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Advanced operator interface and industrial relays

Harmony operator interface and industrial relays enhance operational efficiency and equipment availability across industrial and building applications. Harmony includes intelligent connected products and edge terminals that visualize, gather and process data, enabling informed operator decisions.

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- Harmony HMI Operator Terminals, IPC and EdgeBox
- Harmony Signaling Devices
- Harmony Electrical Relays
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- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

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Select your training

Find the right Training for your needs on our Global website
Locate the training center with the selector tool, using this link
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Harmony HMIBSC Edge Box . . . . . . . .

Harmony HMIBM Modular Box PC, HMDIM Modular Display and HMIDAD Display Adapter . . . . . . . .

Harmony HMIR Rack PC . . . . . . . .

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Selection guide of Harmony Industrial PC, Edge Box and Display . . . . page 1/6
EcoStruxure is Schneider Electric’s innovative IoT architecture addressing the needs of automation applications for a wide range of industries. Harmony Edge Box meets IIoT challenges at the Edge Control level by enabling secured communication from connected products on the shop floor to the required software and applications on the top floor.

This provides improved profitability and new business opportunities, through enhanced asset performance for more efficient operation and maintenance of capital assets. Harmony iPC and Harmony Edge Box offer smart application design and engineering to leverage asset performance with end-to-end cybersecurity.

**Smart design and engineering**

- **Configurable hardware**
  - Millions of possible combinations
  - 12 main units, making 3x IIoT Edge Box, 6x Box PC, 36x Panel PC or Thin client, etc.
  - Dual Ethernet, wireless, choice of memory, displays, storage, and extensions, etc.
  - Up to 7 displays can be connected remotely over a maximum distance of 400 m/1,312 ft

- **Versatile Edge Control software**
  - Open operating system for any software (HMI, EcoStruxure Machine SCADA Expert, engineering and maintenance tools, thin clients, IT/OT connections, etc.)
  - For engineering by automation experts

- **Benefits**
  - Reduced implementation time
  - Best-fit application
  - Consistency of operator workstations
  - Designed for fast and easy maintenance/replacement

**Cybersecurity**

- **ISA/IEC-62443 approved**
  - Designed according to standards (analyses, threat model, user document, etc.)
  - Hardware encryption with TPM
  - Secured password boot and operating system settings
  - McAfee whitelisting
  - Node-RED parallel wiring model does not interfere with automation
  - IT infrastructure security
  - EcoStruxure Secure Connect Advisor for remote connections

- **Benefits**
  - System security helps to protect data and assets
  - Business continuity
Harmony iPC
Industrial PC, Edge Box, and Display

Asset performance
Industrial design
- No rotating parts, 0-55°C/32-131 °F operating temperature
- Industrial certifications including hazardous locations and marine
- Conformal coating, UPS
- 11+ years of availability and 4 years of repair service

IIoT wiring with Node-RED
- Shared operational data with IT and Cloud applications
- Analytics for business enablers
- Secondary sensing connection

Benefits
- Leverage crew reactivity for business maximization
- Asset reliability and optimization
- Predictive maintenance with advanced analytics
- Control system sustainability

Harmony iPC and Edge Box with Node-RED for IIoT wiring
Harmony iPC and Edge Box runs Node-RED to wire devices on the Industrial Internet of Things. Node-RED is a simple, open source graphical programming tool for designing the communication data flow from OT to IT.

The Node-RED community count thousands of nodes ready-to-use, to get data from connected products, manage the communication at the Edge Box level, and connect to the IT systems.

Schneider Electric provides some nodes that are tested, validated, and supported to run with Node-RED on the Harmony iPC and Edge Box.

For instance, the Node-RED wiring can be made up of Modbus or UMAS nodes to get data from connected products to EcoStruxure Machine Advisor, Schneider AVEVA Insight Cloud application, or other IT or Cloud application, thus dynamically sharing business information from the shop floor to leverage asset performance.

Harmony iPC and Edge Box family
As a global specialist in industrial automation, Schneider Electric offers integrated solutions across multiple markets. Harmony iPC provides solutions to applications that need to run on Windows or Linux operating systems in industrial environments. They are a comprehensive range of intuitive Harmony Edge Box and industrial PCs for improved productivity to enhance operator experience.

Harmony Edge Box
Harmony HMIBSC/HMIBMI/HMIBMO can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

Harmony HMIBSC Core
- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port, 1x HDMI
- Qualcomm ARM Cortex-A53 quad-core fanless processor
- 1x full-size mini PCIe slot with optional interface, 1x M.2 slot for extension, 1x SD card slot
- Node-RED

Harmony HMIBMI Basic
- 2 Gigabit Ethernet, 1x RS-232/422/485, 2x USBs, 1x display port
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model

Harmony HMIBMO Optimized
- 2 Gigabit i210 Ethernet, 1x RS-232/422/485, 4x USBs, 2x display ports
- Intel Atom Apollo Lake E3930 dual-core fanless processor
- 1x full-size mini PCIe slot with optional interface
- Node-RED, default or to be installed depending on the model

Click to open the Product Selector and select the right product.

Harmony iPCs and Edge Box at Edge Control level for EcoStruxure Machine and EcoStruxure Plant
Harmony Modular Box PC

Harmony HMIBM Modular Box PC cater to some of the most demanding field applications running on a Windows operating system platform. They make the complete Panel PC when mounted with Harmony HMIDM Modular Displays. Depending on the model, they are conformal coated, and cULus certified for industrial control, hazardous location and marine. They can run also Trusted Platform Module (TPM) for cybersecured hardware encryption.

Harmony HMIBM Modular Box PC (Universal/Performance)
- 2 Gigabit Ethernet, 1x RS-232/422/485, 4x USBs, 2x display ports, 3x antenna connectors
- Intel Celeron 2980U dual-core (Universal)/Intel Core i7-4650U (Performance) fanless processors
- 2x full-size mini PCIe expansion slots and 2x optional PCI/PCIe card slots
- 1x CFast card slot, 2x SSD/HDD hot-swappable slot and optional battery backup

Harmony Modular Display

Harmony HMIDM Modular Displays are the companion of Harmony HMIBM Modular Box PCs. They can be directly mounted on to the Box PC or remotely via cables. This modularity not only allows multiple variations with reduced inventories, it also facilitates maintenance. The Box PC or the Display can be easily replaced without changing the complete Panel PC unit.

With Harmony HMIDAD Display Adapter, the Harmony Modular Display can be used as a:
- Local display (over a maximum distance of 5 m/16.40 ft)
- Remote display (up to 4 daisy chain displays with same screen definition, and over a maximum distance of 100 m/328 ft for the 1st display to 400 m/1,312 ft for the 4th display)

Harmony iDisplay

Harmony HMIDID iDisplays are robust monitors with an excellent screen size/dimensions ratio and can be used in conjunction with industrial PCs. They have the same cut-out dimensions as Harmony Panel PCs and Harmony HMI operator panels, which makes it easy to upgrade installations.

With Harmony HMIDAD Display Adapter, the Harmony Modular Display can be used as a:
- 12” and 15” size color TFT LCDs
- 1x USB on front panel, 1x DVI-D video, 1x USB
- IP67/66 and Nema 4X front screen
- Industrial certifications (hazardous location and marine)
## Harmony S-Panel and Enclosed Panel PCs

Harmony HMIPPS S-Panel PCs are simple and compact all-in-one hardware, with fanless Intel CPUs, HDD/SSD storage drive slots, and mini PCIe slots for optional interfaces.

**Harmony HMIPSO S-Panel PC (Optimized)**
- Intel Atom E3827 dual-core fanless processor, 4 GB DDR3 RAM
- Expansion kit allowing 1x SATA HDD/SSD slot and 1x mini PCIe slot
- W10" and W15" multi-touch projected capacitive technology screens

**Harmony HMIPSP S-Panel PC (Performance)**
- Intel i3-4010U dual-core fanless processor, 8 GB DDR3 RAM
- 1x full-size mini PCIe slot and 1x optional interface slot
- W15" and W19" HD multi-touch projected capacitive technology screens

Harmony Enclosed Panel PCs are completely enclosed PCs with IP66 protection on 6 faces and M12 connectors. They are ready to be directly installed on a VESA arm, without any additional enclosure.

**Harmony HMIEPEP Enclosed Panel PC (Performance)**
- Intel i3-4010U dual-core fanless processor, 8 GB DDR3 RAM
- W19" multi-touch projected capacitive technology screen

## Harmony Rack PC

Harmony HMIR Rack PCs offer a one-stop shop for a complete plant solution that has been tested and validated by Schneider Electric, along with EcoStruxure Hybrid DCS Engineering. Harmony HMIRs can be easily installed in Actassi 19" enclosures and connected to Harmony iDisplay monitors.

**Harmony HMIRxO Rack PC 2U (Optimized) (1)**
- Intel Core G540 or G850 processor, 2 GB RAM
- 2x PCI Express (x8) + 1x PCI
- 2 Gigabit Ethernet, 2x RS-232 (+ 4 optional), 6x USB, 1x VGA, 1x DVI
- 1x internal SATA3 slot and 2x external SATA2 trays, 1x DVD-RW drive

**Harmony HMIRSP Rack PC 4U (Performance) (1)**
- Intel Xeon E3-1225 processor, 4 to 16 GB RAM
- 4x PCI Express (x16) + 3x PCI
- 2 Gigabit Ethernet, 2x RS-232 (+ 4x optional), 6x USB, 1x VGA, 1x DVI
- Dedicated models with Windows Server operating systems

## Companion products (2)

EcoStruxure™ Secure Connect Advisor provide a secure connection between remote display units on the work site (via SiteManager Embedded) and computers or smart devices in the office (via LinkManager) over a secure central server (GateManager). With EcoStruxure Machine Secure Connect Advisor, maintenance personnel can access Schneider Electric software and update it remotely and securely via the Harmony iPC and Harmony Edge Box, and other connected devices as if they were on site. Troubleshooting and repair can also be performed remotely upon request.

(1) Rack 2U or 4U is a unit used to measure the height of a device to be mounted in a 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.
(2) For more information, please refer to “EcoStruxure Secure Connect Advisor catalog DIASED2190101EN.”

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Enhances the user experience and improves productivity
<table>
<thead>
<tr>
<th>Type of Harmony iPC</th>
<th>Harmony HMIPS S-Panel PC</th>
<th>Harmony HMIPSP Performance</th>
<th>Harmony HMIPEP Enclosed Panel PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanless</td>
<td>Panel PC</td>
<td>Panel PC</td>
<td>Panel PC</td>
</tr>
<tr>
<td>Mounting type</td>
<td>Panel PC</td>
<td>Enclosed PC</td>
<td>Enclosed PC</td>
</tr>
<tr>
<td>Display</td>
<td>Touch screen</td>
<td>W15&quot; multi-touch projected capacitive technology screen</td>
<td>W19&quot; multi-touch projected capacitive technology screen</td>
</tr>
<tr>
<td>Definition</td>
<td>W16&quot; HD WXGA, 1920 × 1080 pixels</td>
<td>HD WXGA, 1926 × 786 pixels</td>
<td>HD WXGA, 1926 × 786 pixels</td>
</tr>
<tr>
<td>Front protection</td>
<td>IP65 front panel, NEMA 4X indoor, and 7H hardness anti-scratch</td>
<td>IP65 front panel, NEMA 4X indoor, and 7H hardness anti-scratch</td>
<td>IP66 on all 6 faces, NEMA 4X indoor, and 7H hardness anti-scratch</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel® Atom E3827 dual-core (1.75 GHz)</td>
<td>Intel Core™ i3-4010U dual-core 4th generation (1.7 GHz)</td>
<td>Intel Core™ i3-4010U dual-core 4th generation (1.7 GHz)</td>
</tr>
<tr>
<td>Expansion slots</td>
<td>1x optional full-size mini PCIe slot with optional interface slot (1)</td>
<td>1x full-size mini PCIe slot with optional interface slot (1)</td>
<td>1x full-size mini PCIe slot with optional interface slot (1)</td>
</tr>
<tr>
<td>Storage</td>
<td>CFast card ≥ 32 GB, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF (1), or HDD hard disk ≥ 500 GB Enterprise 24/7 (1)</td>
<td>CFast card ≥ 32 GB, or SSD flash disk ≥ 128 GB or ≥ 256 GB with 1.5 million hours MTBF (1), or HDD hard disk ≥ 500 GB Enterprise 24/7 (1)</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
</tr>
<tr>
<td>RAM</td>
<td>4 GB (not user-expandable)</td>
<td>8 GB (not user-expandable)</td>
<td>8 GB (not user-expandable)</td>
</tr>
<tr>
<td>Operating system</td>
<td>None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2), (4), or Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2), (4), or Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>None, or WES 7 Premium SP1 (64-bit), or Windows 8.1 Industry (64-bit Multi-language) (2), (4), or Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>24 V  (± 20%), AC power supply with external AC/DC power adapter HMIPSPM31C.</td>
<td>24 V  (± 20%), AC power supply with external AC/DC power adapter HMIPSPM31C.</td>
<td>24 V  (± 20%), AC power supply with external AC/DC power adapter HMIPSPM31C.</td>
</tr>
<tr>
<td>Standards and certifications</td>
<td>CE, cULus (UL IT 60950, CSA IT 60950), ROH, IEC, CCC, FCC (part 15 EMC Class A)</td>
<td>CE, cULus (UL IT 60950, CSA IT 60950), ROH, IEC, CCC, FCC (part 15 EMC Class A)</td>
<td>CE, cULus (UL IT 60950, CSA IT 60950), ROH, IEC, CCC, FCC (part 15 EMC Class A)</td>
</tr>
<tr>
<td>References</td>
<td>HMIPSOa552D1e01, HMIPSOa752D1e01</td>
<td>HMIPSPPa752D1e01, HMIPSPPa952D1e01</td>
<td>HMIPEPa952D1e01</td>
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<td>Pages</td>
<td>2/2 and 2/3</td>
<td>24/27</td>
<td>28 and 2/9</td>
</tr>
</tbody>
</table>
Selection guide (continued)

Harmony iPC
Industrial PC, Edge Box, and Display

Harmony HMIBM Modular Box

<table>
<thead>
<tr>
<th>Model</th>
<th>HMIBM Basic ioT</th>
<th>HMIBM Optimized</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HMIBM Box wall/book/DIN rail Flat</td>
<td>HMIBM Box wall/book/DIN rail Flat</td>
</tr>
<tr>
<td></td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
</tr>
<tr>
<td></td>
<td>1x mini PCIe full slot with optional interface</td>
<td>1x mini PCIe full slot with optional interface</td>
</tr>
<tr>
<td></td>
<td>64 GB eMMC (optional)</td>
<td>64 GB eMMC (optional)</td>
</tr>
<tr>
<td></td>
<td>128 GB eMMC (optional)</td>
<td>250 GB M.2 SSD (4) or None</td>
</tr>
<tr>
<td></td>
<td>64 GB M.2 SSD (4) or None</td>
<td>4 GB or 8 GB (not user-expandable)</td>
</tr>
</tbody>
</table>

Option
Optional

Supply voltage
12-24 V or 100...240 V; with power adapter HMYPSONAC1

IEEE 802.11a/b/g/n, 2.4 GHz/5 GHz, Bluetooth 5.1, Wi-Fi 6

Software, IoT and Cybersecurity
Secure password boot, Node-RED pre-installed, TPM for Cybersecurity (6), McAfee whitelisting to be installed and requires license sticker HMIYYMACWLIOT1

Communications
Node-RED pre-installed to be installed (7) or None

References
HMIBSCEA03D10Lh, HMIBMEAS5DD100L, HMIBMOMAS5DD10e

More technical information on www.schneider-electric.com

(1) For mini PCIe card: 1x cellular 4G or 8x analog input interface 0-10 V
(2) For M.2 card: 1x analog input interface 0-10 V/4-20 mA
(3) To be installed and activated by unlimited license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper)
(4) M.2 SSD 1.3 Million hrs. MTBF, 3 years manufacturer warranty
(5) Cybersecurity TPM optional module HMYIBMILFM051 for hardware encryption with Linux.
## Harmony iPC
### Industrial PC, Edge Box, and Display
#### Harmony HMIBM Modular Box PC

<table>
<thead>
<tr>
<th>Feature</th>
<th>HMIBM Modular Box PC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Harmony iPC</strong></td>
<td>Harmony HMIBM Modular Box PC Harmony HMIBM Modular Box PC</td>
</tr>
<tr>
<td><strong>Fanless</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Box PC + associated HMIBM Display (1)</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Intel Celeron® 2980U dual-core (1.6 GHz)</td>
</tr>
<tr>
<td><strong>Expansion slots</strong></td>
<td>2x full-size mini PCIe with 2x optional interface slots, PC/PCIe (none or 2)</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>None, or C’eed card ≥ 32 GB, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF,</td>
</tr>
<tr>
<td></td>
<td>or HDD hard disk ≥ 500 GB Enterprise 24/7</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>4 GB (not user-expandable)</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Conformal coating</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Supply voltage</strong></td>
<td>18...36 V c or 100...240 V a with modular power adapter HMIBMAC1</td>
</tr>
<tr>
<td><strong>Standards and certifications</strong></td>
<td>CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142 ), cULus</td>
</tr>
<tr>
<td></td>
<td>Hazardous Locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2),</td>
</tr>
<tr>
<td></td>
<td>CE ATEX and IECEx Hazardous Locations 3GD Zone 22</td>
</tr>
<tr>
<td><strong>Software, IoT and Cybersecurity</strong></td>
<td>EcoStruxure Operator Terminal/Expert Run Time Demo (3), EcoStruxure Machine SCADA</td>
</tr>
<tr>
<td></td>
<td>Expert Run Time Demo (4), Node-RED to be installed, McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), TPM for Cybersecurity (7)</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>HMIBMU129D+01</td>
</tr>
<tr>
<td><strong>Pages</strong></td>
<td>4/8 and 4/7</td>
</tr>
<tr>
<td><strong>Configured-To-Order</strong></td>
<td>See configured Harmony Modular Box PC on page 4/32</td>
</tr>
</tbody>
</table>

(1) HMYBFK4BM1 fan kit is required only when PCIe expansion cards above 3W are installed.
(2) Windows 8.1 requires user activation.
(3) To be installed and activated by unlimited license HMY7WCZLSPK2Z (Digital) or HMY7WCZLSPW2Z (Paper).
(4) With Configured-To-Order Harmony Modular Box PC.

### HMIBM Performance

<table>
<thead>
<tr>
<th>Feature</th>
<th>HMIBM Modular Box PC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Intel Core i7-4650U (1.7 GHz low power with turbo boost at 3.3 GHz)</td>
</tr>
<tr>
<td><strong>Expansion slots</strong></td>
<td>2x full-size mini PCIe with 2x optional interface slots, PC/PCIe (none or 2)</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>None, or SSD flash disk ≥ 128 GB with 1.5 million hours MTBF, or HDD hard disk ≥ 500 GB Enterprise 24/7</td>
</tr>
<tr>
<td><strong>RAM</strong></td>
<td>8 GB (not user-expandable)</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Conformal coating</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Supply voltage</strong></td>
<td>18...36 V c or 100...240 V a with modular power adapter HMIBMAC1</td>
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<tr>
<td><strong>Standards and certifications</strong></td>
<td>CE, RCM, EAC, CCC, cULus Industrial Control (UL 61010, CSA 22.2 No.142 ), cULus</td>
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<tr>
<td></td>
<td>Hazardous Locations (ANSI/ISA 12.12.01 and CSA C22.2 No. 213, Class I, Division 2),</td>
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<td></td>
<td>CE ATEX and IECEx Hazardous Locations 3GD Zone 22</td>
</tr>
<tr>
<td><strong>Software, IoT and Cybersecurity</strong></td>
<td>EcoStruxure Operator Terminal/Expert Run Time Demo (3), EcoStruxure Machine SCADA</td>
</tr>
<tr>
<td></td>
<td>Expert Run Time Demo (4), Node-RED to be installed, McAfee whitelisting (5), EcoStruxure Secure Connect Advisor (6), TPM for Cybersecurity (7)</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>HMIBM0174D+00A</td>
</tr>
<tr>
<td><strong>Pages</strong></td>
<td>4/8 and 4/9</td>
</tr>
<tr>
<td><strong>Configured-To-Order</strong></td>
<td>See configured Harmony Modular Box PC on page 4/32</td>
</tr>
</tbody>
</table>

(5) McAfee whitelisting to be installed, and requires license sticker HMYMACWLOT21.
(6) To be installed and activated with subscription.
(7) Cybersecurity TPM optional/module HMY1MNAPMD01 for hardware encryption with Windows bit-locker.
(8) For more information, refer to page 1/8.
## Modular displays for Panel PC mounting

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<th>Display</th>
<th>Touch screen</th>
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<th>Front protection</th>
<th>Front USB port</th>
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<th>Marine certifications</th>
<th>Compatibility</th>
<th>Mounting</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>8.3” 12” single-touch resistive</td>
<td>W12” multi-touch capacitive</td>
<td>1024 x 768 pixels</td>
<td>IP66, NEMA 4X indoor, and 7H hardness anti-scratch</td>
<td>1x USB 2.0 port</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>All HMIBM Modular Boxes</td>
<td>Panel + Associated HMIDM Display</td>
<td>HMIDM6421, HMIDM7421, HMIDM6521, HMIDM7521</td>
</tr>
<tr>
<td>4.3” 15” single-touch resistive</td>
<td>W15” multi-touch capacitive</td>
<td>1280 x 800 pixels</td>
<td>IP66, NEMA 4X indoor, and 7H hardness anti-scratch</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>All HMIBM Modular Boxes</td>
<td>Panel or Panel Monitor + Associated HMIDM Display</td>
<td>HMIDM6421, HMIDM7421, HMIDM6521, HMIDM7521</td>
</tr>
</tbody>
</table>

### More technical information on [www.schneider-electric.com](http://www.schneider-electric.com)
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC and HMIDID Display

Type of Harmony iPC
Harmony HMIR Rack PC
HMIRXO Optimized PC 2U (2)

Harmony HMIR Rack PC
HMIRSP Performance PC 4U (2)

Cpus
–
–
–
–
–

Operating System
–
–
–
–
–

Supply Voltage
110...240 V (~, 300 W single power supply)
110...240 V (~, 500 W single or redundant power supply)

Standards and Certifications
–
–
–
–
–

Compatible Display Models
–
–
–
–
–

References
HMIRXODHCA3001
HMIRSPXR6T01
HMIDID64DTD1
HMIDID73DTD1
HMIDADP11

Pages
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5/2
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6/3
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Supply voltage
12...24 V
12...24 V
12...24 V

Standards and certifications
–
c, cULus, EAC, CCC, RCM

Marine certifications
–
BV, CCS, DNV, GL, LR, RINA

Compatibility
All PCs with video port
All PCs with video port
All Harmony HMI Displays

Mounting
Yes
Yes
Yes

References
HMID064DT01
HMIDP11

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12" color multi-touch resistive
15" color multi-touch resistive

Front USB ports
1x USB 2.0 port
1x USB 2.0 port

Display
Panel PC
Yes

HMIDM Modular Display with HMIDAD Display Adapter, making remote connections possible.

