

SCADAPack Smart RTU

Selection Guide with I/O Expansion Module Support

Product Overview

A range of compact Smart RTUs that combines the capabilities of a Remote Terminal Unit with the power of a Programmable Logic Controller; designed to run in challenging, remote environments.

SCADAPack™ x70 is the latest generation of SCADAPack Smart RTUs which includes the SCADAPack 570, 574, 575, 470 and 474 variants. SCADAPack RemoteConnect™ configuration software facilitates configuration, logic development, and diagnostics in a single application. The SCADAPack x70 Logic Editor, within RemoteConnect software, is based on EcoStruxure™ Control Expert (Unity Pro) software components, allowing for code reuse and sharing between Schneider Electric Modicon™ PLCs and SCADAPack Smart RTUs.

The SCADAPack 300 | 32 range is optimized for Modbus-centric control and monitoring applications providing smart controller platform solutions with energy-efficiency, ruggedness and cost-efficiency in mind.

Supporting open, event-driven protocols such as DNP3 and IEC 60870-5-101/-104, the SCADAPack 300E and 500E ranges provide a scalable controller platform that helps to ensure end-to-end, reliable and secure control and monitoring of remote assets in critical infrastructure.



SCADAPack 470 | 474 Smart RTUs



SCADAPack 570 | 574 | 575 Smart RTUs



SCADAPack: Modbus-centric Smart RTUs



SCADAPack E: DNP3-centric Smart RTUs

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	SCADAPack E	SCADAPack Standard	SCADAPack 570 574 575	SCADAPack 470 474
Features embedded into the SCADAPack device				
Modbus protocol				
Server/Client	Yes	Yes	Yes	Yes
TCP/UDP	TCP	Yes	TCP ¹	TCP ¹
ASCII	No	Yes	Future implementation	Future implementation
D_log (data logging)	No	Yes	Future implementation	Future implementation
Master function blocks	Yes	Yes	Yes	Yes
Scanner	Yes	No	Yes	Yes
Store & forward	No	Yes	Yes	Yes
External Serial GPRS/3G/LTE modem support (PPP)	Yes	Yes ²	Yes	Yes
DNP3 protocol				
Subset	Level 4	Level 2	Level 4	Level 4
Secure Authentication	Licensed Option	No	Licensed Option	Licensed Option
Events storage (typical value)	300E: 20,000 500E: 40,000	20,000	40,000	40,000
Data concentrator	10 Free >10 Licensed	No	Licensed Option	Licensed Option
Master/Client/Peer-to-Peer	Yes	Yes ⁷	Yes	Yes
TCP/UDP	Yes	Yes	Yes	Yes
Routing between ports	Yes	Yes	Yes	Yes
External Serial GPRS/3G/LTE modem support (PPP)	Yes	Yes ²	Yes	Yes
IEC 60870-5-101/104 protocol				
Server/Client	Yes	No	Yes	Yes
External Serial GPRS/3G/LTE modem support (PPP)	Yes	No	Yes	Yes
HART protocol				
Pass-thru	Yes	No	Yes	Yes
Function block for standard data	Yes	No	Yes	Yes
SCADAPack 6602 HART module support	No	No	Yes	No
Eaton MTL4851 multiplexer support	Yes	No	No	No
Embedded applications				
Realflo™ (Flow Computer)	No	Option	Option	Option
Realift™ (Artificial lift)	Option	No	Option ⁴	Option ⁴
RealStream™ Lift Station	Option	No	No	No

