

# SCADAPack 100

## Smart RTU



Meters  
Controls  
Equipment  
Service

[www.aquatechnologygroup.com](http://www.aquatechnologygroup.com)  
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[sales@aquatechnologygroup.com](mailto:sales@aquatechnologygroup.com)





The SCADAPack100 Smart RTU is the most compact and cost-effective model in the SCADAPack family, providing serial communications and both analog inputs and digital I/O.

The product offers Modbus RTU, Modbus ASCII and DNP3 as native protocols and is remotely programmable through a choice of flexible programming languages. As with all SCADAPack products the SCADAPack100 is based on a multiprocessor architecture with a co-processor used for handling the onboard input/output channels.



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**Controller**

Processors	<ul style="list-style-type: none"> <li>16-bit CMOS micro-controller, 14.74MHz clock, integrated watchdog timer</li> <li>micro-controller co-processor: 14.74MHz clock</li> </ul>
Memory	<ul style="list-style-type: none"> <li>256KBytes CMOS RAM (controller ID number A182921 or less)</li> <li>1024KBytes CMOS RAM (controller ID number A182922 or greater)</li> <li>512kBytes flash ROM, 1kBytes EEPROM</li> </ul>
Non-volatile RAM	CMOS RAM with lithium battery retains contents for 2 years with no power

**I/O**

Analog Inputs	<ul style="list-style-type: none"> <li>3 at 5V/20mA: 250W resistance user configurable with jumper link</li> <li>1 at 32.768V</li> </ul>
Resolution	12 bits over the 5V and 32.768V measurement range
Digital I/O	6 points, each point is an input and an output, dry contact input, 1.0A max output rating
Counter Inputs	1, maximum frequency 5kHz, dry contact input, wetting current typically 5mA with 24V input power

**Communications**

Communication Port COM1	RS-485 serial port, 2 pole removable terminal block, 2 wire half duplex, bias resistors installed
Communication Port COM1	RS-232 compatible serial port (CMOS), Data Terminal Equipment (DTE), 8 pin modular jack, full or half duplex, implemented Td, Rd, +5V
Communication Port COM2	RS-232 compatible serial port (CMOS), Data Terminal Equipment (DTE), 8 pin modular jack, full or half duplex with RTS/CTS control, implemented Td, Rd, CTS, RTS, DCD, DTR, +5V
Baud Rates COM1 & COM2	300, 600, 1200, 2400, 4800, 9600, 19200, 38400
Serial Protocols	Modbus RTU, Modbus ASCII, DNP3, DF1
Serial Protocol Modes	Slave, Master, Master/Slave, Store and Forward
Wireless <sup>1</sup>	Spread spectrum radio at 900MHz <sup>2</sup> and 2.4GHz <sup>2</sup>

**General**

I/O Terminations	5 and 12 pole, removable terminal blocks. 12 to 22 AWG 15A contacts Screw termination 6 lb.-in. (0.68 Nm) torque
Dimensions	5.65 inch (144mm) wide, 5.00 inch (127mm) high, 1.80 inch (45mm) deep
Packaging	Corrosion resistant zinc plated steel with black enamel paint
Environment	5% RH to 95% RH, non-condensing, -40°C (-40°F) to 70°C (158°F)
DC Power Input:	30V maximum, 10.0 to 11.5V turn on, 9.5V typical turn off, UL508 rated 13.75-28Vdc. Class 2, less than 500mW (at 12V) LEDs off, 2.9W maximum
Output Capacity	5V at 0.425A capacity, 5V at 0.060A required by 5208 controller, 5V at 0.365A available on COM1 and COM2
Warranty	3 years parts and labor

**Certifications**

Hazardous Locations North America	Suitable for use in Class I, Division 2, Groups A, B, C and D Hazardous Locations. Temperature Code T4 per CSA Std C22.2 No. 213-M1987 / UL1604 UL listed and CSA certified to the following standards: <ul style="list-style-type: none"> <li>CSA Std. C22.2 No. 213-M1987 - Hazardous Locations</li> <li>UL Std. No. 1604 - Hazardous (Classified) Locations</li> </ul>
Hazardous Locations	ATEX II 3G, Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2) Does not include Wireless versions
Safety	CSA (cCSA <sub>US</sub> ) certified to the requirements of: CSA C22.2 No. 142-M1987 and UL508. (Process Control Equipment, Industrial Control Equipment) UL (cUL <sub>US</sub> ) listed: UL508 (Industrial Control Equipment)

1 Available only with optional integrated wireless modules or with stand-alone wireless modules.  
2 Not applicable in all countries.

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



	TBUP100-1A20-AA00 represents a sample code for a TBUP100 with DNP, 0-5V inputs
<b>Model</b>	<b>Select: Controller</b>
TBUP100	SCADAPack 100, comes with 3 Analog Inputs, 6 configurable Digital I/O, 1 Accumulator
TBUP110	SCADAPack 100, Gas Flow Controller with 1 Gas Flow Run (I/O as above)
<b>Code</b>	<b>Select: Communication Serial Ports</b>
1	2 Communication Ports (RJ45 Type) : 1 RS-232 and 1 RS232/485
<b>Code</b>	<b>Select: Memory Configuration</b>
A	1 MB CMOS RAM (512K OS, 512K APP), 512K FLASH ROM
<b>Code</b>	<b>Select: Protocol Option</b>
2	Modbus and DNP 3.0 (Level 2) protocol emulation
<b>Code</b>	<b>Select: Programming Environment</b>
0	Telepace Ladder Logic and C Language firmware loaded - IEC enabled (Programming Tools sold separately)
1	IEC 61131-3 and C Language firmware loaded - Telepace enabled (Programming Tools sold separately)
<b>Code</b>	<b>Select: Analog Inputs</b>
A	3 Analog Inputs, individually selectable as 0-20mA or 0-5 volts
<b>Code</b>	<b>Select: Digital Inputs/Outputs</b>
A	6 configurable Digital I/O, individually selectable as Digital Input (Dry Contact) or Digital Output (Open Drain)
<b>Code</b>	<b>Select: Analog Outputs</b>
0	None
<b>Code</b>	<b>Select: Integrated Communication Interfaces</b>
0	None
<b>FreeWave &amp; MDS Radios (requires one RS232 port)</b>	
1	900Mhz FreeWave Spread Spectrum Radio – consult CMI for availability in your market area
A	900Mhz MDS Spread Spectrum Radio – consult CMI for availability in your market area
<b>Trio Radios - 900MHz (requires one RS232 port)</b>	
B	900MHz SCADAWave Spread Spectrum Radio with encryption, 902-928MHz (FCC / IC)
C	900MHz SCADAWave Spread Spectrum Radio with encryption, 915-928MHz (AUS)
D	900MHz SCADAWave Spread Spectrum Radio, 915-928MHz (BRAZIL)
E	900MHz SCADAWave Spread Spectrum Radio, 921-928MHz (NZ)
<b>Trio Radios - 2.4GHz (requires one RS232 port)</b>	
J	2.4GHz Trio Spread Spectrum Radio, ETSI/100mW, ATEX (EUROPE)
K	2.4GHz Trio Spread Spectrum Radio with Encryption, 500mW (CANADA, USA & AUSTRALIA)
L	2.4GHz Trio Spread Spectrum Radio, 500mW (OUTSIDE OF EUROPE, CANADA, USA & AUSTRALIA)