

Additional Device Support in PowerLogic™ ION Enterprise™ 6.0

This document outlines support in ION Enterprise 6.0 for devices that are not based on ION architecture.

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Additional Information

- ◆ Online *ION Enterprise Help*
- ◆ Your device documentation
- ◆ Documentation for your device configuration software
- ◆ *ION Setup Device Configuration Guide*

Software Configuration Utilities

- ◆ ION Setup (PM Series and BCPM devices)
- ◆ PMCU (CM Series devices)
- ◆ SFT2841 (Sepam Series devices)
- ◆ RSU (Compact NSX devices and Micrologic Trip Units)

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PM Series Devices

The following sections provide information on using PM Series devices with ION Enterprise.

The supported PM Series devices are PM210, PM710, PM750, PM810, PM820, PM850 and PM870.

Configuring Devices to Communicate with ION Enterprise

Before you add a PM Series device in ION Enterprise, you need to configure the device using ION Setup.

NOTE

The PM210 is not supported in ION Setup.

The following table outlines parameters that need to be set in a particular way for the device to communicate with ION Enterprise when the device is on a serial communications loop:

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 247
Protocol	Modbus RTU
Parity	None ²

¹ Each address (Unit ID) must be unique for each device on a serial communications loop.

² This is the suggested setting for an ION Enterprise system. If you set the parity to a setting other than None, ensure that all devices on the serial communications loop are set to the same parity.

NOTE

If you are using the PM800 series device with the optional PM8ECC card, you need to adjust the Unit ID in Management Console to match the Unit ID of comm port 1 of the PM800 series device.

Configure other settings as required for your system.

See the *ION Setup Device Configuration Guide* for more information on configuring this device using ION Setup.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Using PM Series Devices with ION Enterprise

After you have configured the device, use Management Console to add the device to your ION Enterprise network. See the online *ION Enterprise Help* for more information.

The following sections outline considerations when using the device with ION Enterprise.

Time Synchronization

For the PM Series devices, time sync requests are sent every hour. You cannot manually send time synchronization signals to these devices from ION Enterprise. For information on enabling or disabling time synchronization, contact Technical Support.

Viewing Historical Data using Web Reporter

The following default reports are available to generate reports on historical data using Web Reporter:

- ◆ Power Quality
- ◆ Load Profile
- ◆ Energy Cost

Other reports can be used with the PM Series devices but may require further device configuration to be useful.

NOTE

For PM Series devices that support power quality features (such as voltage sag/swell detection on the PM870), disturbance monitoring needs to be set up before you can create Power Quality reports using Web Reporter.

Setting Up PM Series Data Logs for Load Profile and Energy Cost Reports

The PM Series devices by default do not log all the measurements required to generate Load Profile and Energy Cost reports using Web Reporter. To generate these reports, you must first use ION Setup to configure the meter to log these measurements.

Use ION Setup to configure the onboard data logs as follows:

- ◆ Add “Reactive Energy Into the Load” and “Real Energy Into the Load” to the Billing Log.
- ◆ Add the log containing basic values into the Log Files for Data Log #1. Make sure the following settings are set as noted:
 - ◆ Ensure **Enable** is selected.
 - ◆ Ensure the Logging Interval Mode is set to **Continuous**.
- ◆ Configure other settings as required for your purposes.

ION Enterprise Priority Numbers for PM Series Events

PM Series device events are mapped to ION Enterprise event log priority numbers in the following way:

PM Series Device Event	ION Enterprise Priority Numbers
0	0
3	64
2	128
1	200

Upgrading Device Firmware

Use DLF3000 to upgrade device firmware.

CAUTION

Disable communication from ION Enterprise to the device before attempting to upgrade your device firmware. You could seriously damage your device if you try to upgrade while ION Enterprise is trying to communicate with the device. To discontinue communication between ION Enterprise and the device, right-click on the device in Management Console and select Disconnect. To enable communication after the upgrade is complete, right-click on the device in Management Console and select Connect.

CM Series Devices

The following sections provide information on using CM Series devices with ION Enterprise.

The supported CM Series devices are CM3250, CM3350, CM4000, CM4000T and CM4250.

