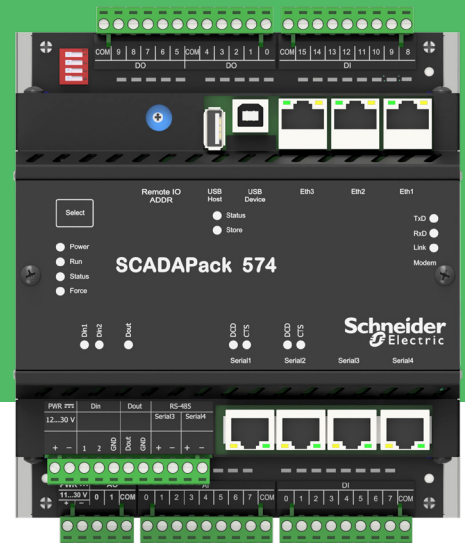


# SCADAPack 574

## Programmable Smart RTU



### Product at a glance

SCADAPack™ 574 is the newest version of SCADAPack x70 Smart RTUs. SCADAPack 574 provides the same functionality and features as the SCADAPack 575 except for the lower I/O board which provides the same lower I/O combination as the popular SCADAPack 334.

**Simplicity:** RemoteConnect™ software facilitates configuration, logic development, and diagnostics in a single application; helping to reduce costs and overhead associated with maintaining multiple software applications for managing a single device.

**Efficiency:** The x70 Logic Editor within RemoteConnect software is based on Unity™ Pro software components; allowing for code reuse and sharing between Schneider Electric Modicon™ PLCs and SCADAPack Smart RTUs.

**Ruggedized:** Designed with Cybersecurity and ruggedized communications in mind, SCADAPack 57x hardware features conformal coated boards and wide operating temperatures of -40...70 °C (-40...158 °F) with cold start at -40.

# SCADAPack 574

## Programmable Smart RTU

### Product Highlights:

#### Flexible Protocol Implementation

- Easily associate Modbus™, DNP3, or both protocols to database objects & variables
- DNP3 routing & Modbus Store-and-Forward facilitate communications bridge functionality using either protocol

#### Tagged (named) Object Database

- Improved readability and debugging of configuration and logic

#### Microsoft® Excel Export & Import of Database Objects

- Create external templates for reuse and manipulation of configurations
- Reduce engineering time and costs for large systems with common configurations

#### x70 Logic Editor

- Based on Unity Pro software with 5-language support for IEC 61131-3
- Code segment and function block export & import for code sharing between Schneider Electric Modicon PLCs and SCADAPack RTUs
- Leverage experience and personnel training across remote (RTU) and in-plant (PLC) projects

#### Remote Maintenance

- Update firmware, load/update logic, load configurations, and view diagnostics remotely or locally with RemoteConnect software
- Manage and configure multiple devices such as HART® instruments, actuators, variable frequency drives (VFDs), and other devices using plug-in DTMs for FDT2 or FDT1.2 within RemoteConnect software

#### Remote Ready Hardware

- 12...24 Vdc Input Power with input voltage monitor
- Wide operating temperature -40...70 °C (-40...158 °F)
- Conformal coated circuit boards

### Typical applications for the SCADAPack 574 RTU



#### Oil and Gas:

- Tank monitoring & automation
- Well test automation
- Well production and optimization
- Measurement

#### Water & Wastewater

- Leakage detection
- Equipment monitoring & control
- Water quality monitoring
- Irrigation
- DMAs (District Metering Areas), PMAs (Press. Monitoring Areas)
- Monitoring flow / level / pressure and temperature, etc. and many others...

# SCADAPack 574

## Programmable Smart RTU

### Configuring and programming SCADAPack 57x RTUs

#### RemoteConnect Software

RemoteConnect software facilitates configuration, diagnostics, logic development, and device management:

- Locally through any of the communication ports (default: USB device port)
- Remotely through serial<sup>1</sup> or TCP/IP networks and modems

#### Device Management

- Upgrade of SCADAPack firmware
- Upgrade of I/O expansion module firmware<sup>2</sup>
- HART device configuration and data monitoring via vendor supplied plug-in DTMs<sup>3</sup>
- Asset Management Software (AMS) TCP/IP network access to HART instruments and actuators via HART pass through