(1) Require Vijeo Designer V6 SP2 or later to build and download HMI application.
(2) Rack 2U or 4U is a unit used to measure the height of a device that will be mounted in an 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.
(3) To be installed and activated by unlimited license HMIRTWCG2SPM22 (Digital) or HMIRTWCG2SPM22 (Paper).
(4) For more information, please refer to Harmony Display Adapter on page 4/28.
Contents

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel and HMIPEP Enclosed Panel PCs

Harmony HMIPS S-Panel and HMIPEP Enclosed Panel PCs

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Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPS0 Optimized - 10" and 15" touch screens

**Type of Harmony iPC**

- **Panel PC**

**Screen**

- **Type**: LED LCD S-point multi-touch projected capacitive technology screen
- **Size**: W 10.1" (257 x 160 mm)
- **Resolution**: 1280 x 800 pixels, 267,000 colors
- **IP66 front panel, NESAA 4X indoor, and TH1 hardness anti-scratch”
- **View angle**: Vertical 160°, horizontal 160°
- **Backlight**: Life span > 50,000 hrs @ 25 °C / 77 °F

**Operate with water on screen**: Yes

**Snap hook (3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly**

**CPU**

- Processor: Intel Atom E3827 dual-core (1.75 GHz, low power)
- Main drive storage: SSD flash disk 32 GB
- HDD hard disk 500 GB Enterprise 24/7 (1)

**Expansion slot (1)**

- 1 CF card slot (2)
- 1 x 2.5” SATA HDD/SSD storage slot, user-accessible (1)

**Power supply**

- Supply voltage: 24 V
- Current consumption: 1.9 A typical

**Operating system**

- Windows 7 Premium SP1 (64-bit Multi-language)
- Windows 10 IoT Enterprise (64-bit Multi-language)

**Watchdog timer**

- Timer with 255 levels/intervals, programmable, 1...255 s

**Dimensions**

- Overall (W x H x D): 283.1 x 202.3 x 61.3 mm (11.15 x 7.95 x 2.41 in.)
- Wall mounting cut-out (W x H x D with snap hooks): 274.8 x 193.8 mm (10.81 x 7.63 in.)

**Temperature**

- Operating: 0...55 °C / 32...131 °F
- Non-operating: 30...70 °C / 86...158 °F

**Vibration resistance**

- During operation: 2 g from 5...500 Hz with SSD/Cfast and 1 g from 5...500 Hz with HDD

**Standards and certifications**

- CE, cULus TE (UL 60065, CSA 60050), EMC, EAC, CCC, FCC (part 15 EMC Class A)

**Software**

- EcoStruxure Operator Terminal Expert (2)
- EcoStruxure Machine SCADA Expert (6)
- EcoStruxure Secure Connect Advisor (6)

**References**

- HMIPS05S52D1W01
- HMIPS05S52D1801
- HMIPS05S152D1801
- HMIPS05S152D1001

**Configured-To-Order**

See configured Harmony Optimized S-Panel PC on page 2/3

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(1) HMIPS05S52D1 expansion kit for HMIPS0 allowing 1 SATA/HDD/SSD slot and 1 mini PCIe slot with its optional interface slot. Mini PCIe is limited to 0...480 VDC / ±11 V operating temperature.

(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMRTWCLSFA2 (Digital) or HMRTWCLSFM6Z (Paper).

(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.

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More technical information on www.schneider-electric.com

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Harmony HMIPS0 Optimized S-Panel PC - 15" touch screen

**Panel PC**

- LED LCD 5-point multi-touch projected capacitive technology screen
- W 15.6" (396 x 269 mm)
- Resolution: 1366 x 768 pixels, 16.7 million colors
- IP66 front panel, NESAA 4X indoor, and TH1 hardness anti-scratch

**View angle**: Vertical 140°, horizontal 150°

**Mounting cut-out (W × H) with snap hooks**: 274.6 x 193.8 mm

**Dimensions**

- Overall (W x H x D): 297.2 x 218.5 x 27.4 mm (11.69 x 8.61 x 1.08 in.)
- Wall mounting cut-out (W x H x D with snap hooks): 281.6 x 200.6 mm (11.10 x 7.89 x 0.79 in.)

**Temperature**

- Operating: 0...55 °C / 32...131 °F
- Non-operating: 30...70 °C / 86...158 °F

**Vibration resistance**

- During operation: 2 g from 5...500 Hz with SSD/Cfast and 1 g from 5...500 Hz with HDD

**Standards and certifications**

- CE, cULus TE (UL 60065, CSA 60050), EMC, EAC, CCC, FCC (part 15 EMC Class A)
- EcoStruxure Operator Terminal Expert Terminal Expert (2)
- EcoStruxure Machine SCADA Expert (6)
- EcoStruxure Secure Connect Advisor (6)

**References**

- HMIPS05752D1W01
- HMIPS05752D1801
- HMIPS05752D1001

**Configured-To-Order**

See configured Harmony Optimized S-Panel PC on page 2/3

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(4) WES 7 Premium SP1 (64-bit Multi-language) supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian).

- Also includes:
  - Microsoft Word/EcoStruxure Power Point Viewer
  - Framework.Net 3.5
  - Web browser

(5) EcoStruxure Machine SCADA Expert Run Time with Configured-To-Order Harmony S-Panel PCs.

(6) To be installed and activated with subscription.

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More technical information on www.schneider-electric.com
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<td>Panel PC</td>
</tr>
<tr>
<td><strong>Mounting type</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Screen</strong></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>LED LCD 5-point multi-touch projected capacitive technology screen</td>
</tr>
<tr>
<td>Size</td>
<td>W 15.6&quot;</td>
</tr>
<tr>
<td>Resolution</td>
<td>HD WXGA, 1366 × 768 pixels, 16.7 million colors</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IPS6 front panel, NEMA 4X indoor, and 7H hardness anti-scratch</td>
</tr>
<tr>
<td>View angle</td>
<td>Vertical 90°, horizontal 170°</td>
</tr>
<tr>
<td>Backlight</td>
<td>Yes</td>
</tr>
<tr>
<td>Backlight intensity</td>
<td>50,000 nits @ 25 °C/77 °F</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel® Core™ i3-4010U dual-core 4th generation (1.7 GHz)</td>
</tr>
<tr>
<td>Processor and Memory</td>
<td></td>
</tr>
<tr>
<td>RAM</td>
<td>8 GB DDR3 (not user-expandable)</td>
</tr>
<tr>
<td>Storage</td>
<td>1 CF card slot, plus 1 Gb SSD storage slot, user-accessible</td>
</tr>
<tr>
<td>Watchdog timer</td>
<td>Times with 255 levels/interval, programmable, 1...255 s</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>18 W typical, 60 W max.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>W 419.7 × H 269 × D 56.7 mm</td>
</tr>
<tr>
<td>Resolution</td>
<td>1366 × 768 pixels, 16.7 million colors</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>during operation</td>
<td>0...56 °C/131 °F</td>
</tr>
<tr>
<td>during storage</td>
<td>20...60 °C/114 °F</td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>2 g from 5...500 Hz with SSD CF and 1 g from 5...500 Hz with HDD</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>during operation</td>
<td>0...56 °C/131 °F</td>
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<tr>
<td>during storage</td>
<td>20...60 °C/140 °F</td>
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<tr>
<td>Standards and certifications</td>
<td>EcoStruxure Operator Terminal Expert (2)</td>
</tr>
<tr>
<td>Software</td>
<td>EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)</td>
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<tr>
<td>References</td>
<td>HMIPSPC752D1W01, HMIPSPC752D1801</td>
</tr>
<tr>
<td>Configured-To-Order</td>
<td>See configured Harmony Performance S-Panel PC on page 2/23</td>
</tr>
<tr>
<td>Hardware</td>
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<tr>
<td>LED</td>
<td>LCD 5-point multi-touch projected capacitive technology screen</td>
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<tr>
<td>Screen type</td>
<td>W 15.6&quot;</td>
</tr>
<tr>
<td>Resolution</td>
<td>HD WXGA, 1366 × 768 pixels, 16.7 million colors</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IPS6 front panel, NEMA 4X indoor, and 7H hardness anti-scratch</td>
</tr>
<tr>
<td>View angle</td>
<td>Vertical 90°, horizontal 170°</td>
</tr>
<tr>
<td>Backlight</td>
<td>Yes</td>
</tr>
<tr>
<td>Backlight intensity</td>
<td>50,000 nits @ 25 °C/77 °F</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel® Core™ i3-4010U dual-core 4th generation (1.7 GHz)</td>
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<td>Processor and Memory</td>
<td></td>
</tr>
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<td>RAM</td>
<td>8 GB DDR3 (not user-expandable)</td>
</tr>
<tr>
<td>Storage</td>
<td>1 CF card slot, plus 1 Gb SSD storage slot, user-accessible</td>
</tr>
<tr>
<td>Watchdog timer</td>
<td>Times with 255 levels/interval, programmable, 1...255 s</td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>18 W typical, 60 W max.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>W 419.7 × H 269 × D 56.7 mm</td>
</tr>
<tr>
<td>Resolution</td>
<td>1366 × 768 pixels, 16.7 million colors</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>during operation</td>
<td>0...56 °C/131 °F</td>
</tr>
<tr>
<td>during storage</td>
<td>20...60 °C/114 °F</td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>2 g from 5...500 Hz with SSD CF and 1 g from 5...500 Hz with HDD</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>during operation</td>
<td>0...56 °C/131 °F</td>
</tr>
<tr>
<td>during storage</td>
<td>20...60 °C/140 °F</td>
</tr>
<tr>
<td>Standards and certifications</td>
<td>EcoStruxure Operator Terminal Expert (2)</td>
</tr>
<tr>
<td>Software</td>
<td>EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)</td>
</tr>
<tr>
<td>References</td>
<td>HMIPSPC752D1801, HMIPSPC752D1801</td>
</tr>
<tr>
<td>Configured-To-Order</td>
<td>See configured Harmony Performance S-Panel PC on page 2/23</td>
</tr>
</tbody>
</table>

(1) See accessories (page 2/7) for additional ports through Mini PCs and optional interfaces.

(2) EcoStruxure Operator Terminal Expert Build Time DVD can be upgraded to unlimited version by purchasing the license HMIYTWCZLSPAZZ (Digital) or HMIYTWCZLSPAZZ (Paper).

(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPS Performance - 19" touch screen

**Selection guide (continued)**

### Harmony HMIPS Performance S-Panel PC - 19" touch screen

- **Type of Harmony**
  - Harmony HMIPS Performance S-Panel PC - 19" touch screen

- **Dimensions**
  - Overall (W × H × D): 488 × 309 × 56.7 mm

- **CPU**
  - Processor: Intel Core i3-4010U dual-core 4th generation (1.7 GHz)

- **Power supply**
  - AC power supply with external AC/DC power adapter HMIPSPMAC1.
  - 28 W typical, 80 W max.

- **RAM**
  - 8 GB DDR3 (not user-expandable)

- **Expansion slot**
  - 1 full-size mini PCIe slot with 1 optional interface slot (1)

- **Storage**
  - Main drive: CFast card > 32 GB
  - SSD flash disk > 128 GB (5-year manufacturer warranty and 1.5 million hours MTBF)

- **Watchdog timer**
  - Timer with 255 levels/intervals, programmable, 1...255 s

- **Operating system**
  - WES 7 Premium SP1 (64-bit) (5)
  - Windows 10 IoT Enterprise (64-bit Multi-language)

- **Fanless**
  - Panel PC

- **Mounting type**
  - Panel PC

- **Screen**
  - Type: LED LCD 5-point multi-touch projected capacitive technology screen
  - Resolution: HD WUXGA, 1920 × 1080 pixels, 16.7 million colors
  - Degree of protection: IP65 front panel, NEMA 4X indoor, and TH hardness anti-scratch
  - View angle: Vertical 180°, horizontal 170°

- **Viewing angle**
  - Vertical 160°, horizontal 170°

- **Backlight**
  - Life span > 50,000 hrs @ 25 °C/77 °F

- **Standards and certifications**
  - cULus ITE (UL 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
  - EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)

- **Software**
  - EcoStruxure Operator Terminal Expert (2)
  - EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)

- **References**
  - HMIPS052D1001
  - HMIPS052D1010
  - HMIPS052D1015
  - HMIPS052D1020

- **Configured-To-Order**
  - See configured Harmony Performance S-Panel PC on page 2/23

(1) See accessories (page 2/17) for additional options through MiX PC/s and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be used for a limited version by purchasing the license HMRTWUCL SPASE (English) or HMRTWUCLSPASON.
(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handed.
(4) Windows 10 IoT Enterprise (64-bit Multi-language)
(5) To be installed and activated with subscription
(6) To be installed and activated with subscription

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**Harmony HMIPS Performance S-Panel PC - 19" touch screen**

- **Type of Harmony**
  - Panel PC

- **Dimensions**
  - Overall (W × H × D): 488 × 309 × 56.7 mm

- **CPU**
  - Processor: Intel Core i3-4010U dual-core 4th generation (1.7 GHz)

- **Power supply**
  - SSD flash disk > 256 GB (5-year manufacturer warranty and 1.5 million hours MTBF)
  - HDD hard disk > 500 GB Enterprise 24/7

- **Expansion slot**
  - 1 CFast card slot
  - 1x 2.5" SATA HDD/SSD storage slot, user-accessible

- **Storage**
  - 8 GB DDR3 (not user-expandable)

- **Watchdog timer**
  - Timer with 255 levels/intervals, programmable, 1...255 s

- **Operating system**
  - Windows 10 IoT Enterprise (64-bit Multi-language)
  - None or Configured-to-order offer

- **Fanless**
  - Panel PC

- **Mounting type**
  - Panel PC

- **Screen**
  - Type: LED LCD 5-point multi-touch projected capacitive technology screen
  - Resolution: HD WUXGA, 1920 × 1080 pixels, 16.7 million colors
  - Degree of protection: IP65 front panel, NEMA 4X indoor, and TH hardness anti-scratch
  - View angle: Vertical 180°, horizontal 170°

- **Viewing angle**
  - Vertical 160°, horizontal 170°

- **Backlight**
  - Life span > 50,000 hrs @ 25 °C/77 °F

- **Standards and certifications**
  - cULus ITE (UL 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
  - EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)

- **Software**
  - EcoStruxure Operator Terminal Expert (2)
  - EcoStruxure Machine SCADA Expert (5), EcoStruxure Secure Connect Advisor (6)

- **References**
  - HMIPS052D1001
  - HMIPS052D1010
  - HMIPS052D1015

- **Configured-To-Order**
  - See configured Harmony Performance S-Panel PC on page 2/23

(1) See accessories (page 2/17) for additional options through MiX PC/s and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be used for a limited version by purchasing the license HMRTWUCL SPASE (English) or HMRTWUCLSPASON.
(3) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handed.
(4) Windows 10 IoT Enterprise (64-bit Multi-language)
(5) To be installed and activated with subscription
(6) To be installed and activated with subscription

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More technical information on www.schneider-electric.com
## Harmony iPC

### Industrial PC, Edge Box, and Display

**Harmony HMIEP Enclosed Panel PC** - 19" touch screen

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<tr>
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<th>Harmony HMIEP Performance Enclosed Panel PC - 19&quot; touch screen</th>
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<td>Enclosed PC</td>
</tr>
<tr>
<td>Mounting type</td>
<td>Enclosed PC</td>
</tr>
<tr>
<td>Screen Type</td>
<td>LED LCD 5-point multi-touch projected capacitive technology screen</td>
</tr>
<tr>
<td>Size</td>
<td>W 18.5&quot;</td>
</tr>
<tr>
<td>Resolution</td>
<td>HD WQGA, 1366 x 768 pixels, 16.7 million colors</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IPS all-over with VESA 100 mounting, NEMA4-4X motor, and TH hardness anti-scratch front panels</td>
</tr>
<tr>
<td>View angle</td>
<td>Vertical 180°, horizontal 170°</td>
</tr>
<tr>
<td>Backlight</td>
<td>Yes</td>
</tr>
<tr>
<td>Operate with water on screen</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### CPU

- **Processor**: Intel Core i3-4010U dual-core 4th generation (1.7 GHz)
- **Expansion slot**: 1 full-size mini PCIe slot without external interface slot (1)

### RAM

- **Main drive**: SSD flash disk (5-year manufacturer warranty and 1.5 million hours MTBF)
  - 1 x 2.5" SATA HDD/SSD storage slot, user-accessible
  - 1 GB DDR3 (not user-expandable)

### Integrated ports

- **Ethernet**: 2 Ethernet 10/100/1,000 Mbps M12 A-coding 8-pin female connector
- **USB**: 1 USB 2.0 with M12 8-pin female connector
- **RS-232**: 1 RS-232 with M12 8-pin male connector

### Operating system

- **Windows 10 IoT Enterprise (64-bit Multi-language)**

### Power supply

- **Supply voltage**: 24 V (± 20%)
- **Power consumption**: 35 W typical, 60 W max.

### Power supply

- **Overall (W × H × D)**: 419.7 × 269 × 56.7 mm (16.52 × 10.59 × 2.23 in)
- **Temperature**: 0…55 °C/32…131 °F
- **Humidity**: 2 g from 5…500 Hz with SSD and CFast
- **Standards and certifications**: CE, cULus ITE (UL 60950, CSA22.2 No. 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
- **Software**: EcoStruxure Machine SCADA Expert (3), EcoStruxure Secure Connect Advisor (4)

### References

- **HMIEP9S52D1801**

### Configured-To-Order

- **References**: See configured Harmony Enclosed Performance S-Panel PC on page 2/33
- **Software**: EcoStruxure Operator Terminal Expert Run Time. The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to an unlimited version by purchasing the license HMRTWCZLSPAZZ (Digital) or HMRTWCZLSPPAZZ (Paper)
- **HMIEP9S52D1001**

(1) See accessories (page 2/77) for additional ports through Mini PCIe and optional interface.
(2) EcoStruxure Operator Terminal Expert Run Time. The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to an unlimited version by purchasing the license HMRTWCZLSPAZZ (Digital) or HMRTWCZLSPPAZZ (Paper)
(3) With Configured-To-Order Harmony /PC
(4) To be installed and activated with subscription.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSO Optimized -10" and 15" touch screens

Presentation

Harmony HMIPSO Optimized S-Panel PCs are the entry level Panel PCs in the Harmony iPC range. These simple-in-design PCs with Intel™ Atom dual-core CPU cater for the performance requirements of most automation applications in the field.

Harmony Optimized S-Panel PCs offer improved application and operator efficiency with:

- 10”/15” wide TFT multi-touch screens, LED backlight, IP66 protection, and 7H hardness anti-scratch front
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F (or up to +45 °C/113 °F for models with HDD or mini PCIe)
- Integration of software applications such as HMI EcoStruxure Operator Terminal Expert software and third-party Windows software
- Expansions with optional interfaces based on mini PCIe (Com, USB, HD audio, Video, networks, wireless, etc.)
- Available with WES 7, Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer

Harmony HMIPSO Optimized

The Harmony HMIPSO S-Panel PCs offer comprises 8 references, each equipped with:

- Fanless Intel® Atom E3827 dual-core processor (1.75 GHz)
- 4 GB DDR3 RAM, default mounted
- Connection ports: 1x USB 3.0, 1x USB 2.0, 2x COM (RS-232/422/485), 2 Gigabit Ethernet
- Expansion kit (depending on model): 1x optional/default kit allowing 1x SATA HDD/SSD slot and 1x mini PCIe slot with its optional interface slot
- Power supply: 24 V DC, AC power supply with external AC/DC power adapter

HMIYPSOMAC1

The operating systems and storage devices for 10” and 15” touch screens are as follows:

- HMIPISO552D1801 and HMIPISO752D1801:
  - Operating system: WES 7 Premium SP1 (64-bit)
  - Default storage device: 32 GB CFast card
- HMIPISO552D1801 and HMIPISO752D1801:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
  - Expansion kit: HMIYPADPSOSTO1
- HMIPSOH552D1801 and HMIPSOH752D1801:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 500 GB HDD (Enterprise 24/7)
  - Expansion kit: HMIYPADPSOSTO1
- HMIPSOO552D1001 and HMIPSOO752D1001:
  - Operating system: None
  - Default storage device: None

Ready-to-run Software for Harmony HMIPSO

Harmony HMIPSO S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIPSO are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription. For more information on the supported softwares, refer to the following catalogs:
- EcoStruxure Operator Terminal Expert (DIA5ED2140703EN),
- EcoStruxure Machine SCADA Expert (DIA5ED2171201EN),
- EcoStruxure Secure Connect Advisor (DIA5ED2190101EN).
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSO Optimized - 10” and 15” touch screens

Description

Harmony HMIPSO Optimized: 10” and 15” touch screens

Front view
1. 10” LCD multi-touch LED screen, HD WSVG, 1280 × 800 pixels, and 267,000 colors for HMIPSO P552D1 P01:
   □ Brightness: 300 cd/m² (adjustable)
   □ Type of touch panel: 5-point projected capacitive technology multi-touch
   □ Typical viewing angle: 160° (vertically)/160° (horizontally)

2. 15” LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, and 16 million colors for HMIPSO P752D1 P01:
   □ Brightness: 300 cd/m² (adjustable)
   □ Type of touch panel: 5-point projected capacitive technology multi-touch
   □ Typical viewing angle: 140° (vertically)/150° (horizontally)

3. Harmony and Schneider Electric removable stickers
4. Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)
5. Optional AC power supply
6. S-Panel PC interface
7. Cover for mini PCIe card and HDD/SSD drive

Underside view
8. DC power connector
9. 1x Eth1 (10/100/1,000 Mbps)
10. 1x Eth2 (10/100/1,000 Mbps)
11. 1x USB2 (USB 2.0)
12. 1x USB1 (USB 3.0)
13. 1x COM2 RS-232/422/485 port
14. 1x COM1 RS-232 port
15. Snap hook (2)
16. Expansion kit
17. Optional interface
18. Optional AC power supply

(1) Cooling method is by passive heat sink.
(2) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.
### Harmony HMIPSO Optimized: 10" touch screen

<table>
<thead>
<tr>
<th>Supply voltage</th>
<th>Operating system (1)</th>
<th>Software</th>
<th>Storage</th>
<th>DDR3 RAM (5)</th>
<th>Reference</th>
<th>Weight (kg/lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (6)</td>
<td>WES 7 Premium SP1 (64-bit) (2)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure</td>
<td>CFast card ≥ 32 GB</td>
<td>4 GB</td>
<td>HMIPSOC552D1W01</td>
<td>2.50/5.51</td>
</tr>
<tr>
<td></td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>Secure Connect Advisor (4), IoT monitor with Node-RED</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF (mounted in expansion kit)</td>
<td>4 GB</td>
<td>HMIPSO552D1801</td>
<td>2.50/5.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HDD hard disk ≥ 500 GB (mounted in expansion kit)</td>
<td>4 GB</td>
<td>HMIPSOH552D1801</td>
<td>2.50/5.51</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4 GB</td>
<td>HMIPSO552D1001</td>
<td>2.50/5.51</td>
</tr>
</tbody>
</table>

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPSO (see page 2/23).
(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
- Microsoft® Word/Excel/Power Point Viewer
- Framework.Net 3.5
- Web browser
(3) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
(4) To be installed and activated with subscription.
(5) 4 GB DDR3 RAM is not user-expandable.
(6) AC power supply with external AC/DC power adapter HMIYPSPMAC1.
## Harmony HMIPOSO Optimized: 15" Touch Screen (Intel Atom E3827 dual-core processor, 1.75 GHz)

<table>
<thead>
<tr>
<th>Supply Voltage</th>
<th>Operating System (1)</th>
<th>Software</th>
<th>Storage</th>
<th>DDR3 RAM (3)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (6)</td>
<td>WES 7 Premium SP1 (64-bit) (2)</td>
<td>EcoStruxure Operator Terminal Expert RT Demo (3), Secure Connect Advisor (4)</td>
<td>CFast card ≥ 32 GB</td>
<td>4 GB</td>
<td>HMIPOSO752D1W01</td>
<td>3.90/8.60</td>
</tr>
<tr>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>SSD flash disk ≥ 128 GB with 2 million hours MTBF (mounted in expansion kit)</td>
<td>4 GB</td>
<td>HMIPOSO752D1801</td>
<td>3.90/8.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>HDD hard disk ≥ 500 GB (mounted in expansion kit)</td>
<td>4 GB</td>
<td>HMIPOSO752D1801</td>
<td>3.90/8.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>–</td>
<td>–</td>
<td>4 GB</td>
<td>HMIPOSO6752D1001</td>
<td>3.90/8.60</td>
<td></td>
</tr>
</tbody>
</table>

(1) Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPOSO (see page 2/23).  
(2) WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:  
- Microsoft® Word/Excel/Power Point Viewer  
- Framework.Net 3.5  
- Web browser  
(3) EcoStruxure Operator Terminal Expert RT: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIIRTWCZLSPAZZ (Digital) or HMIIRTWCZLSPMZZ (Paper).  
(4) To be installed and activated with subscription.  
(5) 4 GB DDR3 RAM is not user-expandable.  
(6) AC power supply with external AC/DC power adapter HMIYPSPMAC1.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPS S-Panel PC
HMIPSP Performance -15" and 19" touch screens

Presentation

Harmony HMIPSP Performance S-Panel PCs are simple all-in-one design performance PCs. The 15"/19" wide screens, HD resolution display, and capacitive multi-touch feature enhance the user experience of these PCs. The fanless Intel Core i3 CPU processor delivers good performance for a wide range of software.

