

# 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 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
<b>Features embedded into the SCADAPack device</b>				
<b>Modbus protocol</b>				
Server/Client	Yes	Yes	Yes	Yes
TCP/UDP	TCP	Yes	TCP <sup>1</sup>	TCP <sup>1</sup>
ASCII	No	Yes	Future implementation	Future implementation
D_log (data logging)	No	Yes	Future implementation	Future implementation
Client 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	No	Yes	Yes
<b>DNP3 protocol</b>				
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
Controlling Station/Outstation/Peer-to-Peer	Yes	Yes <sup>7</sup>	Yes	Yes
TCP/UDP	Yes	Yes	Yes	Yes
Routing between ports	Yes	Yes	Yes	Yes
External Serial GPRS/3G/LTE modem support (PPP)	Yes	No	Yes	Yes
<b>IEC 60870-5-101/104 protocol</b>				
Controlling Station/Controlled Station	Yes	No	Yes	Yes
External Serial GPRS/3G/LTE modem support (PPP)	Yes	No	Yes	Yes
<b>HART protocol</b>				
Pass-thru	Yes	No	Yes	Yes
Function block for standard data	Yes	No	Yes	Yes
SCADAPack 6602 HART module support	No	No	Yes	Yes
Eaton MTL4851 multiplexer support	Yes	No	No	No
<b>Embedded applications</b>				
Realflo™ (Flow Computer)	No	Option	Option	Option
Realift™ (Artificial lift)	Option	No	Option <sup>4</sup>	Option <sup>4</sup>
RealStream™ Lift Station	Option	No	No	No

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### RTU Selection Guide - continued

	SCADAPack E	SCADAPack Standard	SCADAPack 570   574   575	SCADAPack 470   474
<b>Embedded logic</b>				
IEC 61131-3 Logic	Yes	Yes	Yes	Yes
Ladder Logic	Yes	Yes	Yes	Yes
<b>Remote SCADAPack management (configurable changes, logic program downloads, RTU firmware or diagnostics)</b>				
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 <sup>4</sup>	DNP3/Modbus <sup>4</sup>
<b>Software tools</b>				
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 <sup>3</sup>	Function Block <sup>3</sup>
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
<b>Analog inputs</b>				
0...20 mA, 4...20 mA 0...5 Vdc, 0...10 Vdc		8		8
0...20 mA or 0...10 Vdc			5	5
0...32.7 Vdc			1	1
<b>Analog outputs</b>				
0...20 mA, 4...20 mA (optional)		2	2	2 or 4
<b>Digital inputs</b>				
12 Vdc or 24 Vdc		16		32
Dry contact, shared with output points			8	8
<b>Digital outputs</b>				
Dry contact or solid state, Form A (Normally open)		10		16
Open drain, shared with input points			8	8
<b>Counter inputs</b>				
0...10 Hz, 0...5 kHz dry contact	1	1	1	1
0...10 kHz (turbine or dry contact inputs)	2	2	2	2

	530E	535E	570	574	575	470	474
<b>Analog inputs</b>							
0...20 mA, 4...20 mA 0...5 Vdc, 1...5 Vdc		6			6 <sup>b</sup>	4	12
0...20 mA, 4...20 mA 0...5 Vdc, 0...10 Vdc				8 <sup>b</sup>			
<b>Analog outputs</b>							
0...20 mA, 4...20 mA (optional)		2		2	2		2
<b>Digital inputs</b>							
12...24 Vdc	2	18	2	18	18	4	20
<b>Digital outputs</b>							
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		
<b>Counter inputs</b>							
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

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### RTU Onboard Communication Port Comparison

	330 330E	334 334E	350 350E	357 357E
<b>Serial</b>				
RS232/RS485: RJ45	2	2	1	1
RS232: RJ45	1	1	1	1
RS485: 2-pole removable terminal block			1	1
<b>Ethernet</b>				
10/100 Base-T, RJ45	1	1	1	1
<b>USB</b>				
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 (specific memory sticks supported)	1	1	1	1

	530E	535E	570	574	575	470	474
<b>Serial</b>							
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
<b>Ethernet</b>							
10/100 Base-T, RJ45	3	3	3	3	3	2	2
<b>USB</b>							
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
<b>Analog inputs</b>				
<b>5502:</b> 8-channel, isolated, differential, bipolar	No	Yes	No	No
<b>5505:</b> 4-channel, RTD	Yes <sup>5</sup>	Yes	Yes	Yes
<b>5506:</b> 8-channel, isolated, single-ended	Yes	Yes	Yes	Yes
<b>Analog outputs</b>				
<b>5304:</b> 4-channel, isolated	Yes	Yes	Yes	Yes
<b>Digital inputs/Counter inputs</b>				
<b>5403:</b> 8-point, discrete	No	Yes	No	No
<b>5405:</b> 32-point, discrete	Yes	Yes	Yes	Yes
<b>5410:</b> 4-channel counter	No	Yes	Yes	Yes
<b>5414:</b> 16-point, compact discrete	Yes	Yes	Yes	Yes
<b>Digital outputs</b>				
<b>5415:</b> 12-point, compact, dry contact relay, solid state relay	Yes	Yes	Yes	Yes
<b>Combination IO</b>				
<b>5402:</b> 16-point, configurable as 16 D/I or 16 D/O <sup>8</sup>	No	Yes	No	No
<b>5606:</b> 32 D/I, 16 Dry Contact relay O/P, 8 config. A/I	Yes <sup>5</sup>	Yes	Yes	Yes
<b>5607:</b> 16 D/I, 10 Dry Contact relay O/P, 8 config. A/I	Yes <sup>5</sup>	Yes	Yes	Yes
<b>6601:</b> 16 D/I, 8-Dry contact relay O/P, 6 config. A/I	Yes <sup>6</sup>	No	Yes	Yes
<b>6607:</b> 16 D/I, 8 Counter/D/I (shared), 8 A/I, 2 A/O	No	No	Yes	Yes
<b>Expansion power supply</b>				
<b>6103:</b> Output: 5.1 V +/- 0.05 V, 2 A max. Input: 11...30 Vdc, 13 W (Vin = 24 V, 2 A output)	Yes	Yes	Yes	Yes

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### Footnotes:

- 1 UDP in future Implementation
- 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 Controlling Station (Class 0),
- 8 Requires plug-in relays
- 9 Not supported on 300E Series
- 10 Differential analog inputs, i.e. do not share common GND (57x lower board only)

**Note:** 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.

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