#### Logic Development (x70 Logic Editor)

- Choose from five IEC 61131-3 compliant languages
- Use compiled run-time code for fast execution
- Import and export logic code segments for use in other SCADAPack projects or sharing<sup>4</sup> with Modicon PLC projects
- Perform online debugging and logic modifications from the x70 Logic Editor
- Develop and write logic to a running system without interruption to the logic
- Deploy new logic code between scans with minimal effect on execution time



#### Configuration

- Use descriptive naming of objects to enhance development, debugging, and translation to host systems
- Import or export configurations for templating and bulk editing externally in Excel
- Group, filter, and sort objects for easy editing and viewing with RemoteConnect software object browsers

#### Diagnostics

- View system information and status from object browsers within RemoteConnect software
- View advanced diagnostics using the Telnet command line interface, including built-in protocol analyzers for DNP3 and Modbus

#### Footnotes:

1. Online connection between RemoteConnect software and SCADAPack requires DNP3 protocol. Modbus will be supported in the future to allow for online connection over Modbus serial networks.
2. I/O expansion module firmware upgrades are supported on 6xxx modules only.
3. DTM is Device Type Manager – vendor-supplied device driver for device-specific configuration and data display. RemoteConnect software is an FDT2 (Field Device Tool version 2) container for compatible DTMs.
4. Sharing of logic code does not include hardware specific functions or system variables that are not common to both platforms.

Refer to the SCADAPack x70 Documentation Set for further details.

# SCADAPack 574

## Programmable Smart RTU

### Specifications

#### Architecture

Processor	SPEAR 1380 32-bit dual-core Cortex™ A9 microcontroller, 500 MHz
Memory	<ul style="list-style-type: none"> <li>• 128 MB NAND FLASH, 128 MB DDR3 RAM</li> <li>• Non-Volatile RAM CMOS SRAM with lithium battery retains contents for 2 years with no power</li> </ul>
Event logging capacity	Up to 40,000 time-stamped DNP3 events (reduced if database exceeds 10,000 objects)
Database capacity	Typical maximum 15,000 objects, max. number of logic connected objects is 6000 (subset of 15,000 total objects)
DNP3 Data Concentrator Master	(optional) Manages up to 100* DNP3 peer (slave) devices for collection of DNP3 data and events from other DNP3 outstations
DNP3 Master Stations	Up to 3
DNP3 Peer Devices	Up to 90
Modbus master (client)	Up to 80* simultaneous Modbus TCP client (outgoing master) connections
Modbus slave (server)	Up to 20* Modbus TCP server (incoming slave) connections
File system storage	Internal: 70 MB usable; External: 32 GB (using optional memory stick)

\* Shared resources – Total combined maximum number of simultaneous TCP connections is 80; additional connections such as FTP, Telnet, and logic debug utilize some of these total combined resources when they are active.

#### Communications

Serial Ports: Serial1, Serial2	<ul style="list-style-type: none"> <li>• RS-232 port, 8-pin modular RJ45 jack, +5 Vdc power control, hardware handshaking, maximum baud rate 115,200 bps</li> <li>• Rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection</li> </ul>
Serial Ports: Serial3, Serial4	Configurable as: <ul style="list-style-type: none"> <li>• RS-232 or RS-485 two wire, half duplex, maximum baud rate 115,200 bps</li> <li>• 8-pin modular RJ45 jack, rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection</li> </ul>
Serial Protocols	DNP3 level 4 slave/master and peer-to-peer, Modbus RTU slave/master
Ethernet Ports: Eth1, Eth2, Eth3	8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer isolated
IP Protocols	<ul style="list-style-type: none"> <li>• DNP3 level 4 in TCP or in UDP Master/Slave and peer-to-peer,</li> <li>• Modbus/TCP Server, Modbus/TCP Client</li> <li>• Telnet Server, FTP Server</li> <li>• HART pass through over TCP when connected to SCADAPack 6602 modules</li> </ul>
USB Device Port	USB 2.0 compliant "B"-type receptacle, for local configuration
USB Host Port	USB 2.0 compliant "A"-type receptacle, supports USB devices up to 32 GB

# SCADAPack 574

## Programmable Smart RTU

### Specifications – cont'd

#### General

Logic Control	RemoteConnect software (five IEC 61131-3 languages)
I/O Terminations	Plug-in terminal blocks 0.0810...3.31 mm <sup>2</sup> (28...12 AWG), solid or stranded
Dimensions	150.5 mm x 181.7 mm x 91.0 mm (5.93 in. wide x 7.15 in. high x 3.58 in. deep)
Packaging	<ul style="list-style-type: none"> <li>Corrosion resistant zinc-plated steel with black enamel paint</li> <li>Conformal coated circuit boards</li> </ul>
Environment	<ul style="list-style-type: none"> <li>Operating temperature -40...70 °C (-40...158 °F), storage temperature, -40...85 °C (-40...185 °F)</li> <li>5% RH to 95% RH, non-condensing</li> </ul>
Shock & Vibration	IEC 61131-2 mechanical shock (tested up to 15 g shock), IEC 61131-2 vibration
Warranty	3 years on parts and labor