Harmony Performance S-Panel PCs offer improved application and operator efficiency with:

- Slim panels with depth < 57 mm/2.24 in.
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F.
- Integration of software applications such as EcoStruxure Operator Terminal Expert, Lite supervision EcoStruxure Machine SCADA Expert and third-party Windows software.
- Expansions with optional interfaces based on mini PCIe (Com, USB, HD audio, Video, networks, wireless, etc.)
- Available with WES 7, Windows 8.1 in Configured-To-Order offer, Windows 10, or without an operating system.

Overview of the offer
Harmony HMIPSP Performance

The Harmony HMIPSP Performance PCs offer comprises 10 references, each equipped with:

- Fanless Intel® i3-4010U dual-core processor (1.7 GHz)
- 8 GB DDR3 RAM, default mounted
- Connection ports: 2x USB 3.0, 2x COM (RS-232/422/485), 2x Gigabit Ethernet, 1x HD audio port, 1x HDMI video port, 3x SMAs for antennas
- Expansion slot: 1x mini PCI Express® full slot with 1x optional interface slot
- Power supply: 24 V AC, AC power supply with external AC/DC power adapter

HMIYPSPMAC1

The operating systems and storage devices for 15" and 19" touch screens are as follows:

- HMIPSPC752D1W01 and HMIPSPC952D1W01:
  - Operating system: WES 7 Premium SP1 (64-bit)
  - Default storage device: 32 GB CFast card
- HMIPSPS752D1801 and HMIPSPS952D1801:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- HMIPSPS752D180L and HMIPSPS952D180L:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 256 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- HMIPSPH752D1801 and HMIPSPH952D1801:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 500 GB HDD (Enterprise 24/7)
- HMIPSP0752D1001 and HMIPSP0952D1001:
  - Operating system: None
  - Default storage device: None
Presentation (continued)

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMiPS S-Panel PC
HMiPS Performance - 15” and 19” touch screens

Presentation (continued)
Ready-to-run Software for Harmony HMiPS
Harmony HMiPS S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with HMiRtWCZLSPAZZ (Digital) or HMiRtWCZLSPMZZ (Paper) license. For line management and lite supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMiPS are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:
EcoStruxure Operator Terminal Expert (DIA5ED2140703EN),
EcoStruxure Machine SCADA Expert (DIA5ED2171201EN),
EcoStruxure Secure Connect Advisor (DIA5ED2190101EN).

Description
Harmony HMiPS Performance - 15” and 19” touch screens

Front view
1 15" LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, 16 million colors for HMiPS752D1:
  □ Brightness: 300 cd/m² (adjustable)
  □ Type of touch panel: 5-point projected capacitive technology multi-touch
  □ Typical viewing angle: 160° (vertically)/170° (horizontally)

2 19" LCD multi-touch LED screen, HD WFXGA, 1366 × 768 pixels, 16 million colors for HMiPS952D1:
  □ Brightness: 300 cd/m² (adjustable)
  □ Type of touch panel: 5-point projected capacitive technology multi-touch
  □ Typical viewing angle: 160° (vertically)/170° (horizontally)

3 Harmony and Schneider Electric removable stickers

Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view
5 Heat sink
6 S-Panel PC interface
7 S-Panel PC cover for storage drives (2.5” SATA HDD/SSD, CFast)
8 S-Panel PC rear access to mini PCIe and internal connector for optional interfaces

Underside view
9 DC power connector
10 SMA connector for the external antenna
11 1x COM1, RS-232 port
12 1x HDMI
13 SMA connector for the external antenna
14 1x Eth1 (10/100/1000 Mbps) supports AMT (active management technology)
15 1x Eth2 (10/100/1000 Mbps)
16 1x USB1 (USB 3.0) and 1x USB2 (USB 3.0)
17 1x Audio Line out
18 1x COM2, RS-232/422/485 port
19 1x optional interface
20 Snap hook (1)

(1) Snap hook allows mounting of S-Panel PC in the panel cut-out single-handedly.
## Harmony iPC
### Industrial PC, Edge Box, and Display
#### Harmony HMIPS S-Panel PC
##### HMIPS Performance - 15" touch screen

<table>
<thead>
<tr>
<th>Supply voltage</th>
<th>Operating system (1)</th>
<th>Software</th>
<th>Storage</th>
<th>DDR3 RAM (5)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (6)</td>
<td>WES 7 Premium SP1 (64-bit Multi-language) (2)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)</td>
<td>CFast card ≥ 32 GB</td>
<td>8 GB</td>
<td>HMIPSPC752D1W01</td>
<td>6.00/13.23</td>
</tr>
<tr>
<td>1 mini PCIe slot</td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language) (2)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIPSPS752D1801</td>
<td>6.00/13.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SSD flash disk ≥ 256 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIPSPS752D180L</td>
<td>6.00/13.23</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HDD hard disk ≥ 500 GB</td>
<td>8 GB</td>
<td>HMIPSPH752D1801</td>
<td>6.00/13.23</td>
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<td></td>
<td></td>
<td>8 GB</td>
<td>HMIPSP0752D1001</td>
<td>6.00/13.23</td>
</tr>
</tbody>
</table>

1. Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order: Harmony HMIPSP (see page 2/23).
2. WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
   - Microsoft (R) Word/Excel/Power Point Viewer
   - Framework.Net 3.5
   - Web browser
3. EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
4. To be installed and activated with subscription.
5. 8 GB DDR3 RAM is not user-expandable.
6. AC power supply with external AC/DC power adapter HMIPSPMAC1.
## Harmony HMIPS Performance - 19" touch screen

<table>
<thead>
<tr>
<th>Supply voltage</th>
<th>Operating system (1)</th>
<th>Software</th>
<th>Storage</th>
<th>DDR3 RAM (5)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V (6)</td>
<td>WES 7 Premium SP1 (64-bit Multi-language) (2)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)</td>
<td>CFast card ≥ 32 GB</td>
<td>8 GB</td>
<td>HMIPS952D1W01</td>
<td>7.00/15.43</td>
</tr>
<tr>
<td>1 mini PCIe slot</td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4)</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIPS952D1801</td>
<td>7.00/15.43</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>SSD flash disk ≥ 256 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIPS952D1801L</td>
<td>7.00/15.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>HDD hard disk ≥ 500 GB</td>
<td>8 GB</td>
<td>HMIPS952D1801</td>
<td>7.00/15.43</td>
</tr>
</tbody>
</table>

1. Windows 8.1 Industry SP1 (64-bit Multi-language) operating system is available with Configured-To-Order Harmony HMIPS (see page 2/23).
2. WES 7 Premium SP1 supplied in 9 languages (English, French, German, Italian, Portuguese, Spanish, Swedish, Chinese, Russian). Also includes:
   - Microsoft (R) Word/Excel/Power Point Viewer
   - Framework.Net 3.5
   - Web browser
3. EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIERTWCZLSPAZZ (Digital) or HMIERTWCZLSPMZ (Paper).
4. To be installed and activated with subscription.
5. 8 GB DDR3 RAM is not user-expandable.
6. AC power supply with external AC/DC power adapter HMIYPSPMAC1.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIPEP Enclosed Panel PC
HMIPEP Performance -19" touch screen

Presentation
Harmony HMIPEP Enclosed Performance S-Panel PCs are fully enclosed PCs with IP66 protection on all sides. These 19" wide PCs can be directly mounted on a machine or automation system without any additional enclosure. The HD display and multi-touch features enhance the user experience.

Harmony Enclosed Performance S-Panel PCs offer increased application and operator efficiency with:
- 19" wide HD TFT multi-touch screens, LED backlight, and 7H hardness anti-scratch front
- Ready to be VESA mounted with IP65 protection on all sides and M12 connections
- Slim enclosed panels with 65 mm/2.56 in. depth
- Maintenance-free non-rotating parts and operation up to +55 °C/131 °F
- Available with Windows 10, without an operating system, or with Windows 8.1 in Configured-To-Order offer

Overview of the offer
Harmony HMIPEP Performance
The Harmony HMIPEP Enclosed Performance PCs offer comprises 2 references, each equipped with:
- Fanless Intel® i3-4010U dual-core processor (1.7 GHz)
- 8 GB DDR3 RAM, default mounted
- 5x M12 Connection ports: 1x USB 2.0, 1x COM (RS-232), 2x Gigabit Ethernet, 1x 24 V power supply
- Expansion slot: 1x full-size mini PCIe slot without external interface slot

The operating systems and storage devices for 19" touch screens are as follows:
- HMIPEPS952D1801:
  - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
  - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
- HMIPEP0952D1001:
  - Operating system: None
  - Default storage device: None

Ready-to-run Software for Harmony HMIPEP
Harmony HMIPEP S-Panel PCs are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with HMIERTWCZLSPA ZZ (Digital) or HMIERTWCZLSPMZZ (Paper) license. For line management and file supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secured remote access, Harmony HMIPEP are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on the supported softwares, refer to the following catalogs:
EcoStruxure Operator Terminal Expert (DIA5ED2140703EN).
EcoStruxure Machine SCADA Expert (DIA5ED2171201EN).
EcoStruxure Secure Connect Advisor (DIA5ED2190101EN).
Description
Harmony HMIPEP Performance: 19" touch screen

Front view
1 19" LCD multi-touch LED screen, HD WFXGA 1366 x 768 pixels, 16 million colors for HMIPEP952D1801:
   - Brightness: 300 cd/m² (adjustable)
   - Type of touch panel: 5-point projected capacitive technology multi-touch
   - Typical viewing angle: 160° (vertically)/170° (horizontally)
2 Harmony and Schneider Electric removable stickers
3 Power status indicator (Green: On, Orange: Stand-by, No light: Off)

Rear view (1)
4 Cover
5 1x USB 2.0 with M12 8-pin female connector
6 1x RS-232 with M12 8-pin male connector
7 1x Eth1 (10/100/1000 Mbps) base-T with M12 8-pin female connector
8 1x Eth2 (10/100/1000 Mbps) base-T with M12 8-pin female connector
9 1x 24 V power supply with M12 5-pin male connector
10 Back cover to access HDD/SSD slot

Harmony HMIPEP Performance: 19" touch screen
(Intel i3-4010U dual-core processor, 1.7 GHz)
Supply voltage slot
Expansion slot
Storage slot
Software slot
Reference
Windows 10 IoT Enterprise (64-bit Multi-language), 8 GB DDR3 RAM (3)
24 V 1x mini PCIe slot SSD flash disk ≥ 128 GB with 1.5 million hours MTBF EcoStruxure Operator Terminal Expert Run Time Demo (2), EcoStruxure Secure Connect Advisor (4) HMIPEPS952D1801 8.00/17.64

No operating system, 8 GB DDR3 RAM (4)
24 V 1x mini PCIe slot EcoStruxure Machine SCADA Expert (5) HMIPEP0952D1001 8.00/17.64

(1) Cooling method is by passive heat sink.
(2) EcoStruxure Operator Terminal Expert Run Time: The demo version can be used temporarily without activation (installation from EcoStruxure Operator Terminal Expert Build Time DVD) and can be upgraded to unlimited version by purchasing the license HMIRTWCZLPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
(3) 8 GB DDR3 RAM is not user-expandable.
(4) To be installed and activated with subscription.
(5) With Configured-To-Order Harmony Modular Box PC.
# Separate components

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIP</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drives</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Blank CFast card</td>
<td>32 GB MLC</td>
<td>Yes</td>
<td>HMIYCA32S</td>
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<tr>
<td>Blank SSD with mounting screws</td>
<td>128 GB MLC (5-year warranty and 1.5 million hours MTBF)</td>
<td>All models (1)</td>
<td>HMIYSSDS080S1</td>
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<tr>
<td>Blank SSD with mounting screws</td>
<td>256 GB MLC (5-year warranty and 0.5 million hours MTBF)</td>
<td>All models (1)</td>
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<tr>
<td>Blank HDD</td>
<td>Spare 1 TB HDD, blank</td>
<td>All models (1)</td>
<td>HMIYHD001T21</td>
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<td>Spare 500 GB HDD, blank</td>
<td>All models (1)</td>
<td>HMIYHD50021</td>
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<tr>
<td>Interfaces</td>
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<tr>
<td>NVRAM interface</td>
<td>Mini PCIe with non-volatile RAM, without external connectors</td>
<td>Yes (1)</td>
<td>HMIYMNVRAM1</td>
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<tr>
<td>HDMI to DVI interface</td>
<td>HDMI to DVI interface</td>
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<td>HMIYADHDIMIDVIS1</td>
<td></td>
</tr>
<tr>
<td>2 RS-422/485 isolated interface</td>
<td>Mini PCIe with 2x RS-422/485, isolated external interface with connectors</td>
<td>Yes (1)</td>
<td>HMIYMNLS24851</td>
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<tr>
<td>4 RS-422/485 interface</td>
<td>Mini PCIe with 4x RS-422/485, external interface with connectors</td>
<td>Yes (1)</td>
<td>HMIYMNLS44851</td>
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<tr>
<td>2 RS-232 isolated interface</td>
<td>Mini PCIe with 2x RS-232, isolated external interface with connectors</td>
<td>Yes (1)</td>
<td>HMIYMNLS22321</td>
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</tr>
<tr>
<td>4 RS-232 interface</td>
<td>Mini PCIe with 4x RS-232, external interface with connectors</td>
<td>Yes (1)</td>
<td>HMIYMNLS42321</td>
<td></td>
</tr>
<tr>
<td>1 Profibus DP Master NVRAM interface</td>
<td>Mini PCIe with 1x Profibus DP</td>
<td>Yes (1)</td>
<td>--</td>
<td>HMIYMNPRO1</td>
</tr>
<tr>
<td>2 CANopen/CAN bus interface</td>
<td>Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus</td>
<td>Yes (1)</td>
<td>--</td>
<td>HMIYMNCAN1</td>
</tr>
</tbody>
</table>

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.
## Separate components (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony</th>
<th>Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interfaces</strong> (continued)</td>
<td></td>
<td></td>
<td>HMIPSO</td>
<td>HMISP</td>
</tr>
<tr>
<td>RJ45 Ethernet interface</td>
<td>Interface Mini PCIe, 1x RJ45 Ethernet (3)</td>
<td>Yes (1)</td>
<td>–</td>
<td>HMIYMIN1ETH1</td>
</tr>
<tr>
<td>16DI/8DO interface</td>
<td>Mini PCIe with 16DI/8DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal</td>
<td>Yes (1)</td>
<td>–</td>
<td>HMIYMINIO1</td>
</tr>
<tr>
<td>2 USB 3.0 interface</td>
<td>Mini PCIe with USB 3.0, external interface with connectors</td>
<td>Yes (1)</td>
<td>–</td>
<td>HMIYMINUSB1</td>
</tr>
<tr>
<td>3G cellular interface</td>
<td>Mini PCIe with GPRS, SIM card holder and external antenna</td>
<td>Yes (1)</td>
<td>–</td>
<td>HMIYMINGPRS1</td>
</tr>
<tr>
<td>WiFi interface access point and 2x antennas</td>
<td>Kit with mini PCIe WiFi access point (with Windows 10) + bluetooth and 2x antennas</td>
<td>Yes (1)</td>
<td>–</td>
<td>HMIYMINWIFI2</td>
</tr>
<tr>
<td>4G cellular interface for North America</td>
<td>Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMIN4GUS1</td>
</tr>
<tr>
<td>4G cellular interface for Europe and Asia</td>
<td>Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMIN4GEU1</td>
</tr>
<tr>
<td>Mini PCIe interface DVI-I for iPC</td>
<td>Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMINDVII1</td>
</tr>
<tr>
<td>Mini PCIe interface 2VGA + DVI-D</td>
<td>Mini PCIe Graphic video card Full HD 1920 x 1080, with 2x VGA connectors on a single external interface and 1x DVI-D connector in a second external interface</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMINVGADVID1</td>
</tr>
<tr>
<td>Mini PCIe interface audio for iPC</td>
<td>Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMINAUD21</td>
</tr>
<tr>
<td>Mini PCIe interface to Display Adapter</td>
<td>Interface transmitter (2)</td>
<td>Yes</td>
<td>–</td>
<td>HMIYMINDP1</td>
</tr>
</tbody>
</table>

(1) Require Expansion kit (HMIYPADPSOSTO1) for HMIPSO Optimized S-Panel PC.
(2) For more information, see long distance multi-display adapter on page 4/31.
(3) Available in Q2 2020.
## Separate components (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIP</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB key blank</td>
<td>Spare USB memory key blank (1)</td>
<td>All models</td>
<td>HMIYUSBK111</td>
<td>–</td>
</tr>
</tbody>
</table>
| Maintenance kit for HMIPSO/PSP/PEP Panel PCs | Includes:  
- Screws and dampers for HDD/SSD  
- Screws and clamps for panel mounting  
- Power connector and sticker  
- CFast card pull-out  
- Rubbers for W15" and W19" mounting  
- Bracket, screws, and dampers for mini PCIe | Yes | – | HMIYPMKTPSO1 – |
| Maintenance kit for HMIPSO/PSP Panel PCs | Includes:  
- Screws and dampers for HDD/SSD  
- Screws and clamps for panel mounting  
- Power connector and sticker  
- CFast card pull-out  
- Rubbers for W15" and W19" mounting  
- Bracket, screws, and dampers for mini PCIe | Yes | – | HMIYPMKTPSP1 – |
| Removable protective sheet | Set of 5 protective sheets for W10" | Yes | – | HMIYP552PS11 – |
| AC/DC power adapter 110/220 V ~ to 24 V | AC/DC power adapter, provided with US and European power cord | – | Yes | – | HMIYPSPMAC1 – |
| AC/DC power adapter 110/220 V ~ to 24 V | External AC power adapter which can be mounted on the rear side of HMIPSO, provided with US and European power cord | Yes | – | HMIYPSOMAC1 – |
| M12 connectors | Set of 5 M12 connectors for Enclosed Panel PC | – | Yes | HMIYEM1211 – |
| M12 cables | Set of 5 cables with M12 connectors on one side to Enclosed Panel PC, and DC/USB/CON2x LAN connectors on the other side | – | Yes | HMIYCABM1211 – |
| Expansion kit | Optional expansion kit offering 1 slot for storage drive HDD/SSD and 1 mini PCIe slot with 1 optional interface plate | Yes | – | HMIYPADPSOSTO1 – |
| VESA mounting kit | VESA mounting kit for HMIPSO W10" | Yes | – | HMIYPVESAPSO51 – |
| VESA mounting kit | VESA mounting kit for HMIPSO W15" | Yes | – | HMIYPVESAPSO751 – |
| Software (2) | | | | | |
| EcoStruxure Operator Terminal Expert | Converts the 21-day trial version of EcoStruxure Operator Terminal Expert HMI software | All models that support EcoStruxure Operator Terminal Expert HMI software | HMIRICTWCLSPAZZ (Digital) | – |
| Run Time license | Time Demo to an unlimited license | All models that support EcoStruxure Secure Connect Advisor | HMIRICTWCLSPMZZ (Paper) | – |
| EcoStruxure Secure Connect Advisor | For HMI secure remote access | All models that support EcoStruxure Secure Connect Advisor | VJOCNT (3) | – |

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(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.

(2) EcoStruxure Machine SCADA Expert available with Configured-to-Order (see page 2/23).

(3) For more information, please refer to EcoStruxure Secure Connect Advisor catalog DIA2ED190101EN.
Configured-To-Order Harmony HMIPSO/HMIPSP/HMIEP Panel PCs

"Configured-To-Order" industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator https://www.hmisource.com/wwipcc is also available to help user easily build the configuration (password = Harmony).

Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony S-Panel PC and a configuration code that will be the part number of the Harmony iPC.

Ordering procedure for a configured Harmony Panel PC

If user have built your Harmony iPC configuration with the Web configurator:
1. Please forward the e-mail received from the Web configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description, and part number code.
2. If required, specify the reference root part number GCR_HMIPCCP2.

If user cannot access the Harmony iPC Web configurator:
3. Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.
4. Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.
5. Confirm your order.