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Embedded logic				
IEC 61131-3 Logic	Yes	Yes	Yes	Yes
Ladder Logic	Yes	Yes	Yes	Yes
Remote SCADAPack management (configurable changes, logic program downloads, RTU firmware or diagnostics)				
Change RTU configuration	Yes	Yes	Yes	Yes
Download new RTU logic program	Yes	Yes	Yes	Yes
Update RTU firmware	Yes	Yes	Yes	Yes
RTU diagnostics	Yes	Yes	Yes	Yes
Protocol used (to perform these operations from the corresponding software tools)	DNP3	Modbus	DNP3/Modbus ⁴	DNP3/Modbus ⁴
Software tools				
RTU configuration	SCADAPack E Configurator	Telepace Studio, SCADAPack Configurator, SCADAPack WorkBench 6 (CAM3)	RemoteConnect	RemoteConnect
IEC 61131-3 logic programming	SCADAPack WorkBench 6 (CAM5)	SCADAPack WorkBench 6 (CAM3)	RemoteConnect	RemoteConnect
Telepace Studio ladder logic programming	No	Yes	No	No
C/C++ support	No	Yes	Function Block ³	Function Block ³
Ecostruxure™ Geo SCADA Expert software as Centralized Remote Management tool	Yes	No	Yes	Yes
Realflo Multi-Run Flow Computer for Gas & Liquids	No	Yes	Yes	Yes
Ability to import EcoStruxure Control Expert (Unity Pro) Derived Function Blocks and/or program sections	No	No	Yes	Yes

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RTU Onboard I/O Comparison

	330 330E	334 334E	350 350E	357 357E	32P	32 P4	32 P4A	32 P4B
Analog inputs								
0...20 mA, 4...20 mA 0...5 Vdc, 0...10 Vdc		8		8				8
0...20 mA or 0...5 Vdc						8		
0...20 mA or 0...10 Vdc			5	5			8	
0...32.7 Vdc			1	1			1	
Analog outputs								
0...20 mA, 4...20 mA (optional)		2	2	2 or 4		2	2	2
Digital inputs								
12 Vdc or 24 Vdc		16		32				32
12/24/120/220 V						16		
24 Vac/30 Vdc, shared with counter inputs					3	3	3	3
30 V interrupt					1	1	1	1
Dry contact, shared with output points			8	8			32	
Digital outputs								
Dry contact						12		16
Dry contact or solid state, Form A (Normally open)		10		16				
Dry contact shared with inputs							32	
Open drain, shared with input points			8	8				
Controller Status Output					1	1	1	1
Counter inputs								
0...10 Hz, 0...5 kHz dry contact	1	1	1	1				
0...10 kHz (turbine or dry contact inputs)	2	2	2	2				
0...500 Hz, interrupt input					1	1	1	1
0...5 kHz, shared with Digital Inputs					3	3	3	3

RTU Onboard Communication Port Comparison

	330 330E	334 334E	350 350E	357 357E	32P	32 P4	32 P4A	32 P4B
Serial								
RS232/RS485: RJ45	2	2	1	1	1	1	1	1
RS232: RJ45	1	1	1	1	2	3	3	2
RS485: 2-pole removable terminal block			1	1				
Ethernet								
10/100 Base-T, RJ45	1	1	1	1	1	1	1	1
USB								
Peripheral: USB 2.0 compliant "B"-type, for local configuration	1	1	1	1				
Host: USB 2.0 compliant "A"-type, supports USB devices up to 32 GB ⁹ (specific memory sticks supported)	1	1	1	1				

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RTU Onboard I/O Comparison - continued

	530E	535E	570	574	575	470	474
Analog inputs							
0...20 mA, 4...20 mA 0...5 Vdc, 1...5 Vdc		6			6	4	12
0...20 mA, 4...20 mA 0...5 Vdc, 0...10 Vdc				8			
Analog outputs							
0...20 mA, 4...20 mA (optional)		2		2	2		2
Digital inputs							
12...24 Vdc	2	18	2	18	18	4	20
Digital outputs							
Form C relays: SPDT, separate Normally Open/Normally Closed/ Common)			2		2		
Form A relays: Normally Open			6		6	2	12
Dry-contact or solid-state relays (Form A - normally open)				10			
Sinking MOSFET output, rated 30 Vdc	1	1	1	1	1		
Counter inputs							
0...10 kHz, shared with digital input channels on controller board			2	2	2	4	4
0...1.5 kHz, shared with first 8 digital input channels on lower I/O board		4			4		4
0...150 Hz, shared with first 8 digital input channels on lower I/O board		4			4		4