#### Power Supply

Rated Voltage and Power	12...30 Vdc, SCADAPack 574 typical 6.5 W, Max. 9.2 W, Class 2 power supply required
-------------------------	---

#### Certifications

EMC & Radio Frequency	<ul style="list-style-type: none"> <li>FCC 47 CFR Part 15, Subpart B</li> <li>ICES-003</li> <li>CE and RCM markings</li> </ul>
General Safety	IEC 61010-2-201; UL; CSA
Hazardous locations (option)	<ul style="list-style-type: none"> <li>cCSAus: Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D; and Class I, Zone 2</li> <li>IECEX/ATEX: Ex ec IIC T4 Gc -40°C ≤ Ta ≤ +70°C (pending December 2018)</li> </ul>
This product is RoHS-compliant	

# SCADAPack 574

## Programmable Smart RTU

### Specifications – cont'd

#### Digital and Analog Inputs/Outputs Controller Board (574)

Digital Inputs	<ul style="list-style-type: none"> <li>2, Din 1...2</li> <li>• 12...24 Vdc</li> <li>• Turn on voltage: 8 Vdc (minimum), Turn off voltage: 4 Vdc (maximum)</li> <li>• Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage</li> <li>• DC input current: 0.4 mA at 12 Vdc, 0.8 mA at 24 Vdc</li> <li>• Ground return connected to Chassis Ground</li> </ul>
Digital Output	<ul style="list-style-type: none"> <li>1, Dout:</li> <li>• Sinking MOSFET output, rated 30 Vdc, 0.5 A, ground return connected to Chassis Ground</li> </ul>
Internal Power monitor	<ul style="list-style-type: none"> <li>• Power supply Input voltage monitor with low voltage indication</li> <li>• Memory/RTC battery voltage monitor with low voltage indication</li> </ul>
Internal Temperature Monitor	<ul style="list-style-type: none"> <li>• Measurement range -40...75 °C (-40...167 °F)</li> </ul>

#### Lower I/O board (5607 module)

Analog Inputs	<ul style="list-style-type: none"> <li>8, AI 0...7</li> <li>• Software-configurable: 0...20 mA, 4...20 mA, 0...5 Vdc or 0...10 Vdc, plus over range</li> <li>• Resolution: 15-bit ADC (15-bit in measurement range 0...10 Vdc, and 14-bit in 5 Vdc or 20 mA input ranges)</li> <li>• Accuracy: <math>\pm 0.1\%</math> of full scale at 25 °C (77 °F), <math>\pm 0.2\%</math> over temperature range</li> <li>• Input Resistance: 250 <math>\Omega</math> in current ranges, 20 k<math>\Omega</math> in voltage ranges</li> <li>• Normal mode rejection: 27 dB at 60 Hz</li> <li>• Sampling rate: 170 ms</li> <li>• Isolation: 500 Vac from logic and chassis</li> </ul>
Analog Outputs	<ul style="list-style-type: none"> <li>(2 optional), AO 0...1</li> <li>• 0...20 mA or 4...20 mA, voltage output may be accomplished with external precision resistor.</li> </ul>
Digital Inputs	<ul style="list-style-type: none"> <li>16, DI 0...15</li> <li>• 12...24 Vdc, Turn-on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum)</li> <li>• Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage</li> <li>• DC input current: 0.67 mA typical at 24 Vdc</li> <li>• Isolation: in groups of 8, 1500 Vac from logic supply and chassis</li> </ul>
Digital Outputs	<ul style="list-style-type: none"> <li>10, dry-contact or solid-state relays (Form A - normally open)</li> <li>• 5 contacts share one common</li> <li>• Isolation: Chassis or logic to contact 1500 Vac (1 min.)</li> <li>• Controls: (DNP3 protocol) Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse</li> <li>Dry-contact relays:</li> <li>• Contact rating 3 A, 30 Vdc (resistive), 12 A maximum per common</li> <li>Solid-state relays:</li> <li>• Load voltage 30 Vdc maximum</li> <li>• Load current 2 A continuous max at 50 °C (122 °F), or 1.33 A at 70 °C (158 °F) ambient</li> </ul>