Configured-To-Order options for Harmony HMIPSO/HMIPSP/HMIEP Panel PCs

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel PC</td>
<td>S-Panel PC Optimized DC 4 GB RAM W10&quot; - WXGA</td>
</tr>
<tr>
<td></td>
<td>S-Panel PC Optimized DC 4 GB RAM W15&quot; - FWXGA</td>
</tr>
<tr>
<td></td>
<td>S-Panel PC Performance DC 8 GB RAM W15&quot; - WHD</td>
</tr>
<tr>
<td></td>
<td>S-Panel PC Performance DC 8 GB RAM W19&quot; - WHD</td>
</tr>
<tr>
<td></td>
<td>Enclosed Panel PC Performance DC 8 GB RAM W19&quot; - FWXGA</td>
</tr>
<tr>
<td>Fanless ULV CPU</td>
<td>Performance Core i3-4010U dual-core</td>
</tr>
<tr>
<td></td>
<td>Optimized Atom-E3827 dual-core</td>
</tr>
<tr>
<td>Power supply</td>
<td>DC (1)</td>
</tr>
<tr>
<td>Windows operating system</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>WEST7 Premium SP1 (64-bit Multi-language)</td>
</tr>
<tr>
<td></td>
<td>Win 8.1 Industry (64-bit Multi-language)</td>
</tr>
<tr>
<td></td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td>Main storage device for operating system</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>CFast 32 GB</td>
</tr>
<tr>
<td></td>
<td>HDD 500 GB/1 TB</td>
</tr>
<tr>
<td></td>
<td>SSD 128 GB/256 GB</td>
</tr>
<tr>
<td>Optional interfaces (pre-mounted)</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>NVRAM</td>
</tr>
<tr>
<td></td>
<td>2x RS-422/485 Isolated/4 RS-422/485</td>
</tr>
<tr>
<td></td>
<td>2x RS-232 Isolated/4 RS-232</td>
</tr>
<tr>
<td></td>
<td>16x Di/8 DO</td>
</tr>
<tr>
<td></td>
<td>Audio</td>
</tr>
<tr>
<td></td>
<td>Video (DVI and VGA ports)</td>
</tr>
<tr>
<td></td>
<td>Cellular 3G/4G</td>
</tr>
<tr>
<td></td>
<td>Wireless LAN + 2 antennas</td>
</tr>
<tr>
<td></td>
<td>2 CANopen/CAN bus</td>
</tr>
<tr>
<td></td>
<td>1x Ethernet RJ45</td>
</tr>
<tr>
<td></td>
<td>Profinbus DP Master with NVRAM</td>
</tr>
<tr>
<td>Software bundle</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>EcoStruxure Operator Terminal Expert Run Time unlimited license</td>
</tr>
<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 1500 tags Run Time license</td>
</tr>
<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 4000 tags Run Time license</td>
</tr>
<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 64000 tags Run Time license</td>
</tr>
</tbody>
</table>

(1) AC power supply with external AC/DC power adapter HMIYPSPMAC1.
Contents

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBSC Edge Box Core

Harmony HMIBSC Edge Box Core

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- Description .................................................................................................................. page 3/5
- References
  - HMIBSC Edge Box Core .......................................................................................... page 3/6
  - Drives ..................................................................................................................... page 3/6
  - Separate Components
    - Accessories .......................................................................................................... page 3/6
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## Harmony iPC

**Industrial PC, Edge Box, and Display**

### Harmony Edge Box

<table>
<thead>
<tr>
<th>Type of Harmony Edge Box</th>
<th>Harmony HMIBSC Edge Box Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanless</td>
<td>Fanless</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall / book / DIN rail / Flat</td>
</tr>
<tr>
<td>CPU</td>
<td>Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz</td>
</tr>
<tr>
<td>Expansion slots</td>
<td>1x full-size slot with optional interface (1)</td>
</tr>
<tr>
<td>Storage</td>
<td>eMMC 8 GB (soldered and not user-expandable)</td>
</tr>
<tr>
<td>RAMMRAM</td>
<td>1x 2 GB DDR3 (not user-expandable)</td>
</tr>
<tr>
<td>Cybersecurity encryption</td>
<td>TPM module (pre-installed)</td>
</tr>
<tr>
<td>Operating system</td>
<td>Linux Yocto</td>
</tr>
<tr>
<td>Conformal coating</td>
<td>No</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>12-24 V~ or 100...240 V~/ with power adapter HMIPYSOMAC1</td>
</tr>
<tr>
<td>Power consumption</td>
<td>16 W</td>
</tr>
<tr>
<td>Interface</td>
<td>2x RJ45 Ethernet 10/100/1000 Mbps</td>
</tr>
<tr>
<td>Ethernet</td>
<td>1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated</td>
</tr>
<tr>
<td>Embedded I/O</td>
<td>8x GPIO (Digital General Purpose I/O)</td>
</tr>
<tr>
<td>Video interface</td>
<td>1x HDMI (for configuration only)</td>
</tr>
<tr>
<td>WLAN embedded</td>
<td>Wi-Fi WCN3620 802.11 b/g/n 2.4 GHz, WCN3620 Bluetooth 4.1 (4)</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>1x for WLAN antenna, 1x for SPIRIS antenna</td>
</tr>
<tr>
<td>Processor</td>
<td>Qualcomm ARM Cortex-A53 Quad core up to 1.2 GHz</td>
</tr>
<tr>
<td>Expansion slots</td>
<td>1x full-size slot with optional interface (2)</td>
</tr>
<tr>
<td>Storage</td>
<td>eMMC 8 GB (soldered and not user-expandable)</td>
</tr>
<tr>
<td>RAMMRAM</td>
<td>1x 2 GB DDR3 (not user-expandable)</td>
</tr>
<tr>
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<td>Linux Yocto</td>
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<tr>
<td>Conformal coating</td>
<td>No</td>
</tr>
<tr>
<td>Supply voltage</td>
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<td>1x RS-232 (default) and 1x RS-422/485 (software setting), non-isolated</td>
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<tr>
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<tr>
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</tr>
<tr>
<td>Cybersecurity encryption</td>
<td>TPM module (pre-installed)</td>
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<tr>
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<td>Linux Yocto</td>
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<td>Conformal coating</td>
<td>Yes</td>
</tr>
<tr>
<td>Supply voltage</td>
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<tr>
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</tr>
<tr>
<td>Antenna connectors</td>
<td>1x for WLAN antenna, 1x for SPIRIS antenna</td>
</tr>
</tbody>
</table>

### Standards and certifications

- CE, cULus ITE (UL 60950, CSA IT 60950), RCM, EAC, CCC, FCC (part 15 EMC Class A)
- Secure password boot and Node-RED

### References

- HMBSCCEA53D1L01

### Configured-To-Order

- See configured Harmony Modular Box PC on page 4/32

---

*(1) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.*

*(2) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.*

*(3) Cybersecurity TPM optional module HMIYBINLTPM201 for hardware encryption with Linux.*

*(4) Radio-Frequency Certifications:
  - RED for Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, UK
  - FCC (IP for USA)
  - IC for Canada
  - SRRC for China (pending)
  - RCM for Australia, New Zealand
  - Anatel for Brazil (pending)
  - TEC for India (pending)*

*(5) Except with optional interface installed: limited to 45 °C/113 °F.*
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core

Presentation
Harmony HMIBSC connects OT (Operational Technology) in the field to IT (Information Technology) for an Industrial Internet of Things. With built-in Node-RED, WiFi, and Bluetooth, and a Linux operating system running on a quad-core Qualcomm ARM CPU, it is well adjusted to wire the Internet of Things.

eMMC storage is available by default and can be expanded with an SD card. The two standard Ethernet ports allow OT and IT communications to be separated if necessary. The secure password boot and TPM encryption module afford a high level of cybersecurity by design. The commissioning is made easier and safer with its own HDMI port that connects to an optional screen.

The embedded GPIO and optional cards for analog I/O allow dedicated sensors to be connected to Harmony HMIBSC. The optional cellular 4G card of the Harmony iPC range is supported on Harmony HMIBSC for remote connection to IT systems.

All these options can be user mounted or Configured-To-Order (see page 4/32).

Overview of the offer
Harmony HMIBSC Edge Box Core

The Harmony HMIBSC offer comprises 3 product references, each equipped with:
- Fanless Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz
- Default WLAN: 1x WiFi, 1x Bluetooth
- Connection ports: 2x USB 2.0, 1x COM (RS-232/422/485), 2x Gigabit Ethernet, 1x Display port, 1x HDMI
- Expansion slots: 1x full-size mini PCIe slot with optional interface (2), 1x M.2 slot for extension (not for storage) (3), 1x SD card slot
- Power supply: 12-24 V, AC with optional external adapter HMIYPSOMAC1

The operating systems, storage devices, and expansion slots are as follows:

- **HMIBSCA53D1L0T**
  - Operating system: Linux Yocto with secure password boot
  - RAM: 1 GB DDR3 (1)
  - Default storage device: 8 GB eMMC
  - Software: Node-RED
  - Default TPM module for encryption

- **HMIBSCA53D1L01**
  - Operating system: Linux Yocto with secure password boot
  - RAM: 1 GB DDR3 (1)
  - Default storage device: 8 GB eMMC
  - Software: Node-RED
  - Connector for optional TPM module

- **HMIBSCA53D1L0A**
  - Operating system: Linux Yocto with secure password boot
  - RAM: 2 GB DDR3 (1)
  - Default storage device: 64 GB eMMC
  - Software: Node-RED
  - Conformal coating
  - Connector for optional TPM module

(1) Memory is not user-expandable.
(2) For mini PCIe card, cellular 4G or 8x analog input interface 0-10 V.
(3) For M.2 card, 2x analog input interface 0-10 V / 4-20 mA.
Description

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core

Front view
1 SD card slot (1)
2 LEDs and reset button

Top view
3 SMA connector for the GPRS/4G external antenna
4 Optional interface
5 SMA connector for the WLAN external antenna

Underside view
6 USB1 (USB 2.0)
7 HDMI port
8 ETH1 (10/100/1000 Mbps) IEEE1588
9 COM port RS-232/422/485 (non-isolated) (2)
10 Ground connection pin
11 USB2 (USB 2.0)
12 ETH2 (10/100/1000 Mbps) IEEE1588
13 GPIO
14 DC power connector

(1) The default OS can be restored with the SD card.
(2) RS-232 (default setting) and RS-422/485 (software setting).
# Harmony iPC

**Industrial PC, Edge Box, and Display**  
**Harmony Edge Box**  
**HMIBSC Edge Box Core**

## Harmony HMIBSC Edge Box Core

Qualcomm ARM Cortex-A53 quad-core processor up to 1.2 GHz/24 V supply voltage \(^{(1)}\)

<table>
<thead>
<tr>
<th>Mini PCIe slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM (^{(2)})</th>
<th>Reference</th>
<th>Weight (\text{kg/ lb} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 2 expansion slots</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1x mini PCIe, full-size</td>
<td>Linux Yocto</td>
<td>Node-RED</td>
<td>8 GB eMMC</td>
<td>1 GB</td>
<td>HMIBSCEA53D1L0T</td>
<td>1.00/ 2.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HMIBSCEA53D1L01</td>
<td>1.00/ 2.20</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64 GB eMMC</td>
<td>2 GB</td>
</tr>
</tbody>
</table>

### Drives

<table>
<thead>
<tr>
<th>Description</th>
<th>Compatible with Harmony HMIBSC</th>
<th>Reference</th>
<th>Weight (\text{kg/ lb} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD card industrial grade 16 GB for HMIBSC</td>
<td>All models</td>
<td>HMIYSD016C1</td>
<td>–</td>
</tr>
<tr>
<td>SD card industrial grade 64 GB for HMIBSC</td>
<td>All models</td>
<td>HMIYSD064C1</td>
<td>–</td>
</tr>
</tbody>
</table>

### Separate Components

#### Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIBSC</th>
<th>Reference</th>
<th>Weight (\text{kg/ lb} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintenance kit for HMIBSC</td>
<td>Includes: screws, USB holder, power connector, rubber</td>
<td>All models</td>
<td>HMIYBMKTBS1</td>
<td>–</td>
</tr>
<tr>
<td>TPM 2.0 cybersecurity module for HMIBSC</td>
<td>TPM cybersecurity module for HMIBSC</td>
<td>All models</td>
<td>HMIYBINLTPM201</td>
<td>–</td>
</tr>
<tr>
<td>1x WiFi/ Bluetooth antenna for Harmony iPC</td>
<td>AC power adapter (60 W)</td>
<td>All models</td>
<td>HMIYPSOMAC1</td>
<td>–</td>
</tr>
<tr>
<td>AC power supply (60 W)</td>
<td>Modular AC power adapter (100 W)</td>
<td>All models</td>
<td>HMIYMMAC1</td>
<td>–</td>
</tr>
<tr>
<td>UPS battery</td>
<td>UPS battery for HMIBSC (no cables)</td>
<td>All models</td>
<td>HMIYMUPS1</td>
<td>–</td>
</tr>
<tr>
<td>UPS cable</td>
<td>UPS cables for HMIBSC (3 m/9.84 ft)</td>
<td>All models</td>
<td>HMIYCBUPS31</td>
<td>–</td>
</tr>
</tbody>
</table>

\(^{(1)}\) AC with additional power supply module.  
\(^{(2)}\) Memory is not user-expandable.  
\(^{(3)}\) With default TPM module.  
\(^{(4)}\) With conformal coating.
## Harmony iPC
Industrial PC, Edge Box, and Display
Harmony Edge Box
HMIBSC Edge Box Core

### Separate Components (continued)

<table>
<thead>
<tr>
<th>Interfaces</th>
<th>Details</th>
<th>Compatible with Harmony HMIBSC</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
</table>
| **Mini PCIe**
8x analog input interface 0-10 V | Mini PCIe with 8x analog inputs 0-10 V | All models | HMIYMIN8AI1 | – |
| **M.2**
2x analog input interface
0-10 V/4-20 mA | M.2 with 2x analog inputs 0-10 V or 4-20 mA selected by switch. | All models | HMIYBIN2AIM21 | – |
| **Cellular 4G**
interface for North America | Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna | All models | HMIYMIN4GUS1 | – |
| **Cellular 4G**
interface for Europe and Asia | Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna | All models | HMIYMIN4GEU1 | – |

### Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with HMIBSC</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable for 4G card in HMIBSC 5 m/16.40 ft</td>
<td>Remote cable for 4G card in Iot Box Core HMIBSC (5 m/16.40 ft)</td>
<td>All models</td>
<td>HMIYCA4GAN51</td>
<td>–</td>
</tr>
</tbody>
</table>
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box/Modular Box PC and HMIDM Modular Display

Harmony HMIBM Edge Box/Modular Box PC
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  - Presentation ........................................ page 4/10
  - Description ........................................... page 4/11
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- HMIBMO Optimized
  - Presentation ........................................ page 4/12
  - Description ........................................... page 4/13
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- HMIBMU Universal and HMIBMP Performance
  - Presentation ........................................ page 4/14
  - Harmony HMIBMU Universal .................... page 4/15
  - Harmony HMIBM Performance ................. page 4/15
  - Description
    - Harmony HMIBMU Universal and HMIBMP Performance
      2 expansion slots ................................ page 4/16
    - Harmony HMIBMU Universal and HMIBMP Performance
      4 expansion slots ................................ page 4/17
  - References .......................................... page 4/18
    - HMIBMU Universal ................................ page 4/19
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  - Separate components
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    - Software and Secure remote access .......... page 4/22
    - Interfaces ....................................... page 4/22
  - Configured-To-Order: Harmony HMIBM Modular Box PC
    and HMIDM Modular Display .................... page 4/32
  - Equivalent product table ...................... page 4/33

Harmony HMIDM Modular Display
Selection guide ........................................ page 4/24

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  - Overview of the offer
    - Harmony HMIDM Modular Display ............ page 4/26
    - Architecture .................................... page 4/26

- References
  - Harmony HMIDM Modular Displays ............ page 4/27
  - Separate components ........................... page 4/27
  - Configured-To-Order: Harmony HMIBM Modular Box PC
    and HMIDM Modular Display .................... page 4/32
  - Equivalent product table ...................... page 4/33

Harmony HMIDAD Display Adapter
- Presentation ........................................ page 4/28
- Description ........................................ page 4/28
- Architecture ...................................... page 4/28
- Configuration .................................... page 4/29
- Example of displays connected to Harmony HMIBMO ......... page 4/30
- References ........................................ page 4/31
## Selection guide

**Harmony iPC**

**Industrial PC, Edge Box, and Display**

**Harmony Edge Box and Modular Box PC**

**HMIBM Basic**

### Table: Harmony HMIBM Edge Box Modular Box PC

<table>
<thead>
<tr>
<th><strong>Type of Harmony Edge Box and PC</strong></th>
<th><strong>Harmony HMIBM Edge Box Modular Box PC</strong></th>
<th><strong>Harmony HMIBM Basic Modular Box PC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fantas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Box PC</td>
<td>Panel PC</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Processor</strong></td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
</tr>
<tr>
<td><strong>Minutes expansion slots</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>eMMC</strong></td>
<td>64 GB eMMC (soldered and not user-expandable)</td>
<td>64 GB eMMC (soldered and not user-expandable)</td>
</tr>
<tr>
<td><strong>4 GB DDR3 (not user-expandable)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BIOS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Battery backup</strong></td>
<td>Optional</td>
<td></td>
</tr>
<tr>
<td><strong>Cybersecurity encryption</strong></td>
<td>TPM 2.0 module (pre-installed)</td>
<td>Connector for TPM 2.0 module (5)</td>
</tr>
<tr>
<td><strong>Operating system</strong></td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
</tr>
<tr>
<td><strong>Conformal coating</strong></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td><strong>Supply voltage</strong></td>
<td>12-24 V or 100…240 V ~ with power adapter HMIPYSOMAC1</td>
<td>12-24 V or 100…240 V ~ with power adapter HMIPYSOMAC1</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>20 W</td>
<td></td>
</tr>
<tr>
<td><strong>Power interface</strong></td>
<td>Ethernet</td>
<td></td>
</tr>
<tr>
<td><strong>Power interface</strong></td>
<td>2x RJ45 Ethernet 10/100/1000 Mbps</td>
<td></td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>1x USB 2.0, 1x USB 3.0</td>
<td></td>
</tr>
<tr>
<td><strong>Video Interface</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Antenna connectors</strong></td>
<td>2x for WLAN antenna, 1 for GPSR antenna</td>
<td></td>
</tr>
<tr>
<td><strong>Reset button and buzzer</strong></td>
<td>Timer with 255 levels/intervals, programmable, 1...255 s</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Overall dimensions (W x H x D)</strong></td>
<td>187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.</td>
<td>187 x 150 x 46 mm/7.36 x 5.91 x 1.81 in.</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>Conforming to EN/IEC 60068-2-30: 0…50 °C / 32…122 °F (6)</td>
<td>Conforming to EN/IEC 60068-2-30: 0…50 °C / 32…122 °F (6)</td>
</tr>
<tr>
<td><strong>Vibration resistance</strong></td>
<td>Conforming to IEC 68-2-1: 2 g from 5…500 Hz</td>
<td>Conforming to IEC 68-2-1: 2 g from 5…500 Hz</td>
</tr>
<tr>
<td><strong>Standards and certifications</strong></td>
<td>CE, cULus ITE (UL 60950), CSA T6 (6950), EAC, CCC, FCC (part 15 EMC Class A)</td>
<td>CE, cULus ITE (UL 60950), CSA T6 (6950), EAC, CCC, FCC (part 15 EMC Class A)</td>
</tr>
<tr>
<td><strong>Software, IoT and Cybersecurity</strong></td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (7), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (7), McAfee whitelisting (2), EcoStruxure Secure Connect Advisor (3), Secure password boot UEFI</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>HMIBMIEASD1001L</td>
<td>HMIBMIEASD1001A</td>
</tr>
<tr>
<td><strong>Page</strong></td>
<td>4/18</td>
<td>4/32</td>
</tr>
</tbody>
</table>

(1) To be installed and activated by unlimited license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPAMZ (Paper).
(2) McAfee whitelisting to be installed and requires license sticker HMIMYSWINK01 to be applied.
(3) To be installed and activated with subscription.
(4) Node-RED to be installed or through USB key Windows 10 Recovery process (*"Windows 10 with Node-RED for IoT Box" option to be selected.*)
(5) For Cybersecurity, TPM, optional module HMIBMITEH (for hardware encryption with Windows bitlocker).
(6) Except with optional interface installed. Limited to 45 °C/113 °F.
### Selection Guide

**Harmony iPC**  
Industrial PC, Edge Box, and Display  
Harmony Edge Box and Modular Box PC  
HMIBMO Optimized

#### Type of Harmony Edge Box and IPC

<table>
<thead>
<tr>
<th>Harmony HMIBMO Edge Box Modular</th>
<th>Harmony HMIBMO Optimized Modular Box PC (regular)</th>
<th>Harmony HMIBMO Optimized Modular Box PC (expandable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fanless</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Box PC</td>
<td>Box PC</td>
<td>Box PC</td>
</tr>
<tr>
<td>Panel PC</td>
<td>Panel PC</td>
<td>Panel PC</td>
</tr>
<tr>
<td>CPU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processor</td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
<td>Intel Atom Apollo Lake E3930 dual-core 1.8 GHz</td>
</tr>
<tr>
<td>Mini PCIe expansion slots with interface</td>
<td>1x full-size slot without optional interface</td>
<td>1x full-size slot without optional interface</td>
</tr>
<tr>
<td>Storage</td>
<td>M.2 SSD 512 GB (2)</td>
<td>M.2 SSD 250 GB (2)</td>
</tr>
<tr>
<td>Main drive</td>
<td>M.2</td>
<td>M.2</td>
</tr>
<tr>
<td>RAM</td>
<td>2 GB DDR3 (not user-expandable)</td>
<td>2 GB DDR3 (not user-expandable)</td>
</tr>
<tr>
<td>Battery backup</td>
<td>Optional</td>
<td>Optional</td>
</tr>
<tr>
<td>Cybersecurity encryption</td>
<td>TPM 2.0 module (pre-installed)</td>
<td>Connector for TPM 2.0 module</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating system</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0</td>
</tr>
<tr>
<td>Conformal coating</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>12-24 V or 100…240 V w. power adapter HMYPSSOMC1</td>
<td></td>
</tr>
<tr>
<td>Power consumption</td>
<td>25 W</td>
<td>25 W</td>
</tr>
<tr>
<td>Interface</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethernet</td>
<td>2x RJ45 Ethernet 10/100/1 Gbps &quot;1210 IEEE1588&quot;</td>
<td>2x RJ45 Ethernet 10/100/1,000 Mbps &quot;1210 IEEE1588&quot;</td>
</tr>
<tr>
<td>1x RS-232/422/485 non-isolated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USB</td>
<td>2x USB 2.0, 2x USB 3.0</td>
<td>2x USB 2.0, 2x USB 3.0</td>
</tr>
<tr>
<td>Video interface</td>
<td>2x display ports</td>
<td>2x display ports</td>
</tr>
<tr>
<td>Resolution</td>
<td>Up to 3200 x 2000 at 60 Hz</td>
<td>Up to 3200 x 2000 at 60 Hz</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>3x for WLAN antenna, 1x for GPS network antenna</td>
<td>2x for WLAN antenna, 1x for GPS network antenna</td>
</tr>
<tr>
<td>Watchdog timer</td>
<td>Timer with 255 levels/interval, programmable, 1...255 s</td>
<td>Timer with 255 levels/interval, programmable, 1...255 s</td>
</tr>
<tr>
<td>Reset button and button</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Overall dimensions (W x H x D)</td>
<td>187 x 150 x 38 mm/ 7.36 x 5.91 x 1.50 in</td>
<td>187 x 150 x 38 mm/ 7.36 x 5.91 x 1.50 in</td>
</tr>
<tr>
<td>Temperature during operation</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
</tr>
<tr>
<td>During storage</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
</tr>
<tr>
<td>Vibration resistance during operation</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
<td>Conforming to EN/IEC 60068-2-30: 0…55 °C/32…131 °F (6)</td>
</tr>
<tr>
<td>Standards and certifications</td>
<td>CE, UL61010-1/2/201, CSA 22.2 No. 142, IEC61508 (ANSI/ISA 12.2-1201) and CSA C22.2 No. 211, Class I, Division 2, RCM, CCC, CE ATEX and IECEx, Hazardous Zone 1/22, EAC, Marine DNV (without HDD)</td>
<td>CE, UL61010-1/2/201, CSA 22.2 No. 142, IEC61508 (ANSI/ISA 12.2-1201) and CSA C22.2 No. 211, Class I, Division 2, RCM, CCC, CE ATEX and IECEx, Hazardous Zone 1/22, EAC, Marine DNV (without HDD)</td>
</tr>
</tbody>
</table>

#### References

<table>
<thead>
<tr>
<th>Page</th>
<th>HMIBMOMASDD1011</th>
<th>HMIBMOMASDD1011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HMIBMOMASDD1011</td>
<td>HMIBMOMASDD1011</td>
</tr>
</tbody>
</table>

(1) M.2 SSD 1.5 Mbit/s H.1585F. 3 Years manufacturer warranty.  
(2) Requires HMATX2CH6COMC1 adapter.  
(3) To be installed and activated by unlimited license HMATW2CZLSPKZ (Digital) or HMATW2CZLSPMIZ (Paper).  
(4) With Configured-To-Order Harmony Modular Box PC.  
(5) McAfee whitelisting to be installed and requires license MTAHYFMCWCL101 to be applied.  
(6) To be installed and activated with subscription.  
(7) Node-RED to be installed or through USB key Windows 10 Recovery process.  
(8) Except with optional interface or HDD installed, limited to 45 °C/113 °F.