Configuring Devices to Communicate with ION Enterprise

Before you add a CM Series device in ION Enterprise, you need configure the device using PowerLogic Meter Configuration Utility (PMCU). The following table outlines parameters that need to be set in a particular way for the device to communicate with ION Enterprise when the device is on a serial communications loop:

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 247
Protocol	Modbus RTU
Parity	None ²

¹ Each address (Unit ID) must be unique for each device on a serial communications loop.

² This is the suggested setting for an ION Enterprise system. If you set the parity to a setting other than None, ensure that all devices on the serial communications loop are set to the same parity.

Configure other settings as required for your system.

NOTE

It is recommended that you use PMCU or Vista to disable Data Log 4 on CM Series devices in your ION Enterprise network. Because this Data Log logs at a very high frequency (every 5 seconds), it can impact the performance of ION Enterprise.

For more information on CM Series devices, see your device documentation. For more information on using PMCU, see the PMCU documentation.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Configuring Input Metering on CM Series Devices

With input metering, device inputs can measure values from the same location as the device or they can measure values from locations other than that of the device.

If you want these inputs to appear in ION Enterprise as device-independent measurements, you must create custom labels for these measurements using PMCU. These custom labels must include the @ symbol. ION Enterprise interprets labels with the @ symbol as a device-independent measurements.

NOTE

Measurements with the default labels appear as if they are from the CM Series device and are available to the OPC Server Assistant. However, if you use custom labels to create device-independent measurements, these measurements are no longer available to the OPC Server Assistant.

Using CM Series Devices with ION Enterprise

After you have configured the device, use Management Console to add the device to your ION Enterprise network. See the online *ION Enterprise Help* for more information.

The following sections outline considerations when using the device with ION Enterprise.

Time Synchronization

Time synchronization is enabled by default. Signals are sent to these devices once every hour and do not include DST adjustments. You cannot manually send time synchronization signals to these devices from ION Enterprise. For information on enabling or disabling time synchronization for a particular device type, contact Technical Support.

ION Enterprise Priority Numbers for CM Series Events

CM Series device events are mapped to ION Enterprise event log priority numbers in the following way:

CM Series Device Event	ION Enterprise Priority Numbers
0	0
3	64
2	128
1	200

Viewing Historical Data using Web Reporter

The following default reports are available to generate reports on historical data using Web Reporter:

- ◆ Load Profile
- ◆ Energy Cost
- ◆ Power Quality
- ◆ EN50160
- ◆ 100 ms (CM3350/CM4000/CM4000T/CM4250)

Other reports can be used with these CM Series devices but may require further device configuration to be useful.

For more information on the default reports, see the online *ION Enterprise Help*.

Setting Up CM Series Data Logs for Use with Load Profile and Energy Cost Reports

The CM Series devices by default do not log all the measurements required to generate Load Profile and Energy Cost reports using Web Reporter. To generate these reports, you must first use PMCU to configure the meter to log these measurements.

Use PMCU to configure the onboard data logs as follows:

- ◆ Add “Reactive Energy Into the Load” and “Real Energy Into the Load” to the Log Template that corresponds to basic values (e.g., Basic Values).
- ◆ Add the log containing basic values into the Log Files for Data Log #1. Make sure the following settings are set as noted:
 - ◆ Select **Continuous** logging.
 - ◆ Ensure **Enable** and **FIFO** are selected.
- ◆ Configure other settings as required for your purposes.

Upgrading Device Firmware

Use DLF3000 to upgrade firmware.

CAUTION

Disable communication from ION Enterprise to the device before attempting to upgrade your device firmware. You could seriously damage your device if you try to upgrade while ION Enterprise is trying to communicate with the device. To discontinue communication between ION Enterprise and the device, right-click on the device in Management Console and select Disconnect.

Compact NSX Devices

The following sections provide information on using Compact NSX devices with ION Enterprise.

The supported devices are Compact NSX with BSCM module and Micrologic™ trip units type A and type E

Configuring Devices to Communicate with ION Enterprise

Before you add a Compact NSX device in ION Enterprise, you need configure the device using RSU. The following table outlines parameters that need to be set in a particular way on the device for the device to communicate with ION Enterprise.