RTU Onboard Communication Port Comparison

	530E	535E	570	574	575	470	474
Serial							
RS232/RS485: RJ45	2	2	2		2	2	2
RS232: RJ45	2	2	2	2	2		
RS232/RS485: RJ45 and 2-pole removable terminal block				2			
RS485: 2-pole removable terminal block						2	2
RS-232: 8-pin removable terminal block under top cover						1	1
Ethernet							
10/100 Base-T, RJ45	3	3	3	3	3	2	2
USB							
Peripheral: USB 2.0 compliant "B"- type, for local configuration	1	1	1	1	1		
Peripheral: USB 2.0 compliant "C"- type, for local configuration						1	1
Host: USB 2.0 compliant "A"-type, supports USB devices up to 32 GB (specific memory sticks supported)	1	1	1	1	1	1	1

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I/O Expansion Module Support

	SCADAPack E	SCADAPack Standard	SCADAPack 570 574 575	SCADAPack 470 474
Analog inputs				
5502: 8-channel, isolated, differential, bipolar	No	Yes	No	No
5504: 8-channel, isolated thermocouple	No	Yes	No	No
5505: 4-channel, RTD	Yes ⁵	Yes	Yes	Yes
5506: 8-channel, isolated, single-ended	Yes	Yes	Yes	Yes
Analog outputs				
5304: 4-channel, isolated	Yes	Yes	Yes	Yes
Digital inputs/Counter inputs				
5403: 8-point, discrete	No	Yes	No	No
5404: 16-point, discrete	No	Yes	No	No
5405: 32-point, discrete	Yes	Yes	Yes	Yes
5410: 4-channel counter	No	Yes	Yes	Yes
5414: 16-point, compact discrete	Yes	Yes	Yes	Yes
Digital outputs				
5406A: 16-point, Form A relay	No	Yes	No	No
5407: 8-point, Form A relay	No	Yes	No	No
5409: 8-point, DC	No	Yes	No	No
5411: 32-point, open-drain type	Yes ⁵	Yes	No	No
5415: 12-point, compact, dry contact relay, solid state relay	Yes	Yes	Yes	Yes

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I/O Expansion Module Support - Continued

	SCADAPack E	SCADAPack Standard	SCADAPack 570 574 575	SCADAPack 470 474
Combination IO				
5401: 8-point, individually configurable I/O ⁸	No	Yes	No	No
5402: 16-point, configurable as 16 D/I or 16 D/O ⁸	No	Yes	No	No
5606: 32 D/I, 16 Dry Contact relay O/P, 8 config. A/I	Yes ⁵	Yes	Yes	Yes
5607: 16 D/I, 10 Dry Contact relay O/P, 8 config. A/I	Yes ⁵	Yes	Yes	Yes
6601: 16 D/I, 8-Dry contact relay O/P, 6 config. A/I	Yes ⁶	No	Yes	Yes
6602: Analog I/O HART, 8 A/I, 4 A/O	Yes ⁶	No	Yes	Yes
6607: 16 D/I, 8 Counter/D/I (shared), 8 A/I, 2 A/O	No	No	Yes	Yes
Expansion power supply				
5103: 5 V@2 A, 24 V@ 0.5 A, accepts 16...24 Vac or 12...40 Vdc	Yes	Yes	Yes	Yes
Communication Module				
5904: HART communication module support	No	Yes	No	No

Footnotes:

- 1 UDP in future Implementation
- 2 SCADAPack 32 only
- 3 Using the EFB Toolkit, C/C++ programming can be used to create custom functions and function blocks
- 4 Coming in Q1 2021
- 5 Except 530E/535E
- 6 530E/535E only
- 7 Master (Class 0), Client
- 8 Requires plug-in relays
- 9 Not supported on 300E Series

Disclaimer: Consult the [SCADAPack hardware manuals](#) for more information. May be subject to export restrictions. Please contact your Process Automation SCADA & Telemetry [business development representative](#) for more details. Not all product features are available in every mode of operation. For detailed product specifications please refer to the individual data sheets & user manuals. Schneider Electric reserves the right to change product specifications. For more information, visit www.se.com.

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