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**More technical information on www.schneider-electric.com**
Type of Harmony HMIBM Universal Modular Box PC

<table>
<thead>
<tr>
<th>Feature</th>
<th>Box PC: HMIBM Universal Modular Box PC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>18...36 V cc or 100...240 V AC supply with modular power adapter HMIBM1AC1</td>
</tr>
<tr>
<td>Power consumption</td>
<td>17.8 W typical, 33.6 W max.</td>
</tr>
<tr>
<td>Interface</td>
<td>Ethernet interface</td>
</tr>
<tr>
<td>Video</td>
<td>2x display ports</td>
</tr>
<tr>
<td>Antenna connectors</td>
<td>M.2/WAN antenna, 1x hot swap antenna</td>
</tr>
<tr>
<td>Reset button and buzzer</td>
<td>Yes</td>
</tr>
<tr>
<td>Overall dimensions</td>
<td>With 2 slots (2 mini PCIe)</td>
</tr>
<tr>
<td></td>
<td>With 4 slots (2 mini PCIe + 2 PCIe)</td>
</tr>
<tr>
<td>Temperature</td>
<td>Conforming to EN 60068-2-30 for wall/book mounting: 0...55 °C/2…131 °F (4), for flat mounting: 50 °C/122 °F (5)</td>
</tr>
<tr>
<td>Vibration resistance</td>
<td>Conforming to EN 60068-2-30 for wall/book mounting: 0...55 °C/2…131 °F (4), for flat mounting: 50 °C/122 °F (5)</td>
</tr>
<tr>
<td>Standards and certifications</td>
<td>CE, cULus industrial control (UL 91010-2-201, CSA 22.2 No. 142), cULus HaLacLoc (ANSI/ISA 12.12.01 and CSA 22.2 No. 213, Class I, Division 2), RCM, CCC, CE ATEX and IECEx HaLacLoc 3D/2 Zone 22, EAC</td>
</tr>
<tr>
<td>Software, IoT and Cybersecurity</td>
<td>EcoStruxure Machine SCADA Expert Run Time Demo (3), EcoStruxure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (8), EcoStruxure Secure Connect Advisor (9)</td>
</tr>
<tr>
<td>References</td>
<td>No PCIe/PCI expansion slots</td>
</tr>
<tr>
<td></td>
<td>1 PCIe (x4) + 1 PCI</td>
</tr>
<tr>
<td></td>
<td>2 PCIe</td>
</tr>
<tr>
<td></td>
<td>1 PCIe (x4) + 1 PCI</td>
</tr>
</tbody>
</table>

Configured-To-Order See configured Harmony Modular Box PC on page 4/33

(1) HMIBMUM1AC1 is an option only when DC/DC converter expansion cards above 3 W are installed.
(2) 5-year Intel warranty and 1.5 million hours MTBF. For high performance, user can preferably use the configuration with 240 GB SSD.
(3) EcoStruxure Operator Terminal Expert Run Time demo to be installed and activated by unlimited license HMIBM2CLSPHZ (Digital) or HMIBM2CLSPHZ (Paper).
(4) Except with HDD or HDD Modular Display or with PCIe cards up to 45 °C/158 °F.
(5) Except with HDD, mini PCIe cards or PCIe card mounted which is up to 40 °C/104 °F.
(6) Wall/Right side - front or flat mounting: 50 °C/122 °F (5).
(7) Free storage slot requires slide-in HMIYMADSDD1 to mount HDD/SSD 2.
(8) For Windows 10 operating system. Requires user downgrade to TPM 1.2, with utility tool provided.
(9) To be installed and activated with subscription.
(10) With Configured-To-Order Harmony Modular Box PC.
### Harmony iPC

**Industrial PC, Edge Box, and Display**
**Harmony HMIBMP Module Box PC**
**HMIBMP Performance**

#### Type of Harmony iPC Box and IPC

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PowerAll</td>
<td>Box PC, Panel PC, Fanless</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel Core i7-4805U (1.7 GHz, low power with turbo boost at 3.35GHz)</td>
</tr>
<tr>
<td>Storage</td>
<td>SSD ≥ 128 GB (2)</td>
</tr>
<tr>
<td>RAM/PM</td>
<td>8 GB DDR3 (not user-expandable)/512 KB non-volatile RAM with 300 KB for user</td>
</tr>
<tr>
<td>Hot-swap RACK/HS and battery backup</td>
<td>Optional</td>
</tr>
</tbody>
</table>

#### Cybersecurity encryption
- Connector for TPM 1.2 module (8)
- Windows 10 IoT Enterprise (64-bit Multi-language) (9)
- Node-RED and McAfee whitelisting to be installed and requires licence sticker HMIYYMACWLIOT1 to be applied (9)
- EcoStruxure Secure Connect Advisor (9)
- EcoStruxure Machine SCADA Expert Run Time, Node-RED, and McAfee whitelisting (6)
- EcoStructure Secure Connect Advisor (6)

#### Operating system
- 18...36 °C; or 100...240 V/≤ 500 mA supply with modular power adapter HRMYYMAC1 (1)
- 18.1 W typical, 38.4 W max (2)
- 2x RJ45 Ethernet 10/100/1000 Mbps “i210 IEEE1588” (3)
- 2x RS-232/422/485 isolated with auto flow control (4)
- 2x display ports (1 port is disabled when HMIDM Modular Display is mounted on the front) (5)
- Up to 3000 × 2000 at 60 Hz (6)
- 2x for WLAN antenna, 1 for GPRS antenna (7)

#### Reset button and buzzer
- Yes

#### Overall dimensions (W x H x D)
- With 4 slots (2 mini PCIe + 2 PCI/PCIe) 254 × 207 × 103.2 mm/10 × 8 × 4 in
- With 2 slots (2 PCIe) 254 × 207 × 103.2 mm/10 × 8 × 4 in

#### Temperature
- During operation Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (9)
- Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (9)
- During storage Conforming to IEC 60068-2-5: 0...55 °C (12), 70–100 °C, 70–100 °C, 70–100 °C
- Conforming to IEC 60664-1: 2 g from 5...500 Hz (10)

#### Vibration resistance
- During operation Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (9)
- Conforming to IEC 61000-4-6: 5% S001–10% S011–30% S222, Marine DNV (without HDD), RCM, CCC, EAC (11)
- Conforming to IEC 61000-4-6: 5% S001–10% S011–30% S222, Marine DNV (without HDD), RCM, CCC, EAC (11)
- EcoStructure Operator Terminal Expert Run Time (8)
- EcoStructure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStructure Secure Connect Advisor (6)

#### Standards and certifications
- CE, cULus industrial control (UL 61010-2-01, CSA 22.2 No. 142), cULus Hazardous (ANSI/ISA 12.12.01 and CSA 22.2 No. 213, Class I, Division 2), CE and IECEx Hazardous Zone 222, Marine DNV (without HDD), RCM, CCC, EAC (10)
- EcoStructure Operator Terminal Expert Run Time (8)
- EcoStructure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStructure Secure Connect Advisor (6)

#### Software, IoT and Cybersecurity
- EcoStructure Operator Terminal Expert Run Time (8)
- EcoStructure Operator Terminal Expert Run Time Domain (9)
- EcoStructure Machine SCADA Expert Run Time (10), Node-RED and McAfee whitelisting (6), EcoStructure Secure Connect Advisor (6)

#### Environment
- Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F (9)
- Conforming to IEC 61000-4-6: 5% S001–10% S011–30% S222, Marine DNV (without HDD), RCM, CCC, EAC (11)
- Conforming to IEC 61000-4-6: 5% S001–10% S011–30% S222, Marine DNV (without HDD), RCM, CCC, EAC (11)

#### Configuration-To-Order
- See configured Harmony Module Box PC on page 4/12

---

(1) HMIBMP1K4M8MT fan is all-inclusive only when PCI/PCIe expansion cards above 3 W are installed.
(2) 5-year Intel warranty and 1 million hours MTBF.
(3) EcoStructure Operator Terminal Export Run Time Domain (8)
(4) SSD ≥ 512 GB, 24/7 Enterprise.
(5) Except with HDD + HMIDM Modular Display or with PCI/PCIe up to 45 °C/113 °F.
(6) Node-RED to be installed or through USB key Windows 10 Recovery process (“Windows 10 with Node-RED for IoT Box” option to be selected), McAfee whitelisting to be installed and requires license activation HRMYYMACG17 to be applied.
(7) Free storage slot required when HRMYYMACG17 to mount HDD/SSD 2.5”.
(8) For Windows 10 operating system. Requires user downgrade to TPM 1.2, with utility tool provided.
(9) To be installed and activated with subscription.
(10) With Configured-To-Order Harmony Modular Box PC.
Presentation

Harmony HMIBM support advanced automation applications requiring Windows operating systems, with powerful CPUs, expansion capabilities, high-availability options (RAID HDD, UPS), and advanced certifications. Their modularity means that HMIBM Box PCs can be converted to Panel PCs by combining them with HMIDM Displays. They can be used for IIoT at the edge of EcoStruxure for direct connection to Cloud applications (running Node-RED to wire from OT to IT) with enhanced cybersecurity by design.

In addition to the referenced offer, the flexibility offered by the modular design allows Configured-To-Order Harmony Box PC versions (see page 4/32).

Overview of the offer

Harmony HMIBM Basic

The Harmony HMIBM Basic offer comprises 5 product references, each equipped with:

- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- 4 GB DDR3 RAM (1)
- Connection ports: 1x USB 3.0, 1x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit Ethernet, and 1x Display port
- Expansion slots: 1x full-size mini PCIe slot with optional interface
- Power supply: 12-24 V AC with optional external adapter HMIYPSOMAC1

The operating systems, storage devices, and expansion slots are as follows:

- **HMIBMIEA5DD1E01 Edge Box**
  - Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
  - Default storage device: 64 GB eMMC (soldered, not user-expandable)
  - TPM encryption module, default mounted
  - Software: EcoStruxure Operator Terminal Expert + Node-RED (default)

- **HMIBMIEA5DD1101**
  - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
  - Default storage device: 64 GB eMMC (soldered, not user-expandable)
  - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)

- **HMIBMIEA5DD110L**
  - Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
  - Default storage device: 128 GB eMMC (soldered, not user-expandable)
  - Software: EcoStruxure Operator Terminal Expert + Node-RED (2)

- **HMIBMIEA5DD1001**
  - Operating system: None
  - Default storage device: 64 GB eMMC (soldered, not user-expandable)
  - Node-RED (2)

- **HMIBMIEA5DD100A**
  - Operating system: None
  - Default storage device: 128 GB eMMC (soldered, not user-expandable)
  - Node-RED (2)
  - Conformal coating: Yes

(1) Memory is not user-expandable.
(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where “Windows 10 with Node-RED for IIoT Box” option has to be selected.
**Description**

**Harmony iPC**
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBMI Basic

---

**Front view**
1. Display port
2. LEDs and power/reset button

---

**Top view**
3. SMA connector for the WLAN A external antenna
4. SMA connector for the cellular 4G external antenna
5. SMA connector for the WLAN B external antenna

---

**Underside view, 1 expansion slot**
6. DC power connector
7. COM port RS-232 (non-isolated), RS-422/485 (non-isolated)
8. USB1 (USB 2.0)
9. USB2 (USB 3.0)
10. Eth1 (10/100/1000 Mbps) IEEE1588
11. Eth2 (10/100/1000 Mbps) IEEE1588
12. Optional interface
13. Ground connection pin
Presentation (continued)

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBM MO Optimized

Overview of the offer (continued)

The Harmony HMIBM MO Optimized Box PC offer comprises 6 references, each equipped with:
- Fanless Intel Atom Apollo Lake E3930 dual-core processor, 1.8 GHz
- Connection ports: 2x USB 3.0, 2x USB 2.0, 1x COM (RS-232/422/485), 2 Gigabit i210 Ethernet, and 2x Display port
- Expansion slots: 1x full-size mini PCIe slot
- Power supply: 12-24 V: AC with additional power supply module HMIYPSOMAC1
- Expandable models have 1x optional interface for external connection to mini PCIe cards mounted in the internal slot and 1x HDD/SSD 2.5" slot (3)

The operating systems, storage devices, and expansion slots are as follows:

HMIBM EMA5DD01E01 Edge Box
- Operating system: Windows 10 IoT Enterprise LTSC (64-bit) + TPM 2.0
- RAM: 4 GB DDR3 (1)
- Default storage device: 64 GB M.2 SSD
- TPM encryption module, default mounted
- Software: EcoStruxure Operator Terminal Expert + Node-RED (default)
- 1x mini PCIe without optional interface (for wireless cards only)

HMIBM OMA5DD1101
- Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
- RAM: 4 GB DDR3 (1)
- Default storage device: 64 GB M.2 SSD
- Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- 1x mini PCIe without optional interface (for wireless cards only)

HMIBM OMA5DD1001
- Operating system: None
- RAM: 4 GB DDR3 (1)
- Default storage device: None
- Software: None
- 1x mini PCIe without optional interface (for wireless cards only)

HMIBM OMA5DDF10L
- Operating system: Windows 10 IoT Enterprise LTSC (64-bit)
- RAM: 4 GB DDR3 (1)
- Default storage device: 250 GB M.2 SSD
- Software: EcoStruxure Operator Terminal Expert + Node-RED (2)
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

HMIBM OMA5DDF101
- Operating system: None
- RAM: 4 GB DDR3 (1)
- Default storage device: None
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

HMIBM OMA5DDF10A
- Operating system: None
- RAM: 8 GB DDR3 (1)
- Default storage device: None
- Conformal coating
- Expandable with 1x optional interface for mini PCIe + 1x HDD/SSD 2.5" slot (3)

(1) Memory is not user-expandable.
(2) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where “Windows 10 with Node-RED for IIoT Box” option has to be selected.
(3) 2.5" HDD/SSD requires HMIYBADHDD8MO1 adapter to be mounted.
### Description (continued)

**Harmony iPC**

Industrial PC, Edge Box, and Display

**Harmony HMIBM Edge Box and Modular Box PC**

**HMIBMO Optimized**

<table>
<thead>
<tr>
<th>Front view</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Display Port 2</td>
</tr>
<tr>
<td>2</td>
<td>Display Port 1</td>
</tr>
<tr>
<td>3</td>
<td>LEDs and power/reset button</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Top view</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>SMA connector for the WLAN A external antenna</td>
</tr>
<tr>
<td>5</td>
<td>SMA connector for the cellular 4G external antenna</td>
</tr>
<tr>
<td>6</td>
<td>SMA connector for the WLAN B external antenna</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underside view “regular version” (1)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>DC power connector</td>
</tr>
<tr>
<td>8</td>
<td>COM1 port RS-232 (non-isolated)</td>
</tr>
<tr>
<td>9</td>
<td>COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)</td>
</tr>
<tr>
<td>10</td>
<td>USB1 and USB2 (USB 2.0)</td>
</tr>
<tr>
<td>11</td>
<td>USB3 and USB4 (USB 3.0)</td>
</tr>
<tr>
<td>12</td>
<td>Eth1 (10/100/1000 Mbps) IEEE1588</td>
</tr>
<tr>
<td>13</td>
<td>Eth2 (10/100/1000 Mbps) IEEE1588</td>
</tr>
<tr>
<td>14</td>
<td>Ground connection pin</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underside view “expandable version” (2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>DC power connector</td>
</tr>
<tr>
<td>8</td>
<td>COM1 port RS-232 (non-isolated)</td>
</tr>
<tr>
<td>9</td>
<td>COM2 port RS-232 (non-isolated), RS-422/485 (non-isolated)</td>
</tr>
<tr>
<td>10</td>
<td>USB1 and USB2 (USB 2.0)</td>
</tr>
<tr>
<td>11</td>
<td>USB3 and USB4 (USB 3.0)</td>
</tr>
<tr>
<td>12</td>
<td>Eth1 (10/100/1000 Mbps) IEEE1588</td>
</tr>
<tr>
<td>13</td>
<td>Eth2 (10/100/1000 Mbps) IEEE1588</td>
</tr>
<tr>
<td>14</td>
<td>Optional interface</td>
</tr>
<tr>
<td>15</td>
<td>Ground connection pin</td>
</tr>
</tbody>
</table>

(1) Regular version: HMIBMOMA5DD1101, HMIBMOMA5DD1E01, HMIBM0ADD1001
(2) Expandable version: HMIBMOMA5DDF10L, HMIBM00A5DDF101, HMIBM00A5DDF10A
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBM Universal and HMIBMP Performance

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBM Universal

The Harmony HMIBM Universal Box PC offer comprises 12 references, each equipped with:
- Fanless Intel® Celeron 2980U processor (1.6 GHz) (2)
- 4 GB or 8 GB DDR3 RAM (3)
- 512 KB non-volatile MRAM with 300 KB for user
- Connection ports: 2 USB 3.0, 2 USB 2.0, 1 COM (RS-232, RS-232/422/485), 2 Gigabit Ethernet, and 2 Display ports (1)
- Expansion slots: 2 full-size mini PCIe slots, 0 or 2 full-size PCI/PCIe slots (2)
- Power supply: 24 V c, AC with additional power supply module HMIYMMAC1

The operating systems, storage devices, and expansion slots are as follows:
- With 4 GB DDR3 RAM (3), and 2 full-size mini PCIe slots:
  - HMIBMUCI29D2W01:
    - Operating system: WES 7 Premium SP1 (64-bit Multi-language)
    - Default storage device: 32 GB CFast card
  - HMIBMUSI29D2801:
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
  - HMIBMUHI29D2801:
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 500 GB HDD (Enterprise 24/7)
  - HMIBMU0I29D2001:
    - Operating system: None
    - Default storage device: None

- With 4 GB DDR3 RAM (3), 2 full-size mini PCIe slots and 1 PCI + 1 PCIe (x4) (2):
  - HMIBMUCI29D4W01:
    - Operating system: WES 7 Premium SP1 (64-bit Multi-language)
    - Default storage device: 32 GB CFast card
  - HMIBMUSI29D4801:
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
  - HMIBMUHI29D4801:
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 500 GB HDD (Enterprise 24/7)
  - HMIBMU0I29D4001:
    - Operating system: None
    - Default storage device: None

- With 8 GB DDR3 RAM (3), conformal coating, and without operating system/default storage device:
  - HMIBMU029D200A:
    - 2 full-size mini PCIe slots
  - HMIBMU029D400A:
    - 2 full-size mini PCIe slots, 1 PCI + 1 PCIe (x4) (2)
  - HMIBMU029DI00A:
    - 2 full-size mini PCIe slots, 2 PCI (2)
  - HMIBMU029DE00A:
    - 2 full-size mini PCIe slots, 1 PCIe (x1) + 1 PCIe (x4) (2)

(1) When Modular Box PC is mounted on Display, Display port 2 has no function.
(2) HMIYBFKT4BM1 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
(3) Memory is not user-expandable.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBMU Universal and HMIBMP Performance

Presentation (continued)

Overview of the offer (continued)

Harmony HMIBMP Performance

The Harmony HMIBMP Performance Box PC offer comprises 10 references, each equipped with:

- Fanless Intel® Core i7-4650U processor (1.7 GHz) (2)
- 8 GB or 16 GB DDR3 RAM (3)
- 512 KB non-volatile MRAM with 300 KB for user
- Connection ports: 2 USB 3.0, 2 USB 2.0, 1 COM (RS-232/422/485), 2 Gigabit Ethernet, and 2 Display ports (1)
- Expansion slots: 2 full-size mini PCIe slots, 0 or 2 full-size PCI/PCIe slots
- Power supply: 24 V =, AC with additional power supply module HMIFMMAC1

The operating systems, storage devices, and expansion slots are as follows:

- With 8 GB DDR3 RAM (3), and 2 full-size mini PCIe slots (2):
  - HMIBMPsi74D2801
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
  - HMIBMPHi74D2801
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 500 GB HDD (Enterprise 24/7)
  - HMIBMP0i74D2001
    - Operating system: None
    - Default storage device: None

- With 8 GB DDR3 RAM (3), 2 full-size mini PCIe slots and 1 PCI + 1 PCIe (x4) (2):
  - HMIBMPsi74D4801
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 128 GB SSD (5-year manufacturer warranty and 1.5 million hours MTBF)
  - HMIBMPHi74D4801
    - Operating system: Windows 10 IoT Enterprise (64-bit Multi-language)
    - Default storage device: 500 GB HDD (Enterprise 24/7)
  - HMIBMP0i74D4001:
    - Operating system: None
    - Default storage device: None

- With 16 GB DDR3 RAM (3), conformal coating, and without operating system and default storage device:
  - HMIBMP0i74D200A
    - 2 full-size mini PCIe slots
  - HMIBMP0i74D400A
    - 2 full-size mini PCIe slots, 1 PCI + 1 PCIe (x4) (2)
  - HMIBMP0i74DI00A
    - 2 full-size mini PCIe slots, 2 PCI (2)
  - HMIBMP0i74DE00A
    - 2 full-size mini PCIe slots, 1 PCIe (x1) + 1 PCIe (x4) (2)

(1) When Modular Box PC is mounted on Display, Display Port 2 has no function.
(2) HMIBF44A01 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
(3) Memory is not user-expandable.
**Description (continued)**

**Harmony iPC**
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBM Universal and HMIBMP Performance

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**Description**
Harmony HMIBM Universal and HMIBMP Performance, 2 expansion slots

**Front view**

1. Display port 2 (1)
2. Slide-in CFast card slot
3. Power status indicator (Green: On, Orange: Stand-by, No light: Off)
4. SATA status indicator (Green: On (Storage data transmit), Off (No storage data transmit))
5. CMOS status indicator (Orange: On (RTC voltage < 3 V), Off (RTC voltage > 3 V))
6. Fanless heat sink
7. Power supply/Reset button
8. Programmable status indicators (RUN/STOP and ERR LEDs)
9. HDD/SSD 2 (hot-swap and can be redundant RAID configuration) (2)
10. HDD/SSD 1 (hot-swap and can be redundant RAID configuration) (2)

**Top view**

11. SMA connector for wireless LAN external antenna
12. SMA connector for Cellular 4G external antenna
13. SMA connector for wireless LAN external antenna

**Underside view**

14. DC power connector
15. Ground connection pin
16. COM1 port RS-232/422/485 (isolated), can be used for communication with HMIBMUPSKT1 UPS battery
17. Optional interface 2 with full-size mini PCIe slot
18. Optional interface 1 with full-size mini PCIe slot
19. Display port 1
20. Eth1 (10/100/1,000 Mbps) IEEE1588
21. Eth2 (10/100/1,000 Mbps) IEEE1588
22. USB1 and USB2 (USB 3.0)
23. USB3 and USB4 (USB 2.0)

(1) When Modular Box PC is mounted on Display, Display port 2 has no function.
(2) Free storage slot requires slide-in HMIBMADSDD1 to mount HDD/SSD 2.5".
**Description (continued)**

**Harmony iPC**
Industrial PC, Edge Box, and Display
Harmony HMIBM Modular Box PC
HMIBMU Universal and HMIBMP Performance

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**Description**

**Harmony HMIBMU Universal and HMIBMP Performance, 4 expansion slots**

**Front view**

1. Display port 2 (1)
2. Slide-in CFast card slot
3. Power status indicator (Green: On, Orange: Stand-by, No light: Off)
4. SATA status indicator (Green: On (Storage data transmit), Off (No storage data transmit))
5. CMOS status indicator (Orange: On (RTC voltage < 3 V c), Off (RTC voltage > 3 V c))
6. Fanless heat sink
7. Power supply/Reset button
8. Programmable status indicators (RUN/STOP and ERR LEDs)
9. HDD/SSD 2 (hot-swap and can be redundant RAID configuration) (2)
10. HDD/SSD 1 (hot-swap and can be redundant RAID configuration) (2)

**Top view**

11. SMA connector for wireless LAN external antenna
12. SMA connector for Cellular 4G external antenna
13. SMA connector for wireless LAN external antenna

**Underside view**

14. DC power connector
15. Ground connection pin
16. COM1 port RS-232/422/485 (isolated), can be used for communication with HMIYMPST1 UPS battery
17. Optional interface 1 with full-size mini PCIe slot
18. Optional interface 2 with full-size mini PCIe slot
19. Display port 1
20. 2x PCI/PCIe slots (3)
21. Eth1 (10/100/1,000 Mbps) IEEE1588 (3)
22. Eth2 (10/100/1,000 Mbps) IEEE1588 (3)
23. USB1 and USB2 (USB 3.0)
24. USB3 and USB4 (USB 2.0)

(1) When Modular Box iPC is mounted on Display, Display port 2 has no function.
(2) Free storage slot requires slide-in HMIYMASD1 to mount HDD/SSD 2 5”.
(3) HMIYFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIBM Edge Box and Modular Box PC
HMIBMI Basic and HMIBMO Optimized

Ready-to-run Software, IIoT and Cybersecurity

Harmony HMIBM are supported by Schneider Electric HMI software. For HMI applications, EcoStruxure Operator Terminal Expert Run Time demo version can be downloaded and activated to unlimited version with HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper) license. For line management and life supervision, EcoStruxure Machine SCADA Expert Run Time is available via Configured-To-Order process.