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 247
Parity	None ²
Auto-speed sensing	No ³

¹ Each address (Unit ID) must be unique for each device on a serial communications loop.

² This is the suggested setting for an ION Enterprise system. If you set the parity to a setting other than None, ensure that all devices on the serial communications loop are set to the same parity.

³ Setting this to Yes can result in significant communications problems between ION Enterprise and the device.

Configure other settings as required for your system.

For more information on Compact NSX devices, see your device documentation. For more information on using RSU, see the RSU documentation.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Using Compact NSX Devices with ION Enterprise

After you have configured the device, use Management Console to add the device to your ION Enterprise network. See the online *ION Enterprise Help* for more information.

The following sections outline considerations when using the device with ION Enterprise.

Compact NSX Security and ION Enterprise Access

When performing control actions on the Compact NSX, ION Enterprise attempts to use the device's default passwords. If these have been changed and ION Enterprise cannot gain access to the Compact NSX, the action is aborted and an error message appears.

Time Synchronization

Time synchronization is enabled by default. Signals are sent to these devices once every 15 minutes and include DST adjustments. You cannot manually send time synchronization signals to these devices from ION Enterprise. For information on enabling or disabling time synchronization for a particular device type, contact Technical Support.

ION Enterprise Priority Numbers for Compact NSX Events

Compact NSX events are mapped to ION Enterprise event log priority numbers in the following way:

Compact NSX Event	ION Enterprise Priority Numbers
1	64
2	128
3	200

Viewing Historical Data using Web Reporter

The following default reports are available for the Compact NSX E when generating reports on historical data using Web Reporter:

- ◆ Load Profile
- ◆ Energy Cost

Other reports can be used with the Compact NSX devices but may require further device configuration to be useful.

For more information on the default reports, see the online *ION Enterprise Help*.

Upgrading Device Firmware

Use RSU to upgrade firmware

CAUTION

Disable communication from ION Enterprise to the device before attempting to upgrade your device firmware. You could seriously damage your device if you try to upgrade while ION Enterprise is trying to communicate with the device. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect.

BCPM Devices

The following sections provide information on using Branch circuit power meters (BCPM) with ION Enterprise.

Configuring Devices to Communicate with ION Enterprise

Before you add a BCPM device in ION Enterprise, you need configure the device using ION Setup. The following table outlines parameters that need to be set in a particular way on the device for the device to communicate with ION Enterprise.

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 247
Parity	Off

¹ Each address (Unit ID) must be unique for each device on a serial communications loop.

Configure other settings as required for your system.

For more information on Branch circuit power meters, see your device documentation. For more information on using ION Setup to configure the device, see the *ION Setup Device Configuration Guide*.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Using BCPM Devices in ION Enterprise

The following sections outline considerations when using the device with ION Enterprise.

BCPM OPC Server Support in ION Enterprise

OPC server support is available for the BCPM in ION Enterprise except for channel measurements (such as channel current and channel demand), which are not exported to the OPC server.

Adding Devices to ION Enterprise

Perform basic device configuration using the appropriate device configuration utility before you add the device to your ION Enterprise network.

For instructions on adding devices to your ION Enterprise network, see the online *ION Enterprise Help*.

The BCPM and Device Licensing in ION Enterprise

Device licensing for the BCPM in ION Enterprise is different from most other devices. For specific information on device licensing and the BCPM, contact your Schneider Electric sales representative.

- ◆ **BCPM84:** For the BCPM84, each pair of current sensor (CT) strips must be added as a separate device in ION Enterprise. Each pair of CT strips has a unique unit ID (the base address that you configure and the base address plus 1).

The BCPM84 appears as two devices in ION Enterprise. However, each pair of CT strips on the BCPM84 counts as half a device license — so when you add both pairs of CT strips, you use one device license.

- ◆ **BCPM42:** The BCPM42 is added as one device in ION Enterprise but uses half a device license.

ION Enterprise Priority Numbers for BCPM Events

BCPM events are mapped to ION Enterprise event log priority numbers in the following way:

BCPM Event	ION Enterprise Priority Numbers
Channel and Auxiliary Input Events	64
Global Events	200

Micrologic Trip Units

The following sections provide information on using Micrologic Trip Units with ION Enterprise.