# SCADAPack 574

## Programmable Smart RTU

### Model Code

SCADAPack 574

Code	Select: Hardware platform
TBUP574	SCADAPack 574, 32-bit controller, Dual Core

Code	Select: Firmware platform
U	SCADAPack x70 Firmware

Code	Select: SCADA Security
A	None
C	DNP3 Secure Authentication SAV2 (Security Administrator application required)

Code	Select: Protocol Option
5	DNP3 Serial/IP master/slave/peer-to-peer, Modbus RTU/TCP master/slave, TCP/IP

Code	Select: License Option
6	None
7	DNP3 Data Concentrator Master License - allows collection of DNP3 events and data from multiple outstations

Code	Select: Analog Inputs
A	8: selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, or 0...10 Vdc

Code	Select: Digital Inputs/Outputs
B	<ul style="list-style-type: none"> <li>Upper I/O: 2 Digital Inputs &amp; 1 Digital Output</li> <li>Lower I/O: 16 Digital Inputs (12...24 Vdc) &amp; 10 DO (Dry Contact relays)</li> </ul>
C	<ul style="list-style-type: none"> <li>Upper I/O: 2 Digital Inputs &amp; 1 Digital Output</li> <li>Lower I/O: 16 Digital Inputs (12...24 Vdc) &amp; 10 DO (Solid State relays)</li> </ul>

# SCADAPack 574

Programmable Smart RTU

## Model Code cont'd

SCADAPack 574

<b>Code</b>	<b>Select: Analog Outputs</b>
0	None
1	2-channel Analog Output option, shipped selectable as 0...20 mA or 4...20 mA, external DC supply required

<b>Code</b>	<b>Future Option</b>
0	None

<b>Code</b>	<b>Select: Certifications</b>
S	IEC 61010-2-201; UL; CSA, EMC and radio frequency; FCC 47 CFR Part 15, Subpart B; ICES-003; CE and RCM markings
X	Adds IECEx/ATEX: Ex ec IIC T4 Gc -40°C ≤ Ta ≤ +70°C (pending December 2018)
U	Adds cCSAus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2



# SCADAPack 574

## Programmable Smart RTU

### Specifications cont'd

#### Additional I/O

Supported I/O expansion module summary:

6000 series

- 6601, combination I/O, 16 digital inputs, 8 Digital outputs (relays), 6 analog inputs, 2 analog outputs (optional)
- 6602 (HART), available in two versions; with 8 analog inputs, or combination of 8 analog inputs and 4 analog outputs.  
Limit of one 6602 module per controller

5000 series

- 5304 AO, 4 analog outputs
- 5405 DI, 32 digital inputs
- 5414 DI, 16 digital inputs
- 5415 DO, 12 digital outputs (relays)
- 5506 AI, 8 analog inputs
- 5606, combination I/O, 32 digital inputs, 16 digital outputs (relays), 8 analog inputs, 2 analog outputs (optional)
- 5607, combination I/O, 16 digital inputs, 10 digital outputs (relays), 8 analog inputs, 2 analog outputs (optional)
- 5103 power supply, input nominal 12...24 Vdc, bus power output 5 Vdc @ 2 A, uses 16-pin bus connectors

#### Supported Modules

When SCADAPack 57x controller is used with 5000 series modules, order one adaptor cable ref. TBUM297138 to adapt from 20 conductors to 16 conductors).

Maximum number of external expansion modules per unit:

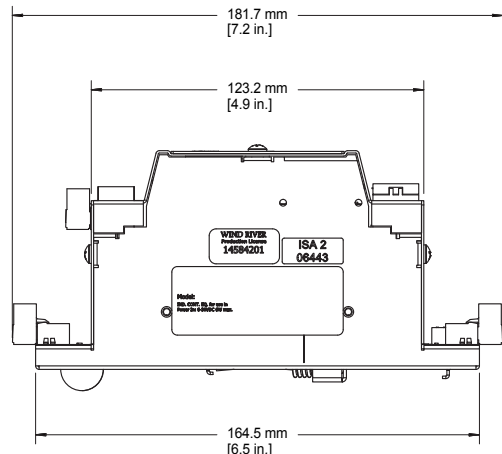
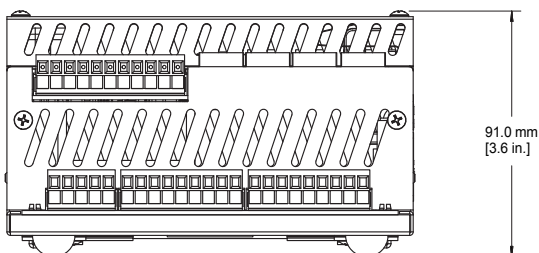
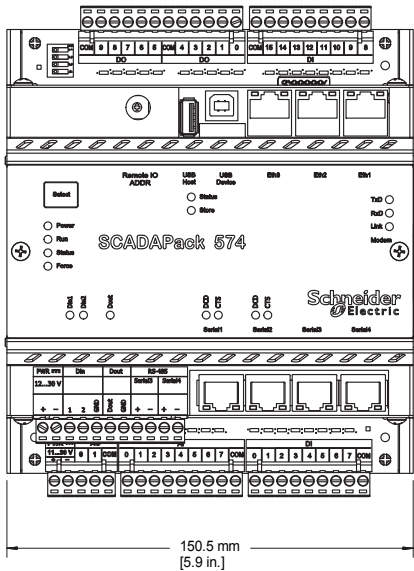
- SCADAPack 574: 15 (\*) Max # of 6601s is 4

(\*): Additional power supply modules (model 5103) may be required for additional bus power, depending on how many expansion modules are included on the bus.

#### I/O Expansion Limits

- Refer to the SCADAPack x70 Documentation Set > Hardware Manuals for further details.
- Maximum intermodule cable length (not including the short cables that come with each module) is 1.82 m (75 in.)

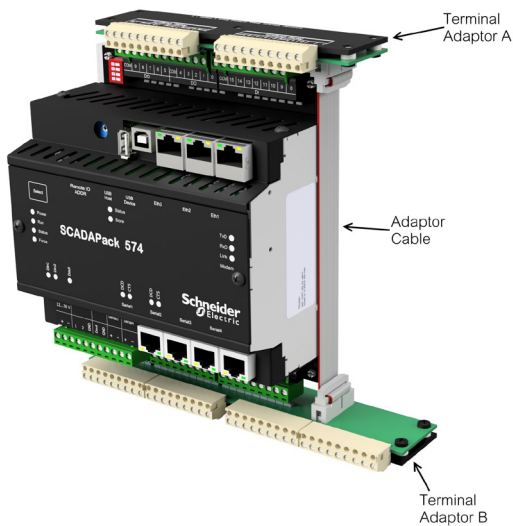
### Dimensions



# SCADAPack 574

Programmable Smart RTU

## Terminal Adaptors



Optional terminal adaptors provide the possibility for drop-in wiring replacement of existing SCADAPack P1, or SCADAPack P4 RTUs. This approach can save substantial time and costs when upgrading existing panels to SCADAPack 574.

The terminal adaptors provide pin headers that accept the older style 'gray' plug-in terminal blocks. The adaptors position the terminal headers to approximately the same physical position as they are on the existing SCADAPacks. If panel space allows, and the wiring scheme is compatible<sup>1</sup> with the terminal adaptors, the SCADAPack 574 can be placed into the existing panel, and existing wiring to the lower I/O board can be plugged onto the terminal adaptors without removing the wires from the terminal blocks.

Refer to data sheet p/n TBULM08038-10 for further details on the terminal adaptors.

### Footnotes:

1. Terminal adaptor design assumes a common wiring scheme. Some existing panels may not be compatible without modifications.

See the SCADAPack x70 Documentation Set for further details.

### Disclaimer:

Schneider Electric reserves the right to change product specifications. For more information visit [www.se.com](http://www.se.com).

**Schneider Electric**  
**Process Automation, SCADA & Telemetry**  
 415 Legget Drive, Suite 101, Kanata, Ontario K2K 3R1 Canada  
 Direct Worldwide: +1 (613) 591-1943  
 Email: [telemetrysolutions@se.com](mailto:telemetrysolutions@se.com)  
 Toll Free within North America: +1 (888) 267-2232  
[www.se.com](http://www.se.com)

Life Is On

**Schneider**  
 Electric

Part Number TBULM08038-11 v03

© 2018 Schneider Electric. All Rights Reserved. Schneider Electric, Life Is On Schneider Electric, Modbus, Modicon, RemoteConnect, SCADAPack and Unity are trademarks and the property of Schneider Electric SE, its subsidiaries, and affiliated companies. All other trademarks are the property of their respective owners. – September 2018