For secure remote access, Harmony HMIBM are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

For more information on EcoStruxure Operator Terminal Expert, EcoStruxure Secure Connect Advisor and EcoStruxure Machine SCADA Expert, please refer to our website www.schneider-electric.com.

The mother board of latest Harmony Modular Box PC are equipped with a pin header to install Cybersecurity whitelisting, the license sticker HMIYMACWLIOT1 is required to be applied.

For IIoT connections to Cloud applications, Harmony HMIBM can run Node-RED. To activate McAfee HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).

For secure remote access, Harmony HMIBM are supported with EcoStruxure Secure Connect Advisor that will have to be installed and activated with subscription.

The mother board of latest Harmony Modular Box PC are equipped with a pin header to install Cybersecurity whitelisting, the license sticker HMIYMACWLIOT1 is required to be applied.

Harmony HMIBM Basic
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V ± supply voltage (1)

<table>
<thead>
<tr>
<th>Expansion slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM (2)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x mini PCIe, full-size with optional interface</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>64 GB eMMC (soldered)</td>
<td>4 GB</td>
<td>HMIBMIEAS6D1101</td>
<td>1.20/2.64</td>
</tr>
<tr>
<td>No</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>64 GB eMMC (soldered)</td>
<td>4 GB</td>
<td>HMIBMIEAS6D1001</td>
<td>1.20/2.64</td>
</tr>
<tr>
<td>No</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>128 GB eMMC (soldered)</td>
<td>4 GB</td>
<td>HMIBMIEAS6D110L</td>
<td>1.20/2.64</td>
</tr>
</tbody>
</table>

Harmony HMIBMO Optimized
Intel Atom Apollo Lake E3930 dual-core 1.8 GHz processor/24 V ± supply voltage (1)

Regular version (without optional interface)

<table>
<thead>
<tr>
<th>Expansion slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM (2)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x mini PCIe, full-size without optional interface</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>M.2 SSD 64 GB</td>
<td>4 GB</td>
<td>HMIBMOAS5DD1101</td>
<td>1.25/2.75</td>
</tr>
<tr>
<td>No</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>M.2 SSD 64 GB</td>
<td>4 GB</td>
<td>HMIBMOAS5DD1001</td>
<td>1.25/2.75</td>
</tr>
</tbody>
</table>

Expandable version (with Optional interface and HDD/SSD 2.5” slot (6))

<table>
<thead>
<tr>
<th>Expansion slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM (2)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1x mini PCIe, full-size with optional interface</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>M.2 SSD 250 GB</td>
<td>4 GB</td>
<td>HMIBMOAS5DDF10L</td>
<td>1.30/2.86</td>
</tr>
<tr>
<td>No</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>8 GB</td>
<td>4 GB</td>
<td>HMIBMOAS5DDF10A</td>
<td>1.30/2.86</td>
</tr>
<tr>
<td>No</td>
<td>Windows 10 IoT Enterprise LTSC (64-bit)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (5)</td>
<td>8 GB</td>
<td>4 GB</td>
<td>HMIBMOAS5DDF10B</td>
<td>1.30/2.86</td>
</tr>
</tbody>
</table>

(1) AC with additional power supply module HMIYPSOMAC1(or HMIYMMAC1 for HMIBM in hazardous locations).
(2) Memory is not user-expandable.
(3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTWCZLSPAZZ(Digital) or HMIRTWCZLSPMZZ (Paper).
(4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.
(5) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where “Windows 10 with Node-RED for IIoT Box” option has to be selected.
(6) 2.5”HDD/SSD requires HMIYBADHDDSBO1 adapter to be mounted.
(7) With conformal coating.
(8) Edge Box with TPM 2.0 default module.
### Harmony HMIBMU Universal

**Intel Celeron 2980U 1.6 GHz processor/24 V supply voltage**

<table>
<thead>
<tr>
<th>Expansion slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>With 2 expansion slots</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2x mini PCIe, full-size with optional interface</td>
<td>WES 7 Premium SP1 (64-bit Multi-language)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)</td>
<td>CFast card ≥ 32 GB</td>
<td>4 GB</td>
<td>HMIBMUCI29D2W01</td>
<td>3.100/6.800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HMIBMUSI29D2801</td>
<td>3.100/6.800</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HMIBMUHI29D2801</td>
<td>3.100/6.800</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>HMIBMUI29D2801</td>
<td>3.100/6.800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expansion slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>With 4 expansion slots</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2x mini PCIe, full-size with optional interface + 1x PCI + 1x PCIe (x4), full-size</td>
<td>WES 7 Premium SP1 (64-bit Multi-language)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7)</td>
<td>CFast card ≥ 32 GB</td>
<td>4 GB</td>
<td>HMIBMUCI29D4W01</td>
<td>3.900/8.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HMIBMUSI29D4801</td>
<td>3.900/8.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HMIBMUHI29D4801</td>
<td>3.900/8.600</td>
</tr>
</tbody>
</table>

- (1) AC with additional power supply module HMIYMMAC1.
- (2) Memory is not user-expandable.
- (3) EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIERTWCZLSPAZZ (Digital) or HMIERTWCZLSPMZ (Paper).
- (4) EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.
- (5) HMIYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
- (6) With conformal coating.
- (7) Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where "Windows 10 with Node-RED for IIoT Box" option has to be selected.
Harmony HMIBM Performance

<table>
<thead>
<tr>
<th>PCI slot</th>
<th>Operating system</th>
<th>Software</th>
<th>Storage disk</th>
<th>DDR3 RAM (2)</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>With 2 expansion slots</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7), HDD Enterprise 24/7 ≥ 500 GB</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIBMPSI74D2801</td>
<td>3.100/6.800</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EcoStruxure Secure Connect Advisor (4), Node-RED (7)</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIBMP0I74D2001</td>
<td>3.100/6.800</td>
</tr>
<tr>
<td>With 4 expansion slots (5)</td>
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</tr>
<tr>
<td></td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>EcoStruxure Operator Terminal Expert Run Time Demo (3), EcoStruxure Secure Connect Advisor (4), Node-RED (7), HDD Enterprise 24/7 ≥ 500 GB</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIBMPSI74D4801</td>
<td>3.900/8.600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>EcoStruxure Secure Connect Advisor (4), Node-RED (7)</td>
<td>SSD flash disk ≥ 128 GB with 1.5 million hours MTBF</td>
<td>8 GB</td>
<td>HMIBMP0I74D4001</td>
<td>3.900/8.600</td>
</tr>
</tbody>
</table>

1. AC with additional power supply module HMYYMMAC1.
2. Memory is not user-expandable.
3. EcoStruxure Operator Terminal Expert Run Time Demo to be installed and activated by unlimited license HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper).
4. EcoStruxure Secure Connect Advisor license has to be purchased. For more information please refer to our website www.schneider-electric.com.
5. HMYYBFKT4BM11 fan kit is required only when PCI/PCIe expansion cards above 3 W are installed.
6. With conformal coating.
7. Node-RED can be directly installed by user or through USB key Windows 10 Recovery process where “Windows 10 with Node-RED for IoT Box” option has to be selected.
## Separate components

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIBM</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drives</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFast card</td>
<td>32 GB MLC, blank</td>
<td>HMIBMU, HMIBMIP</td>
<td>HMIYCFM32S</td>
<td>–</td>
</tr>
<tr>
<td>Blank SSD with mounting screws</td>
<td>128 GB MLC (5-year warranty and 1.5 million hours MTBF)</td>
<td>HMIBMU (expandable), HMIBMIP</td>
<td>HMIYSDS300S1</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>256 GB MLC (5-year warranty and 2 million hours MTBF)</td>
<td>HMIBMU (expandable), HMIBMIP</td>
<td>HMIYSDS400S1</td>
<td>–</td>
</tr>
<tr>
<td>M.2 SSD</td>
<td>64 GB MLC (3-year warranty and 1.5 million hours MTBF)</td>
<td>HMIBMIP</td>
<td>HMIYM2064M1</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>128 GB MLC (3-year warranty and 1.5 million hours MTBF)</td>
<td>HMIBMIP</td>
<td>HMIYM2128M1</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>256 GB MLC (3-year warranty and 1.5 million hours MTBF)</td>
<td>HMIBMIP</td>
<td>HMIYM2256M1</td>
<td>–</td>
</tr>
<tr>
<td>Blank HDD</td>
<td>Spare 1 TB HDD, blank</td>
<td>HMIBMU (expandable), HMIBMIP</td>
<td>HMIYHHDD01T21</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Spare 500 GB HDD, blank</td>
<td>HMIBMU (expandable), HMIBMIP</td>
<td>HMIYHHDS0021</td>
<td>–</td>
</tr>
<tr>
<td>Slide-in for HDD/SSD</td>
<td>Slide-in to mount HDD/SSD 2.5&quot; in a storage slot of modular Box PC</td>
<td>HMIBMU, HMIBMIP</td>
<td>HMIYMADES1</td>
<td>–</td>
</tr>
<tr>
<td>Carrier for HDD/SSD</td>
<td>Carrier to mount an HDD/SSD 2.5&quot; in a storage slot of Harmony HMIBM expandable model</td>
<td>HMIBMIP (expandable)</td>
<td>HMIYBADHDDSD1</td>
<td>–</td>
</tr>
<tr>
<td>Accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance kit for HMIBM Box PCs + HMIDM</td>
<td>Includes:</td>
<td>All models</td>
<td>HMIYBMKTB1</td>
<td>–</td>
</tr>
<tr>
<td>Modular Displays</td>
<td>Screw and dampers for HDD/SSD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screws and clamps for panel mounting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modular Box cover screws</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Screws for mounting Box to Display</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Power connector and sticker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CFast card pull-out</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rubbers for display mounting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Filter for fan kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bracket, screws, and dampers for mini PCie</td>
<td></td>
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</tr>
<tr>
<td>Fan kit for HMIBM Box PC</td>
<td>Fan kit to mount PC/PCIe cards with a power consumption between 3 W to 10 W on a HMIBM Modular Box PC</td>
<td>HMIBMU and HMIBMIP (2 slot models)</td>
<td>HMIYBFKT48M1</td>
<td>–</td>
</tr>
<tr>
<td>USB key blank for iPC recovery</td>
<td>Spare USB memory key blank (1)</td>
<td>All models</td>
<td>HMIYUSBKK11</td>
<td>–</td>
</tr>
<tr>
<td>AC power supply (60 W)</td>
<td>AC power adapter (60 W)</td>
<td>HMIBM, HMIBMIP</td>
<td>HMIYPSOMAC1</td>
<td>–</td>
</tr>
<tr>
<td>AC power supply for HMIDM</td>
<td>Modular AC power adapter (100 W) (2)</td>
<td>All models</td>
<td>HMIYMAMC1</td>
<td>–</td>
</tr>
<tr>
<td>UPS battery</td>
<td>UPS battery for HMIBM (no cables)</td>
<td>All models</td>
<td>HMIYUMPST1</td>
<td>–</td>
</tr>
<tr>
<td>UPS cable</td>
<td>UPS cables for HMIBM (3 m/9.84 ft)</td>
<td>All models</td>
<td>HMIYCBUP3S1</td>
<td>–</td>
</tr>
<tr>
<td>VESA mounting kit</td>
<td>VESA mounting kit for HMIBM Box PC + HMIDM6 4:3 12” and W12” Display</td>
<td>HMIBMU, HMIBMIP (2 slot models)</td>
<td>HMIYPFESA6X21</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>VESA mounting kit for HMIBM Box PC + HMIDM7/8/A 4:3 15&quot;, W15&quot;, W19&quot; and W22&quot; Display</td>
<td>HMIBMU, HMIBMIP (2 slot models)</td>
<td>HMIYPFESA21</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>VESA mounting kit for HMIBM Box PC + HMIDM7/8/A 4:3 15&quot;, W15&quot;, W19&quot; and W22&quot; Display</td>
<td>HMIBMU, HMIBMIP (2 slot models)</td>
<td>HMIYPFESA41</td>
<td>–</td>
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<tr>
<td>DP to DVI adapter</td>
<td>DP to DVI-D adapter</td>
<td>All models</td>
<td>HMIYADDPV11</td>
<td>–</td>
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<tr>
<td>DP to DVI cable</td>
<td>DP to DVI-D cable 3 m/9.84 ft</td>
<td>All models</td>
<td>HMIYCBPADPV13</td>
<td>–</td>
</tr>
<tr>
<td>Display adaptation plate</td>
<td>Display adaptation plate from legacy</td>
<td>All models</td>
<td>HMIYADADPV11</td>
<td>–</td>
</tr>
<tr>
<td>DIN rail adapter</td>
<td>HMIBM, HMIBMIP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) USB key including restore image for recovery is supplied with each unit. The spare blank key is only necessary if the default key supplied with the unit is lost.
(2) Certified for IECEx Zone 22 (Dust) only. HMIYPSOMAC1 is not certified for IECEx Zone 2 (Gas).
(3) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see page 4/32).
(4) For more information, please refer to EcoStruxure Secure Connect Advisor catalog DIA562190101EN.
## Separate components (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIBM</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Software and Secure remote access</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>EcoStruxure Operator Terminal</td>
<td>Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license.</td>
<td>All models with EcoStruxure Operator Terminal Expert</td>
<td>HMIRTC2LSPA22 (Digital)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>HMIRTC2LSPM22 (Paper)</td>
<td></td>
</tr>
<tr>
<td>EcoStruxure Secure Connect Advisor</td>
<td>For HMI secure remote access</td>
<td>All models that support EcoStruxure Secure Connect Advisor</td>
<td>VJ0C0NT(2)</td>
<td></td>
</tr>
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<tr>
<td><strong>Interfaces</strong></td>
<td></td>
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</tr>
<tr>
<td>RJ45 Ethernet interface</td>
<td>Interface Mini PCIe, 1x RJ45 Ethernet (3)</td>
<td>All models with optional interfaces</td>
<td>HMIYMIN1ETH1</td>
<td></td>
</tr>
<tr>
<td>NVRAM interface</td>
<td>Mini PCIe with non-volatile RAM, without external connectors</td>
<td>HMIIBMU, HMIIBM</td>
<td>HMIYMINNVRAM1</td>
<td></td>
</tr>
<tr>
<td>2x RS-422/485 isolated interface</td>
<td>Mini PCIe with 2x RS-422/485, isolated external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINSL24851</td>
<td></td>
</tr>
<tr>
<td>4x RS-422/485 interface</td>
<td>Mini PCIe with 4x RS-422/485, external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINSL44851</td>
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<tr>
<td>2x RS-232 isolated interface</td>
<td>Mini PCIe with 2x RS-232, isolated external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINSL22321</td>
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<tr>
<td>4x RS-232 interface</td>
<td>Mini PCIe with 4x RS-232, external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINSL42321</td>
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</tr>
<tr>
<td>1x Profibus DP Master NVRAM interface</td>
<td>Mini PCIe with 1x Profibus DP Master, non-volatile RAM, external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINPRO1</td>
<td></td>
</tr>
<tr>
<td>2x CANopen/CAN bus interface</td>
<td>Mini PCIe with 2x CAN fieldbus, external interface with connectors, drivers for CANopen and CAN bus</td>
<td>All models with optional interfaces</td>
<td>HMIYMINCAN1</td>
<td></td>
</tr>
<tr>
<td>16x DI/8 DO interface</td>
<td>Mini PCIe with 16x DI/8 DO, external interface with connectors, 2 m/6.56 ft cable and DIN rail wiring terminal</td>
<td>All models with optional interfaces</td>
<td>HMIYMINIO1</td>
<td></td>
</tr>
<tr>
<td>2x USB 3.0 interface</td>
<td>Mini PCIe with USB 3.0, external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINUSB1</td>
<td></td>
</tr>
<tr>
<td>Audio interface</td>
<td>Module with Audio (line in, line out and mic), external interface with connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINAUD1</td>
<td></td>
</tr>
</tbody>
</table>

(1) EcoStruxure Machine SCADA Expert available in Configured-To-Order (see page 4/32)
(2) For more information, please refer to EcoStruxure Secure Connect Advisor catalog DIA5ED2190101EN
(3) Available in Q2 2020.
Separate components (continued)

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIBM</th>
<th>Reference</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wireless LAN interface + 2x antennas kit</td>
<td>Kit with mini PCIe WiFi (access point with Windows 10) + Bluetooth and 2x antennas</td>
<td>All models</td>
<td>HMIYMINWIFI2</td>
<td>–</td>
</tr>
<tr>
<td>Remote wireless LAN antenna cable</td>
<td>5 m/16.4 ft cable to mount a WiFi antenna remotely from Harmony iPC</td>
<td>All models</td>
<td>HMIYCASWIFI1AN51</td>
<td>–</td>
</tr>
<tr>
<td>Cybersecurity TPM for iPC</td>
<td>Trusted Platform Module (1) for cyber secured hardware encryption on HMIBM with related connector on mother board, to be activated with Windows bit-locker</td>
<td>All models</td>
<td>HMIYMINATPM201</td>
<td>–</td>
</tr>
<tr>
<td>McAfee whitelisting</td>
<td>License sticker and a USB stick with software application for Cybersecurity whitelisting on Windows 10</td>
<td>All models</td>
<td>HMIYYMACWLIOT1</td>
<td>–</td>
</tr>
<tr>
<td>Cellular 3G interface</td>
<td>Mini PCIe with GPRS, SIM card holder, and external antenna</td>
<td>All models</td>
<td>HMIYMINGPRS1</td>
<td>–</td>
</tr>
<tr>
<td>Cellular 4G interface for North America</td>
<td>Mini PCIe GPRS 4G for North America frequencies. Kit including SIM card holder and external antenna</td>
<td>All models</td>
<td>HMIYMIN4GUS1</td>
<td>–</td>
</tr>
<tr>
<td>Cellular 4G interface for Europe and Asia</td>
<td>Mini PCIe GPRS 4G for Europe and Asia frequencies. Kit including SIM card holder and external antenna</td>
<td>All models</td>
<td>HMIYMIN4GEU1</td>
<td>–</td>
</tr>
<tr>
<td>Mini PCIe interface to Display Adapter</td>
<td>Mini PCIe interface transmitter with RJ45 port, graphic video card</td>
<td>All models with optional interfaces (5)</td>
<td>HMIYMINDP1</td>
<td>–</td>
</tr>
<tr>
<td>Mini PCIe interface DVI-I for iPC</td>
<td>Mini PCIe Graphic video card Full HD 1920 x 1080, with DVI-I connector on an external interface (providing both dual digital and analog signals)</td>
<td>All models with optional interfaces (5)</td>
<td>HMIYMINDVII1</td>
<td>–</td>
</tr>
<tr>
<td>Mini PCIe interface 2VGA + DVI-D</td>
<td>Mini PCIe Graphic video card Full HD 1920 x 1080, with 2xVGA connectors on a single external interface and 1x DVI-D connector in a second external interface</td>
<td>All models with optional interfaces (5)</td>
<td>HMIYMINVGAVID1</td>
<td>–</td>
</tr>
<tr>
<td>Mini PCIe interface Audio for iPC</td>
<td>Mini PCIe audio card and one external interface with speaker OUT, Line IN and Mic IN connectors</td>
<td>All models with optional interfaces</td>
<td>HMIYMINAUD21</td>
<td>–</td>
</tr>
</tbody>
</table>

(1) TPM delivered at 2.0 version, requiring user downgrade to 1.2 with the provided tool to run on HMIBMU/HMIBM with BIOS and Windows 10.
(2) HMIYMINDVII1 cannot be used with HMIYMNIVGADVID1.
(3) HMIYMINDP1 and HMIYMINUSB cannot be used together.
(4) Remove the existing driver when user want to install HMIYMINDP1 or HMIYMNIVGADVID1.
(5) Limited to a single Mini PCIe graphic video card per unit.
**Selection guide**

**Harmony iPC**

Industrial PC, Edge Box, and Display

**Harmony HMIDM Modular Display**

<table>
<thead>
<tr>
<th>Type of Display</th>
<th>Harmony HMIDM Modular Display</th>
<th>Harmony HMIDAD Display Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>4:3 12” touch screen</td>
<td>W19” touch screen</td>
</tr>
<tr>
<td></td>
<td>4:3 15” touch screen</td>
<td>W22” touch screen</td>
</tr>
<tr>
<td></td>
<td>15” touch screen</td>
<td>W15” touch screen</td>
</tr>
</tbody>
</table>

**Screen**

<table>
<thead>
<tr>
<th></th>
<th>LED LCD single-touch resistive screen</th>
<th>LED LCD 5-point multi-touch projected capacitive technology screen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>4:3 12.1”</td>
<td>4:3 15”</td>
</tr>
<tr>
<td>Size</td>
<td>W12.1”</td>
<td>W15.6”</td>
</tr>
<tr>
<td>Resolution</td>
<td>XGA, 1024 × 768 pixels, 16.7 million colors</td>
<td>WHDI WXGA, 1280 × 800, 16.7 million colors</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP66, Nema 4 indoor front panel, and IP hardness anti-scratch</td>
<td>IP66, Nema 4 indoor front panel, and IP hardness anti-scratch</td>
</tr>
<tr>
<td>Brightness</td>
<td>≥ 300 cd/m², step less adjustment</td>
<td></td>
</tr>
<tr>
<td>View angle</td>
<td>Vertical 115°, horizontal 140°</td>
<td>Vertical 140°, horizontal 150°</td>
</tr>
<tr>
<td>Backlight service life</td>
<td>50,000 hours</td>
<td></td>
</tr>
<tr>
<td>Operate with water on screen</td>
<td>Yes for all models</td>
<td></td>
</tr>
</tbody>
</table>

**Interface**

<table>
<thead>
<tr>
<th></th>
<th>1× USB 2.0 (Type A) and Reset button</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>

**Supply voltage**

<table>
<thead>
<tr>
<th></th>
<th>From Box PC or mounted Display Adapter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

**Standards and certifications**

*On front Panel of Box PC HMIDM or Display Adapter (HMIDAD)*

|                  | CE, RCM, EAC, cULus, Industrielle Contrôle (UL 61010), CSA 22.2 No. 142, cULus HazLoc (AN/NZS 12.12-01 and CSA/C22.2 No. 213, Class A) (Division 2), EAC, RCM, cULus CSA 22.2 No. 142, cULus HazLoc Class I (Division 2), ATEX, IECEx, FCC (part 15 EMC Class A), Atex and IECEx HazLoc 3GD Zone 2/22 |

**Power consumption**

<table>
<thead>
<tr>
<th></th>
<th>With Universal Modular Box PC</th>
<th>With Performance Modular Box PC</th>
<th>With Display Adapter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38.6 W typical, 48.04 W max.</td>
<td>43.5 W typical, 59.85 W max.</td>
<td>44.9 W typical, 58.65 W max.</td>
</tr>
<tr>
<td></td>
<td>39.9 W typical, 48.04 W max.</td>
<td>45.9 W typical, 48.05 W max.</td>
<td>48.6 W typical, 48.1 W typical</td>
</tr>
</tbody>
</table>

**Mounting**

<table>
<thead>
<tr>
<th></th>
<th>Panel/PC (with Box PC HMIDM)</th>
<th>Panel/Adapter (with Display Adapter HMIDAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On front enclosure or VESA 100 × 100 with mounting kit HMIDM/UES/ES/ES/ES on the rear of Box PC</td>
<td>On front enclosure or VESA 100 × 100 on the rear of Display Adapter</td>
</tr>
</tbody>
</table>

**Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>Overall dimensions (W × H × D)</th>
<th>Cut-out (W × H)</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>319.1 × 245.1 × 66.3 mm/ 329.2 × 231.6 × 66.5 mm/ 429.7 × 260.8 × 73.6 mm</td>
<td>301.3 × 222.5 mm/ 310.1 × 201.7 mm/ 316.4 × 201.7 mm</td>
<td>Conforming to EN/IEC 60068-2-30: 0...55 °C/32...131 °F</td>
</tr>
<tr>
<td></td>
<td>12.96 × 9.11 × 2.61 in.</td>
<td>11.17 × 9.47 in.</td>
<td>12.20 × 7.80 in.</td>
</tr>
</tbody>
</table>

**References**

<table>
<thead>
<tr>
<th></th>
<th>HMIIDM6421</th>
<th>HMIIDM7421</th>
<th>HMIIDM6521</th>
<th>HMIIDM7521</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page</td>
<td>4/27</td>
<td></td>
<td>4/28</td>
<td></td>
</tr>
</tbody>
</table>

(1) Except Box PC with 2x mini PCIe + display: limited to 45 °C/113 °F.
(2) CE, EAC and ICEx HazLoc 3GD Zone 2/22.
Harmony HMIDM Modular Displays are monitors designed to be easily integrated with:

- Harmony HMIBM Modular Box PCs (1) to make a Panel PC
- Harmony HMIDAD Display Adapter (2) to make a Panel monitor, to be remotely mounted from the PC with Display Port and USB cable (up to 5 m/16.4 ft) or with RJ45 cable (up to 4 Display and 400 m/1312 ft)

In addition to multiple choices, the modularity feature reduces maintenance as the Display can be independently replaced without changing the complete Panel PC or Panel Monitor.