The following Micrologic Trip Units are supported as stand-alone devices in ION Enterprise: Micrologic Type A (2.0, 3.0, 5.0, 6.0 and 7.0), Micrologic Type H (5.0, 6.0 and 7.0) and Micrologic Type P (5.0, 6.0 and 7.0).

Configuring Devices to Communicate with ION Enterprise

Before you add a Micrologic Trip Unit in ION Enterprise, you need configure the device using RSU. The following table outlines parameters that need to be set in a particular way on the device for the device to communicate with ION Enterprise.

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 47 ²
Parity	None ³
Auto Speed Sensing	No

- ¹ Each address (Unit ID) must be unique for each device on a serial communications loop. If other devices are on the same serial loop as a Micrologic device, set the non Micrologic device Unit IDs to values between 148 and 200.
- ² Because a Micrologic Trip Unit is composed of multiple components with their own unit IDs, the values 50, 100 and 200 are added to the base unit ID. For example, if you set the unit ID to 5, unit IDs 55, 155 and 255 may also used, depending on the trip unit.
- ³ This is the suggested setting for an ION Enterprise system. If you set the parity to a setting other than None, ensure that all devices on the serial communications loop are set to the same parity.

Configure other settings as required for your system.

For more information on Micrologic Trip Units, see your device documentation. For more information on using RSU, see the RSU documentation.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Using Micrologic Trip Units in ION Enterprise

After you have configured the device, use Management Console to add the device to your ION Enterprise network. See the online *ION Enterprise Help* for more information.

The following sections outline considerations when using the device with ION Enterprise.

Time Synchronization

Time synchronization is enabled by default. Signals are sent to these devices once every 15 minutes and do not include DST adjustments. You cannot manually send time synchronization signals to these devices from ION Enterprise. For information on enabling or disabling time synchronization, contact Technical Support.

Viewing Historical Data using Web Reporter

The following default reports are available for Micrologic Type H and Micrologic Type P when generating reports on historical data using Web Reporter:

- ◆ Load Profile
- ◆ Energy Cost

Other reports can be used with the Micrologic Trip Unit devices but may require further device configuration to be useful.

For more information on the default reports, see the online *ION Enterprise Help*.

Upgrading Device Firmware

Use RSU to upgrade device firmware.

NOTE

Disable communication from ION Enterprise to the device before attempting to upgrade your device firmware. You could seriously damage your device if you try to upgrade while ION Enterprise is trying to communicate with the device. To discontinue communication between ION Enterprise and the device, right-click on the device in Management Console and select Disconnect.

Sepam Series Devices

The following sections provide information on using Sepam Series devices with ION Enterprise.

The supported Sepam Series devices are:

- ◆ Sepam Series 10
- ◆ Sepam Series 20 firmware version V0526 or later
- ◆ Sepam Series 40 firmware version V3.0 or later
- ◆ Sepam Series 80 firmware version V3.0 or later

See “Upgrading from Limited Edition (LE) Device Support” on page 17 for information on upgrading your Sepam Series device support from Limited Edition to standard support.

Configuring Devices to Communicate with ION Enterprise

Before you add a Sepam Series device in ION Enterprise, you need configure the device using the appropriate version of SFT2841. The following table outlines parameters that need to be set in a particular way on the device for the device to communicate with ION Enterprise.

Device Parameter	Required Setting
Unit ID ¹	Between 1 and 247
Parity	None ²

¹ Each address (Unit ID) must be unique for each device on a serial communications loop.

² This is the suggested setting for an ION Enterprise system. If you set the parity to a setting other than None, ensure that all devices on the serial communications loop are set to the same parity.

Configure other settings as required for your system.

For more information on Sepam Series devices, see your device documentation. For more information on using SFT2841, see the SFT2841 documentation.

NOTE

Trying to communicate to the device with the same communications port at the same time using two software programs (for example, configuration software and ION Enterprise) can cause communication problems. To discontinue communication between ION Enterprise and the device, right-click the device in Management Console and select Disconnect. To restart communication between ION Enterprise and the device, right-click the device in Management Console and select Connect.