HMIDM Modular Displays are available in:

- 4:3 12” and 15” single-touch resistive screens for easy substitution of legacy Panel PCs, operation with heavy gloves, and front USB connection port
- 16:9 W12”, W15”, W19” and W22” multi-touch capacitive screens for smartphone or tablet-like navigation on EcoStruxure Operator Terminal Expert software and for displaying SCADA screens in wide format

Harmony HMIDM 4:3 12”/15” and 16:9 12”/15” screens are certified for cULus Industrial Control and Hazardous Locations. The Harmony HMIDM displays are also Marine DNV and IECEX ATEX (IECEX ATEX only for 4:3/16:9 15” models) certified. When mounted with Harmony HMIBM Modular Box PCs or HMIDAD Display Adapter with similar certifications, these displays can be used for advanced automation applications.

Overview of the offer

Harmony HMIDM Modular Display

The Harmony HMIDM Modular Display offer comprises 6 references, each equipped with:

- HMIDM6421
  - Resolution: XGA, 1024 x 768 pixels, 16.7 million colors
  - Size and type: 4:3 12.1”, single-touch resistive screen
  - View angle: Vertical 115°, horizontal 140°

- HMIDM7421
  - Resolution: XGA, 1024 x 768 pixels, 16.7 million colors
  - Size and type: 4:3 15”, single-touch resistive screen
  - View angle: Vertical 115°, horizontal 140°

- HMIDM6521
  - Resolution: WHD WXGA, 1280 x 800 pixels, 16.7 million colors
  - Size and type: W12.1”, multi-touch projected capacitive technology screen
  - View angle: Vertical 115°, horizontal 140°

- HMIDM7521
  - Resolution: WHD FWXGA, 1366 x 768 pixels, 16.7 million colors
  - Size and type: W15.6”, multi-touch projected capacitive technology screen
  - View angle: Vertical 140°, horizontal 150°

- HMIDM9521
  - Resolution: WHD FWXGA, 1366 x 768 pixels, 16.7 million colors
  - Size and type: W18.5”, multi-touch projected capacitive technology screen
  - View angle: Vertical 140°, horizontal 150°

- HMIDMA521
  - Resolution: Full HD, 1920 x 1080 pixels, 16.7 million colors
  - Size and type: W21.5”, multi-touch projected capacitive technology screen
  - View angle: Vertical 150°, horizontal 150°

(1) For more information, please refer to pages 4/12 to 4/15.
(2) For more information, please refer to pages 4/28.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display

Presentation (continued)

Architecture
Harmony HMIDM Displays are compatible and easily mountable with all HMIBM Modular Box PCs and HMIDAD Display Adapter.

References
Harmony HMIDM Modular Displays

<table>
<thead>
<tr>
<th>Description</th>
<th>Screen</th>
<th>Interface</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>4:3 12”</td>
<td>12”, XGA (1024 × 768 pixels)</td>
<td>Single-touch resistive</td>
<td>HMIDM6421</td>
<td>2.30/5.07</td>
</tr>
<tr>
<td>4:3 15”</td>
<td>15”, XGA (1024 × 768 pixels)</td>
<td></td>
<td>HMIDM7421</td>
<td>4.20/9.20</td>
</tr>
<tr>
<td>16:9 12”</td>
<td>12”, WHD/FWXGA (1280 × 800 pixels)</td>
<td>Multi-touch capacitive</td>
<td>HMIDM6521</td>
<td>2.25/4.96</td>
</tr>
<tr>
<td>16:9 15”</td>
<td>15.6”, WHD/FWXGA (1366 × 768 pixels)</td>
<td></td>
<td>HMIDM7521</td>
<td>4.30/9.50</td>
</tr>
<tr>
<td>16:9 19”</td>
<td>18.5”, WHD/FWXGA (1366 × 768 pixels)</td>
<td></td>
<td>HMIDM9521</td>
<td>5.20/11.50</td>
</tr>
<tr>
<td>16:9 22”</td>
<td>21.5”, Full HD/FWXGA (1920 × 1080 pixels)</td>
<td></td>
<td>HMIDMA521</td>
<td>6.60/14.50</td>
</tr>
</tbody>
</table>

Separate components

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with HMIDM Display</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Removable protective sheet</td>
<td>Set of 5 protective sheets for 4:3 12”</td>
<td>HMIDM6421</td>
<td>MPCYK20SPSKIT</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Set of 5 protective sheets for 4:3 15”</td>
<td>HMIDM7421</td>
<td>MPCYK50SPSKIT</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Set of 5 protective sheets for W12”</td>
<td>HMIDM6521</td>
<td>HMIYP652PS11</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Set of 5 protective sheets for W15”</td>
<td>HMIDM7521</td>
<td>HMIYP752PS11</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Set of 5 protective sheets for W19”</td>
<td>HMIDM9521</td>
<td>HMIYP952PS11</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>Set of 5 protective sheets for W22”</td>
<td>HMIDMA521</td>
<td>HMIYPA52PS11</td>
<td>–</td>
</tr>
</tbody>
</table>
Presentation
The Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third-party PC.

Description
Rear view
1 DC power supply connection
2 USB port type B (USB 2.0 for touch screen OUT) (1)
3 Display port (IN) (1)
4 Transmitter module (HMIYDATR11) with RJ45 port (2)
5 Mounting holes for the VESA
6 Receiver module (HMIYDARE11) with RJ45 port (2)
7 USB locker

Architecture
The Display Adapter is mounted on the rear side of the display as shown below:

(1) Not operational with Receiver module mounted.
(2) Optional modules.
**Configuration**

**Harmony iPC**
Industrial PC, Edge Box, and Display
Harmony HMIDM Modular Display
Harmony HMIDAD Display Adapter

### Local display

The PC is connected to Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video with a maximum distance of 5 m/16.4 ft.

![Diagram of local display setup](image)

### Remote display

The Harmony iPC with mini PCIe interface can support up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft between each display) when connected to Display adapters that are equipped with transmitter and receiver modules in a daisy chain configuration.

In this configuration, each remote display includes an HMIDM Modular Display + a HMIDADP11 Display Adapter + a HMIYDARE11 Receiver module + a HMIYDATR11 Transmitter module (not required for the last display in the chain).

For long distance remote displays:
- Limited to one HMIYMINDP1 mini PCIe per HMIBM Box iPC.
- To set up mini PCIe to Display Adapter Interface (HMIYMINDP1), a display or a third-party panel on host PC is required to install the driver. Once remote display set-ups are ready, the display on host PC can be removed if not used.
- The remote display cable does not support normal LAN HUB or switch as signal type is different.
- CAT6 cable is recommended. CAT5e cable may be used for shorter distances, according to environment conditions and with the maximum screen resolution of 1920 x 1080 pixels.
- The display touch panels can be disabled. When activated, the touch panel on the remote displays can be used only one at a time (waiting time 100 ms).
- The Display Adapter with display does not support brightness control. The brightness is fixed at 100%.
- With remote display (100 m/328 ft) cable, the touch-beep sound cannot be heard from the touch panel side as the buzzer is on the Box iPC side.
- When the host PC is off, or when one of the displays in the daisy chain is off or disconnected, the next displays in the chain get a NO SIGNAL message on their screens.
Example of displays connected to Harmony HMIBMO

IA, IB, IC, ID Images (with Windows setting)
1, 2, 3 Local displays and Display Adapters
4 Harmony HMIBMO Optimized Modular Box with HMIYMINDP1x mini PCIe transmitter interface with RJ45 port
5 Harmony HMIDM Modular Display + HMIDADP11 Display Adapters + HMIYDARE11 Receiver module + HMIYDATR11 Transmitter module (not required for the last display in the chain), making a daisy chain of up to 4 remote displays with the same screen definition (set by the receiver module or in the Windows settings)
# Harmony HMIDAD Display Adapter

<table>
<thead>
<tr>
<th>Description</th>
<th>Characteristics</th>
<th>Supply voltage</th>
<th>Compatible with</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display Adapter</td>
<td>USB port (OUT) + Display Port (IN) for cable up to 5 m/16.4 ft</td>
<td>24 V (1)</td>
<td>Harmony iPC and third-party PCs</td>
<td>HMIDADP11</td>
<td>1.8/3.96</td>
</tr>
</tbody>
</table>

## Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Characteristics</th>
<th>Compatible with</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVI to DP cable</td>
<td>3 m/9.84 ft</td>
<td>From PC with DVI port to HMIDAD Display Adapter</td>
<td>HMIYCABDPDVI31</td>
<td>–</td>
</tr>
<tr>
<td>DP to DP cable</td>
<td>Display Port to Display Port, 5 m/16.4 ft cable for digital video signal</td>
<td>From HMIBM Modular Box PC to HMIDAD Display Adapter</td>
<td>HMIYCABDP51</td>
<td>–</td>
</tr>
<tr>
<td>USB cable</td>
<td>USB to USB, 5 m/16.4 ft cable for touch screen signal</td>
<td>From HMIDAD Display Adapter to HMIBM Modular Box PC</td>
<td>HMIYCABUSB51</td>
<td>–</td>
</tr>
<tr>
<td>Transmitter interface for Harmony HMIBM Box PC</td>
<td>Mini PCIe to Display Adapter interface with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)</td>
<td>For HMIBM Box PC with optional interface to connect to first HMIYDARE11 receiver in the chain mounted in HMIDADP11 Display Adapter (2)</td>
<td>HMIYMINDP1</td>
<td>–</td>
</tr>
<tr>
<td>Receiver for Display Adapter</td>
<td>Receiver module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch)</td>
<td>For HMIDADP11 Display Adapter to connect to next HMIYDARE11 transmitter in the chain</td>
<td>HMIYDARE11</td>
<td>–</td>
</tr>
<tr>
<td>Transmitter for Display Adapter</td>
<td>Transmitter module with 1x RJ45 port for category 5 or 6 cable (without Hub or Switch).</td>
<td>For HMIDADP11 Display Adapter to connect to next HMIYDARE11 receiver in the chain (not required for the last display in the chain)</td>
<td>HMIYDARE11</td>
<td>–</td>
</tr>
<tr>
<td>AC power supply</td>
<td>External AC power adapter, 60 W</td>
<td>For HMIDADP11 Display Adapter</td>
<td>HMIYPSOMAC1</td>
<td>–</td>
</tr>
<tr>
<td>Modular AC power supply</td>
<td>Modular AC power adapter, 100 W for hazardous locations</td>
<td>For HMIDADP11 Display Adapter</td>
<td>HMIYMAMC1</td>
<td>–</td>
</tr>
</tbody>
</table>

(1) For AC power supply, additional power supply module HMIYPSOMAC1 or HMIYMAMC1 is required. For AC in hazardous locations, AC power supply module HMIYMAMC1 product version PV02 is required.

(2) HMIYMINDP1 cannot be used with HMIYMINDVI1/HMIYMINDVID1/HMIYMINDP1 and HMIYMIND1 cannot be used together in HMIBM/HMIBM. Remove the existing driver to install HMIYMINDP1/HMIYMINDVI1/HMIYMINDVID1 in Modular Box PC HMIBM.


## Configured-To-Order Harmony HMIBM Modular Box PC and HMIDM Modular Display

“Configured-To-Order” industrial PCs offer a vast number of configuration combinations for Harmony iPCs with certifications. The Schneider Electric Customer Care Center can help you configure the right Harmony iPC based on your automation application and provide a quotation. A web configurator [https://www.hmisource.com/wwipcc](https://www.hmisource.com/wwipcc) is also available to help you easily build the configuration by yourself (password = Harmony). Our Customer Care Center or the Web configurator will provide the complete parts list for the configured Harmony Modular Box PC/Display and a configuration code that will be the part number of the Harmony iPC.

### Ordering procedure for a configured Harmony HMIBM Modular Box PC and HMIDM Modular Display

If you have built your Harmony iPC configuration with the Web Configurator:

1. Please forward the e-mail received from the Web Configurator to our Customer Care Center. This e-mail contains a PDF file with your configuration description and part number code.

   If required, specify the reference root part number GCR_HMIPCCP2.

If you cannot access the Harmony iPC Web Configurator:

3. Please contact our Customer Care Center and state the reference root part number GCR_HMIPCCP2.

4. Configure your Harmony Panel PC (see table below) and get your quote with the support of our Customer Care Center.

5. Confirm your order.

### Configured-To-Order options for Harmony HMIBM Modular Box PC and HMIDM Modular Display

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Box PC or Display Adapter</strong></td>
<td>Harmony HMIBM Box PC (Basic, Optimized, Universal, Performance)</td>
</tr>
<tr>
<td></td>
<td>Harmony HMIBSC Core Box</td>
</tr>
<tr>
<td></td>
<td>Harmony HMIDAD Display Adapter</td>
</tr>
<tr>
<td><strong>Modular Displays (pre-mounted)</strong></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Harmony HMIDM Modular Display 4:3 12&quot;/4:3 15&quot; - XGA</td>
</tr>
<tr>
<td></td>
<td>Harmony HMIDM Modular Display W12&quot;/W15&quot; - FWXGA</td>
</tr>
<tr>
<td></td>
<td>Harmony HMIDM Modular Display W22&quot; - FHD</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>None (Display Adapter)</td>
</tr>
<tr>
<td></td>
<td>Universal, Intel® Celeron® 2980U fanless</td>
</tr>
<tr>
<td></td>
<td>Universal, Intel Celeron 2980U with fan for expansion card above 3 W</td>
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<tr>
<td></td>
<td>Performance, Intel Core™ i7-4650U fanless</td>
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<td>Performance, Intel Core i7-4650U with fan for expansion card above 3 W</td>
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<tr>
<td><strong>Power supply</strong></td>
<td>DC</td>
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<tr>
<td></td>
<td>AC</td>
</tr>
<tr>
<td><strong>Windows operating system</strong></td>
<td>None</td>
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<tr>
<td></td>
<td>WEB7 Premium SP1 64-bit Multi-language</td>
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<tr>
<td></td>
<td>Windows 8.1 Industry 64-bit Multi-language</td>
</tr>
<tr>
<td></td>
<td>Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td></td>
<td>Linux Yocto</td>
</tr>
<tr>
<td><strong>Main storage device for operating system</strong></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>CFast 32 GB</td>
</tr>
<tr>
<td></td>
<td>M.2 64 GB/128 GB/250 GB</td>
</tr>
<tr>
<td></td>
<td>HDD 500 GB/1 TB</td>
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<tr>
<td></td>
<td>SSD 128 GB/256 GB</td>
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<tr>
<td><strong>Optional interfaces (pre-mounted)</strong></td>
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<td></td>
<td>NVRAM</td>
</tr>
<tr>
<td></td>
<td>2 RS-422/485 isolated or 4 RS-422/485</td>
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<tr>
<td></td>
<td>2 RS-232 isolated or 4 RS-232</td>
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<td></td>
<td>16 DI/DO</td>
</tr>
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<td></td>
<td>Video (DVI and VGA ports)</td>
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<tr>
<td><strong>Audio</strong></td>
<td>Cellular 3G/4G</td>
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<td></td>
<td>Transmitter to Display adapter</td>
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<td></td>
<td>Analog inputs</td>
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<td></td>
<td>Wireless LAN + 2 antennas</td>
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<td></td>
<td>2 CANopen CAN bus</td>
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<td></td>
<td>Profibus DP Master with NVRAM</td>
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<td></td>
<td>Cyber security TPM module</td>
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<tr>
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<td>1 Ethernet RJ45</td>
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<tr>
<td><strong>PCI slot configuration</strong></td>
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<td>2 full-size mini PCIe</td>
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<td>2 full-size mini PCIe + 1 PCIe (x1) + 1 PCI</td>
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<td>2 full-size mini PCIe + 1 PCIe (x4) + 1PCI</td>
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<td>2 full-size mini PCIe + 2 PCI</td>
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<td>2 full-size mini PCIe + 1 PCIe (x1) + 1PCI</td>
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<tr>
<td><strong>Software bundle</strong></td>
<td>None</td>
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<td></td>
<td>EcoStruxure Operator Terminal Expert Run Time unlimited license</td>
</tr>
<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 1500 tags Run Time license</td>
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<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 4000 tags Run Time license</td>
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<tr>
<td></td>
<td>EcoStruxure Machine SCADA Expert 64000 tags Run Time license</td>
</tr>
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</table>

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---

References

Harmony iPC
Industrial PC, Edge Box, and Display
Configured-To-Order Harmony HMIBM Modular Box PC and Harmony HMIDM Modular Display
### References (continued)

#### Harmony iPC

**Industrial PC, Edge Box, and Display**

**Harmony HMIBM Modular Box PC and HMIDM Modular Display**

#### Equivalent product table

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<thead>
<tr>
<th>Legacy Harmony iPC</th>
<th>Replaced by Harmony iPC</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
<td><strong>Cut-out for flush mounting</strong></td>
</tr>
<tr>
<td>Harmony Panel PC - 12&quot; Universal</td>
<td>Harmony HMIBM Optimized Modular Box PC + Harmony HMIDM Modular Display</td>
<td>Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language)</td>
</tr>
<tr>
<td>Harmony Universal 12&quot; Panel PC, HDD, 100...240 V ~</td>
<td>Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>Harmony 4:3 12&quot; Display, single-touch</td>
</tr>
<tr>
<td>Harmony Universal 12&quot; Panel PC, SSD, 100...240 V ~</td>
<td>Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>Harmony 4:3 12&quot; Display, single-touch</td>
</tr>
<tr>
<td>Harmony Performance 12&quot; Panel PC, Base unit</td>
<td>Harmony Optimized Box PC, M.2, Windows 10 IoT Enterprise (64-bit Multi-language)</td>
<td>Harmony 4:3 12&quot; Display, single-touch</td>
</tr>
</tbody>
</table>

| Harmony Panel PC - 12" Performance | Harmony HMIBM Performance Modular Box PC + Harmony HMIDM Modular Display | Harmony Performance Box PC, Base unit 4 GB + Box PC Optimized DC Base unit 4 GB |
| Harmony Performance 12" Panel PC, HDD, 2 slots, 100...240 V ~ | Harmony Performance Box PC, Base unit, 24 V ~ + Harmony 4:3 12" Display, single-touch |
| Harmony Performance 12" Panel PC, SSD, 2 slots, 100...240 V ~ | Harmony Performance Box PC, 4 slots, 10 IoT Enterprise (64-bit Multi-language), 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch |
| Harmony Performance 12" Panel PC, CFast, 1 slot, 24 V ~ | Harmony Performance Box PC, 24 V ~ + AC power supply module + Harmony 4:3 12" Display, single-touch |

<table>
<thead>
<tr>
<th>Legacy Harmony iPC</th>
<th>Replaced by Harmony iPC</th>
</tr>
</thead>
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<tr>
<td><strong>Description</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Harmony S-Box PC Universal HMIBS</td>
<td>Harmony HMIBM Modular Box PC</td>
</tr>
<tr>
<td>Harmony Optimized S-Box PC, 1 slot, 24 V ~</td>
<td>Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~</td>
</tr>
<tr>
<td>Harmony Optimized S-Box PC, CFast card, 1 slot, 24 V ~</td>
<td>Harmony Modular Box PC, eMMC SSD, 1 slot, 24 V ~</td>
</tr>
<tr>
<td>Harmony Universal S-Box PC, CFast card, 1 slot, 24 V ~</td>
<td>Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~</td>
</tr>
<tr>
<td>Harmony Universal S-Box PC, SSD, 1 slot, 24 V ~</td>
<td>Harmony Modular Box PC, M.2 SSD, 1 slot, 24 V ~</td>
</tr>
<tr>
<td>Harmony Universal S-Box PC, No OS, 1 slot, 24 V ~</td>
<td>Harmony Modular Box PC, No OS, 1 slot, 24 V ~</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Configured part numbers for Harmony iPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configured Harmony iPC</td>
</tr>
</tbody>
</table>

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(1) No stainless steel bezel.
(2) AC with power adapter HMIYPSOMAC1.
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    - Harmony HMIRSP Performance 4U ........................................ page 5/5
  - Storage drive trays and redundant Raid HDD .......................... page 5/5
  - Remote system monitoring for Harmony HMIR Rack PCs .......... page 5/5
  - Harmony :Display monitor for Harmony HMIR Rack PCs ......... page 5/6
  - Software bundles for Harmony HMIR Rack PCs ..................... page 5/6
  - Actassi 19” rack enclosure for Harmony HMIR mounting ......... page 5/6
- Description
  - Harmony HMIRXO Optimized 2U ........................................ page 5/7
  - Harmony HMIRSP Performance 4U ........................................ page 5/7
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  - Separate components
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    - Maintenance kit .............................................................. page 5/9
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Conforming to IEC 60068-2-27: 10
Conforming to IEC 60068-2-26: 1 g from 5...500 Hz (except for HDD drive)
Conforming to IEC 60950-1: 10 g in 11 ms, half sine wave (except for HDD drive)
CE, cULus (UL 60950-1, CSA 22.2 No. 60950-1-07), CCC, cK\[464\]

Referenced

HMIRXOCA3001

Selection guide

Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

Type of Harmony iPC (1)

Industrial environments

Control rooms and labs

CPU (2)

Intel Core i5 450 (2.5 GHz), quad-core

Micro ATX Motherboard

2x PCI Express x1 + 1x PCI Express x16

1x internal slot (SATAD2) + 2x hot-swap trays (SATAD2)

2 GB DDR3 in 1 slot

VGA Up to 2048 × 1536 at 60 Hz, DVI Up to 1920 × 1200 at 60 Hz

3 fans, user-exchangeable with fan speed control to reduce noise

Temperature

Conforming to IEC 60068-2-1: –40...70 °C/
32...140 °F

Conforming to IEC 60068-2-2: 0...40 °C/104 °F

Conforming to IEC 60068-2-26: 1 g from 5...500 Hz (except for HDD drive)

Display screens (see page 6/5)

Operator Terminal Expert Run Time Demo

Vijeo Designer Run Time Demo (21-day trial version) to be installed from Software DVD.

References

HMIRXOCA3001

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in an 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.

(2) 4 user-accessible RAM slots available.

(3) Requires Vijeo Designer V6.2 SP2 or later versions to build and download HMI application.

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More technical information on www.schneider-electric.com
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

Presentation

Harmony HMIR Rack PCs are industrial PCs that can be easily installed in a 19” rack enclosure of an automation control room. The HMIRs have:

- Embedded fan speed control for reduced noise
- Hot-swappable drive trays
- Optional redundant RAID hard drive
- Remote system monitor for remote access
- Harmony iDisplay for display screen

The Rack PCs are tested, validated, and supported by Schneider Electric Plant StruXure software: Vijeo Designer and EcoStruxure Operator Terminal Expert HMI Software and EcoStruxure Hybrid DCS Engineering. These PCs offer 4 years of service and minimum 4 years of commercial availability. They can also be extended and substituted to new compliant models.

The Harmony HMIR comprises the following UL60950-certified PCs for various requirements of a plant solution:

- Optimized Rack PC 2U (1): for operator stations and some dedicated applications in clean areas of industrial plants or labs
- Performance Rack PC 4U (1): for Engineering and SCADA servers with redundant power supply and server operating system according to model

Overview of the offer

Harmony HMIRXO Optimized 2U (1)

The Optimized HMIRXO Rack PC has an Intel Core G540 dual-core CPU (2.5 GHz) on a Micro ATX motherboard, with:

- 2 GB DDR3 RAM (default mounted), user-expandable up to 32 GB in 4 slots
- 3.5” storage slots: 1 internal SATA3 slot and 2 external SATA2 trays
- Expansions: 3 slots for 2 PCI Express® (x8), 1 PCI
- Connection ports: 6 USB 2.0 ports, 2 RS-232 (+ 4 optional), 2 Gigabit Ethernet, 1 VGA, and 1 DVI for video
- 1 optical DVD-RW drive

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in a 19” rack enclosure. 1 unit = 44.45 mm/1.75 in. high.
The Performance HMIRSP Rack PC has an Intel Xeon E3-1225 quad-core CPU (3.1 GHz) on an ATX motherboard, with:

- RAM, user-expandable up to 32 GB in 4 slots
- 3.5" storage slots: 1 internal SATA3 and 4 free external SATA2 trays
- Expansions: 4 PCI Express (x16), 3 PCI with 1 PCI slot used for removable audio connections
- Connection ports: 4 USB 2.0, 2 USB 3.0, 1 RS-232 (+ 4 optional), 2 Gigabit Ethernet, 1 VGA, and 1 DVI port for video
- 1 optical DVD-RW drive
- 8 GB ECC RAM (default mounted)
- 2x 500 GB Enterprise 24/7 HDD in redundant RAID configuration installed in 2 tray slots
- Windows Server 2012 R2 operating system including 5 clients
- Redundant 100...240 V a power supply 500 W

Storage drive trays and redundant Raid HDD
Harmony HMIRs have hot-swappable front trays for storage devices. These trays can be used for a redundant Raid HDD configuration. The Rack PC chipset supports Intel Rapid Storage Technology with internal RAID feature so that when 2 HDDs are available in trays, the RAID can be configured in 2 steps:
1. Assign RAID via the configuration menus in the BIOS.
2. Adjust the RAID configuration options in the Intel Rapid Storage software provided.

Remote monitoring system for Harmony HMIR Rack PCs
Harmony HMIRs can be monitored remotely by installing the Remote Monitoring application provided on any PC. Several Harmony Rack PCs can be monitored for:
- Managing system recovery (backup and restore) and On/Off (e.g., overnight for energy saving)
- Monitoring system parameters such as network connection, system/CPU temperatures, fan speeds, and system voltages
- Configuring alerts via a popup, message, sound, or buzzer with event log entry and system shutdown
- Displaying e-mail alerts and function logs

(1) Rack 2U or 4U is a unit used to measure the height of an equipment that will be mounted in a 19" rack enclosure. 1 unit = 44.45 mm/1.75 in. high.
(2) Dedicated model for running PlantStruxure Process Expert as an engineering workstation.
For more information, see page 5/6.
(3) Dedicated model for Windows Server operating system.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

**Presentation (continued)**

Harmony Rack PCs can use a Harmony iDisplay monitor as a display screen by connecting via USB, VGA, or DVI ports. This monitor can be mounted in the cut-out that is created in the front of an enclosure door.

The HMIDID Harmony iDisplay models are 12” or 15” multi-touch screens, with 16 million colors and IP67 front panel protection. Depending on the model, they are certified for UL508, UL Hazardous Locations and Marine. For more information on Harmony iDisplay screens, see page 6/5.

**Software bundles for Harmony HMIR Rack PCs**

Vijeo Designer/EcoStruxure Operator Terminal Expert and Harmony Rack PC bundles (1)

Harmony Rack PCs are supported by Schneider Electric HMI software for automation.

Vijeo Designer Run Time or EcoStruxure Operator Terminal Expert Run Time can be installed from the Vijeo Designer or EcoStruxure Operator Terminal Expert DVD included with Harmony HMIRs. Vijeo Designer Run Time can be upgraded to the unlimited version with an additional VJDSNRTMPC license (2). EcoStruxure Operator Terminal Expert can also be upgraded to the unlimited version with an additional HMIRTWCZLSPAZZ (Digital) or HMIRTWCZLSPMZZ (Paper) license.

**PlantStruxure and Harmony HMIR bundles**

The PlantStruxure and Harmony HMIR (used as an engineering workstation) bundle comprises:

- HMIRSPSX6T01 with 8 GB RAM (default mounted) (3)
- Windows Server 2012 R2
- Leaflet with instructions for downloading EcoStruxure Hybrid DCS from the website
- EcoStruxure Hybrid DCS licenses for software activation have to be ordered separately. For more information, please contact our Customer Care Center.
- Additional part numbers with pre-installed EcoStruxure Hybrid DCS software are available in the EcoStruxure Hybrid DCS/documents.

**Actassi 19” rack enclosure for Harmony HMIR mounting**

Harmony Rack PCs can be mounted on Actassi 19” Rack enclosures. Depending on the Rack PC model weight, additional mounting accessories such as fixed slides/long slides may be required. For more information on Actassi 19” enclosures and mounting accessories, please refer to our website www.schneider-electric.com.

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(1) As Harmony Rack PC does not have SRAM, it is recommended to save data on a storage drive (USB stick or SSD) to avoid data loss.
(2) Vijeo Designer Run Time is not supported on the Windows Server operating system.
(3) 16 GB RAM is recommended to run EcoStruxure Hybrid DCS. User can upgrade with 2x 4 GB RAM ECC HMIYPRAME040R1.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIR Rack PC
HMIRXO Optimized and HMIRSP Performance

Description

Harmony HMIRXO Optimized 2U
Front view
1. Power LED
2. HDD LED
3. Temperature LED
4. Fan LED
5. 2 fans
6. SATA3 3.5" internal drive
7. 2 USB 2.0 ports (USB1 and USB2)
8. System reset button
9. Alarm reset button
10. Power supply switch
11. KB/MS connector
12. 2x 3.5" hot-swap hard disk trays (RAID configuration required for hot-swapping the operating system)
13. Slim optical drive bay

Rear view
14. Power connector
15. Power supply unit
16. KB/MS connector
17. Display port connector
18. Serial port connector
19. DVI connector
20. VGA connector
21. 2 USB 3.0 ports
22. 2 USB 3.0 ports
23. 2 spare Sub-D9 slots
24. 2 LAN ports
25. Audio port
26. PCI expansion slot
27. 2 PCI Express expansion slots (x8/x16)

Harmony HMIRSP Performance 4U
Front view
1. 2 USB 2.0 ports
2. Front-accessible fan
3. 6 LEDs
4. SATA3 3.5" internal drive
5. 4 switches/buttons
6. 4x 3.5" hot-swappable hard disk trays (RAID configuration required for hot-swapping the operating system)
7. Slim optical drive bay

Rear view with redundant power supply
1. 2 power supply connectors (1)
2. 2 power supply units (2)
3. Button
4. LED
5. Spare Sub-D9 slot
6. KB/MS connector
7. Serial port connector
8. VGA connector
9. 2 USB 2.0 ports
10. 2 USB 3.0 ports
11. 2 LAN ports
12. 2 spare LAN ports
13. 4 spare Sub-D9 slots for additional RS-232 with HMIRINSL41 accessory kit
14. DVI connector
15. Expansion slots (max. 7): 2 PCI Express (x4) and 2 PCI Express (x8/x16) and 3 PCI. By default, audio ports are mounted on 1 slot

(1) Only one power supply connector for Rack PCs with single power supply.
(2) Only one power supply unit for Rack PCs with single power supply.
<table>
<thead>
<tr>
<th>Harmony HMIRXO Optimized 2U</th>
<th>Intel Core G540 (2.5 GHz) processor for HMIRXO/G850 (2.9 GHz) processor for HMIRSO/DDR3 RAM/AC power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCle/PCI expansion slots</strong></td>
<td>Operating system</td>
</tr>
<tr>
<td>2 PCI Express (x8) + 1 PCI</td>
<td>–</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Harmony HMIRSP Performance 4U</th>
<th>Intel Xeon™ E3-1225 processor (3.2 GHz)/DDR3 or ECC RAM/AC power supply</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCle/PCI expansion slots</strong></td>
<td>Operating system</td>
</tr>
<tr>
<td>4 PCI Express (x16) + 3 PCI (2)</td>
<td>Windows Server 2012 R2 standard including 5 clients</td>
</tr>
</tbody>
</table>

(1) Redundant AC power supply, 500 W.
(2) By default, audio ports are mounted on 1 PCI slot.
## Separate components

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
<th>Compatible with Harmony HMIR Rack PC</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage disks, expansion RAM, peripheral equipment</strong></td>
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</tr>
<tr>
<td>HDD with mounting screws</td>
<td>500 GB (Enterprise 24/7), blank</td>
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<tr>
<td></td>
<td>1 TB (Enterprise 24/7), blank</td>
<td>Yes</td>
<td>HMIYHDD01TR2</td>
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<td>SSD with mounting screws</td>
<td>128 GB MLC (5-year warranty and 2 million hours MTBF)</td>
<td>Yes</td>
<td>HMIYSSDS080S1</td>
<td>–</td>
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<tr>
<td></td>
<td>256 GB MLC (5-year warranty and 2 million hours MTBF)</td>
<td>Yes</td>
<td>HMIYSSDS240S1</td>
<td>–</td>
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<tr>
<td>Power cable China</td>
<td>China type power cable</td>
<td>Yes</td>
<td>HMIYRCABPWR CN1</td>
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<tr>
<td>4 Serial Lines kit for Rack 2U</td>
<td>Optional kit with 4 cables for motherboard connection, 2 PCI brackets, and 2 communication ports</td>
<td>Yes</td>
<td>– HMIYRINSL21</td>
<td>–</td>
</tr>
<tr>
<td>4 Serial Lines kit for Rack 4U</td>
<td>Optional kit with 1 PCB for motherboard connection, screws, and 2 × 2 m cables and 2 communication ports for spare housing</td>
<td>Yes</td>
<td>HMIYRINSL41</td>
<td>–</td>
</tr>
<tr>
<td>Expansion RAM 4 GB for HMIR</td>
<td>4 GB DDR3</td>
<td>Yes</td>
<td>HMIYPRAM3040R1</td>
<td>–</td>
</tr>
<tr>
<td>Expansion RAM 8 GB for HMIR</td>
<td>8 GB DDR3</td>
<td>Yes</td>
<td>HMIYPRAM3080R1</td>
<td>–</td>
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<tr>
<td>Maintenance kit</td>
<td>USB cable, fans, holders, filters, motherboard screws, HDD screws, SATA cables, and door keys</td>
<td>Yes</td>
<td>– HMIYRMKT2O1</td>
<td>–</td>
</tr>
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<td>–</td>
<td>– HMIYRMKT2U1</td>
<td>–</td>
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<td></td>
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<td>Yes HMIYRMKT4P1</td>
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<tr>
<td>Power supply</td>
<td>Spare single 110-240 V ~ power supply</td>
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<td>– HMIYRMAC21</td>
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<tr>
<td>Software</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Vijeo Designer Run Time license for 1 workstation</td>
<td></td>
<td>Converts the 21-day trial version of Vijeo Designer Run Time Demo to an unlimited license</td>
<td>Yes</td>
<td>VJDSNRTMPC</td>
</tr>
<tr>
<td>Intelligent Data Service license extension for Vijeo Designer RT for 1 workstation</td>
<td></td>
<td>Used to track the process variables and all operator actions, and offers visibility of the key process values</td>
<td>Yes (requires storage capacity ≥ 4 GB)</td>
<td>VJDSNTRCKV60M</td>
</tr>
<tr>
<td>EcoStruxure Operator Terminal Expert Run Time license for 1 workstation</td>
<td></td>
<td>Converts the 21-day trial version of EcoStruxure Operator Terminal Expert Run Time Demo to an unlimited license</td>
<td>Yes</td>
<td>HMIRTWCZLSPAZZ (Digital) HMIRTWCZLSPMZZ (Paper)</td>
</tr>
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Harmony HMIDID iDisplay screens

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### Harmony iPC

**Industrial PC, Edge Box, and Display Harmony HMIDID iDisplay screens**

**12” and 15” flat screens**

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#### Selection guide

**Type of display**

<table>
<thead>
<tr>
<th>Harmony HMIDID</th>
<th>Display flat screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>12” touch screen</td>
</tr>
<tr>
<td><strong>Screen</strong></td>
<td>TFT HD LCD color multi-touch resistive screen (2)</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>12”, 1”</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>VGA, 1024 x 768 pixels, 16 million colors</td>
</tr>
<tr>
<td><strong>Degree of protection</strong></td>
<td>IP66, IP67, and NEMA-4/13 for the front panel when installed properly in an enclosure</td>
</tr>
<tr>
<td><strong>Brightness</strong></td>
<td>600 nit adjustable, 100 level dimming with brightness sensor</td>
</tr>
<tr>
<td><strong>Backlight</strong></td>
<td>50,000 hours</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>On the front panel</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>1x USB 2.0 (Type A) from touch screen to PC</td>
</tr>
<tr>
<td><strong>Standards and certifications</strong></td>
<td>Conforming to JIS B 3501 and IEC 61131-2 standards:</td>
</tr>
<tr>
<td><strong>Power</strong></td>
<td>17 W max.</td>
</tr>
<tr>
<td><strong>Supply voltage</strong></td>
<td>24 V ±10%</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Panel on front enclosure or VESA 100 x 100 on the rear of display</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Overall dimensions (W x H x D): 315 x 241 x 67 mm</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>During operation: 0...60 °C/104...140 °F, according to EN 61131-2 and UL</td>
</tr>
<tr>
<td><strong>Shock resistance</strong></td>
<td>IEC/EN 61131-2 compliant:</td>
</tr>
<tr>
<td><strong>Vibration resistance</strong></td>
<td>Conforming to AS 9.5.007 and IEC 61131-2 standards:</td>
</tr>
</tbody>
</table>

#### References

**HMIDID640TD1**

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**Alternate Display option with Harmony HMIDID Display adapter**

<table>
<thead>
<tr>
<th>Harmony HMIDID</th>
<th>Display flat screen</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>19” touch screen</td>
</tr>
<tr>
<td><strong>Screen</strong></td>
<td>TFT HD LCD color multi-touch resistive screen (2)</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>19”</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>VGA, 1024 x 768 pixels, 16 million colors</td>
</tr>
<tr>
<td><strong>Degree of protection</strong></td>
<td>IP66, IP67, and NEMA-4/13 for the front panel when installed properly in an enclosure</td>
</tr>
<tr>
<td><strong>Brightness</strong></td>
<td>600 nit adjustable, 100 level dimming with brightness sensor</td>
</tr>
<tr>
<td><strong>Backlight</strong></td>
<td>50,000 hours</td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>On the front panel</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td>1x USB 2.0 (Type A) from touch screen to PC</td>
</tr>
<tr>
<td><strong>Standards and certifications</strong></td>
<td>Conforming to JIS B 3501 and IEC 61131-2 standards:</td>
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<tr>
<td><strong>Power</strong></td>
<td>17 W max.</td>
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<tr>
<td><strong>Supply voltage</strong></td>
<td>24 V ±10%</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>Panel on front enclosure or VESA 100 x 100 on the rear of display</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>Overall dimensions (W x H x D): 315 x 241 x 67 mm</td>
</tr>
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<td><strong>Temperature</strong></td>
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</tr>
<tr>
<td><strong>Shock resistance</strong></td>
<td>IEC/EN 61131-2 compliant:</td>
</tr>
<tr>
<td><strong>Vibration resistance</strong></td>
<td>Conforming to AS 9.5.007 and IEC 61131-2 standards:</td>
</tr>
</tbody>
</table>

#### References

**HMIDID730TD1**

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**HMIIDM Modular Display with HMIDID Display Adapter, making remote monitors as: |
- Local display (maximum distance of 5 m/16 ft) |
- Remote display (up to 4 daisy chain displays with same screen definition, and maximum distance of 100 m/328 ft for 1st Display to 400 m/1312 ft for 4th Display) |

**References**

HMIDID640TD1

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(1) For more information, please refer to Harmony Display Adapter on page 403
(2) Touch function on the display is not available with Windows Server operating system.
Harmony iPC
Industrial PC, Edge Box, and Display
Harmony HMIDID iDisplay screens
12” and 15” flat screens

Presentation
Harmony HMIDID iDisplay are monitors with industrial flat screens designed for use with PCs. The 4:3 auto-scaler format screens of iDisplay adapt to screen definition. Harmony HMIDID enhances user experience and efficiency by multi-touch support like a smartphone. In addition to panel mounting, Harmony iDisplay also offers VESA 100x100 mounting on the rear side of the product.

Two screen sizes are available: 12” and 15” to suit various requirements.
Harmony HMIDID screens are certified for PLC product standards and designed for use in severe industrial environments (up to 60 °C, with LED backlight (50,000-hr life) and waterproof front IP67f). They support excellent screen sizes or dimension ratios for easy installation on any machine or in any equipment.

These screens are easily connected to the PC via:
- Standard DVI digital video with auto-scaler
- USB with touch screen drivers (supports up to Windows® 8.1, not available with Windows Server)

Harmony iDisplay screens have the same cut-out dimensions as Harmony HMI Panels, thus making it easy to upgrade installations.

Architecture
Harmony iDisplay screens are compatible with Harmony Rack PCs (1).

Alternate Display option with Harmony HMIDAD Display Adapter
As an alternative option for Harmony HMIDID iDisplay screens, the Harmony HMIDAD Display Adapter can be used to remotely connect a Harmony Modular Display to a Harmony iPC or a third party PC, in the following configurations:

- Local display of up to 1 display (maximum distance of 5 m/16.4 ft). The Harmony iPC or a third party PC, is connected to HMIDADP11 Display Adapter by 1x USB cable for touch screen and 1x Display Port cable for video.
- Remote display of up to 4 displays with the same screen definition (maximum distance of 100 m/328 ft. between each device). Harmony iPC with mini PCIe interface is connected to Display adapters through RJ45 cables. In this configuration, each remote display includes an HMIDM Modular Display + an HMIDADP11 Display Adapter + an HMIDARE11 Receiver module + an HMIDATR11 Transmitter module (not required for the last display in the chain).

For more information on Harmony HMIDAD Display Adapter, please refer pages 4/28 to 4/31.

(1) For more information, please refer pages 5/4 to 5/9.
**References**

**Harmony iPC**
Industrial PC, Edge Box, and Display Harmony HMIDID iDisplay screens
12” and 15” flat screens

<table>
<thead>
<tr>
<th>References</th>
<th>Screen</th>
<th>Interface</th>
<th>Supply voltage</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat screen for flush mounting, IP66f, IP67f front panel (2)</td>
<td>12”, XGA resistive (1024 x 768 pixels)</td>
<td>Multi-touch</td>
<td>12...24 V</td>
<td>HMIDID64DTD1 (1)</td>
<td>3.9/8.6</td>
</tr>
<tr>
<td></td>
<td>15”, XGA resistive (1024 x 768 pixels)</td>
<td>Multi-touch</td>
<td>12...24 V</td>
<td>HMIDID73DTD1 (1)</td>
<td>5.2/11.5</td>
</tr>
</tbody>
</table>

**Separate parts**

<table>
<thead>
<tr>
<th>Description</th>
<th>Sold in lots of</th>
<th>Reference</th>
<th>Weight kg/lb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extra-long cable (10 m/32.81 ft) for connection with Harmony Box PC and Harmony Panel PC industrial PCs</td>
<td>–</td>
<td>HMIYCBVDI1011</td>
<td>–</td>
</tr>
<tr>
<td>USB clamp Type B (1 port) for Harmony iDisplay</td>
<td>5</td>
<td>HMIY0USBCA111</td>
<td>–</td>
</tr>
<tr>
<td>:Display Adaptation plate from 19” to 15”</td>
<td>–</td>
<td>HMIYAD1915D1</td>
<td>–</td>
</tr>
</tbody>
</table>

**Substitution**

**Legacy Harmony iDisplays**

<table>
<thead>
<tr>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony iDisplay 15”</td>
<td>HMIDID7DT0</td>
</tr>
<tr>
<td>Harmony iDisplay 19”</td>
<td>MPCYT90NAN00N</td>
</tr>
</tbody>
</table>

**Replaced by Harmony displays**

<table>
<thead>
<tr>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmony iDisplay 15” Multi-touch</td>
<td>HMIDID73DTD1</td>
</tr>
<tr>
<td>Harmony displays</td>
<td>HMIDM9521 + HMIDADP11</td>
</tr>
</tbody>
</table>

(1) Supplied with 5 m/16.4 ft DVI cable.
(2) Harmony iDisplay offers VESA 100x100 mounting on the rear of the product.
Product reference index

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The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

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