Using Sepam Series Devices in ION Enterprise

After you have configured the device, use Management Console to add the device to your ION Enterprise network. See the online *ION Enterprise Help* for more information.

The following sections outline considerations when using the device with ION Enterprise.

Multiple System Access

If you have multiple master software communicating to the same communication port on a Sepam Series device (i.e., ION Enterprise and another mastering software), the *SEPAM Data Zone* register must be configured. Sepam Event Logs are designed to initiate a delete when an event is acknowledged (read) from the device. For this reason the device is designed with duplicate event logs, called Data Zones.

ION Enterprise Management Console allows the device setup to choose which Data Zone to read from. If multiple devices are using the same Data Zone then events will be deleted by one master, permanently removing them from access to the other master. The Data Zone setting must be coordinated between the two software configurations to ensure that this circumstance does not occur, or data will be permanently lost.

Sepam Data Zone	Value
System Default	default ¹
1	Zone 1
2	Zone 2

¹) The default value is Zone 2 for Sepam Series devices added to ION Enterprise. The default value is appropriate in most cases.

Time Synchronization

To alter the time synchronization settings for the device, right-click the device in Management Console and select Configure Device. Right-click the blank space below *Description* and select Advanced Properties.

NOTE

For both *Timesync Enabled* and *Timesync with DST*, the default setting is System Default. This is set at a device type level (for example, all Sepam Series 20 devices), and the System Default for both of these settings is Enabled (unless you have modified the .xml file for the device type).

For *Timesync Enabled*, select one of the following:

- ◆ System Default (see note above)
- ◆ Yes: enables time synchronization for the device.
- ◆ No: disables time synchronization for the device.

For *Timesync with DST*, select one of the following:

- ◆ System Default (see note above)
- ◆ Yes: DST is applied for that device if time synchronization is enabled.
- ◆ No: DST is ignored for that device if time synchronization is enabled.

Waveform Triggers and Peak Demand Reset

ION Enterprise Vista allows manual waveform capture and Peak Demand reset for applicable Sepam Series devices.

Device	Waveform Capture	Current Peak Demand Reset	Power Peak Demand Reset
Sepam Series 10	No	Yes	No
Sepam Series 20	Yes	Yes ¹	No
Sepam Series 40	Yes	Yes	Yes
Sepam Series 80	Yes	Yes	Yes

¹) Sepam Series 20 model B20, B21 and B22 do not have current inputs and so cannot trigger a Current Peak Demand Reset.

Viewing Historical Data using Web Reporter

The following default reports are available to generate reports on historical data using Web Reporter:

Report	Sepam Series 10 ¹	Sepam Series 20 ¹	Sepam Series 40 ¹	Sepam Series 80 ¹
Trend	Yes	Yes	Yes	Yes
Tabular	Yes	Yes	Yes	Yes
Event History	Yes	Yes	Yes	Yes
System Configuration	Yes	Yes	Yes	Yes
Energy Period-over-Period	No	No	Yes	Yes
Load Trend	No	No	Yes	Yes
Energy Usage by Shift	No	No	Yes	Yes
Energy Cost	No	No	Yes	Yes
Power Quality	No	Yes ²	Yes ²	Yes ²

¹ Some models in a series may not support all the reports listed.

² Waveform report only

For more information on the default reports, see the online *ION Enterprise Help*.

Upgrading from Limited Edition (LE) Device Support

If you installed optional, limited device drivers and standard support is now available for those devices, you can upgrade the device support.

You must perform the upgrade manually; it is not done automatically when upgrading to ION Enterprise 6.0.

NOTE

In order to perform the upgrade, ION Enterprise Services must be stopped. The services are stopped and restarted automatically.

1. Start Management Console and click the Devices icon in the System Setup pane.
1. Select the device(s) you want to upgrade. Right-click and select **Upgrade LE Device**. A dialog box appears notifying you that ION Enterprise services need to be stopped in order to perform the upgrade.
2. Click **OK** to stop ION Enterprise services and continue. The LE Device Upgrade Status dialog box appears.

If the upgrade is successful, click **Close**. If it is unsuccessful, contact Technical Support.