

SCANTRACK Model 8016 Remote Terminal Unit



General Description

The Willowglen Model 8016 Remote Terminal Unit (RTU) is an advanced intelligent electronic device that is used for data acquisition, local/remote control and simple to complex real-time processing of field or plant data.

The 19 inch rack mountable Model 8016 RTU is designed for medium to very large sites. Up to 16 field I/O modules can be installed in the main RTU chassis and expansion chassis can be easily added.

Willowglen's RTUs provide the best solution for a wide variety of control system requirements. The entire spectrum of sizes and functions are easily accommodated since Willowglen's intelligent RTUs have plenty of processing power for large I/O systems and calculation intensive applications.

The field proven RTU software is available for a broad range of process applications such as liquid pipeline flow metering, gas well flow control, plant process control and electrical utility power distribution monitoring and control. The RTU features the advanced flow chart based Programmable Acquisition and Control (PAC™) software for user defined processing and control algorithms. Using PAC™, custom timing, logic and calculation functions are easily implemented.

Features

- Powerful NEC V53 16-bit microprocessor and 80287 math co-processor
- Very large memory capacity
- 1000+ I/O point capacity
- PAC™ flow chart based programming language
- Integrated fold-down termination arms provide quick and convenient access to the I/O modules without the need to remove field wiring
- Modular design allows customer specific configurations
- 16 I/O card slots per chassis
- Optional expansion to 4 chassis for a total of 64 I/O modules
- Each processor and I/O module is enclosed in a durable plastic housing
- Unitized construction for easy maintenance
- CMOS components for low power and wide temperature applications
- Multiple serial communication ports
- Ethernet option available
- Available with Man Machine Interface (MMI) console

Model 8016 RTU General Specifications

Basic Building Blocks

- **Processor:** An Intelligent System CPU (ISC) module conveniently plugs into the chassis backplane to connect to the field I/O modules and power supply.
- **Input/Output:** Field I/O is provided through a user defined flexible combination of several types of standard input/output modules.
- **Communications:** Several serial and modem communication formats are supported.
- **Power Supply Module:** Removable power supply conveniently plug into the RTU chassis backplane.
- **MMI:** An optional LCD display/keyboard console unit can be mounted on the enclosure door and connected by cable to the ISC module

The main Model 8016 RTU chassis includes an ISC module, a power supply module, a backplane with 16 I/O slots and zero or more I/O modules. For applications requiring extra I/O capacity, up to three expansion chassis can be added for a maximum of 64 I/O modules in a single RTU.

Power Supply Module

Input power is provided by a modular, removable power supply for 12 VDC, 24 VDC, 48 VDC, 129 VDC, 120 VAC and 240 VAC sources (with optional redundancy and battery backup).

Processor Module

- **Processor:** Powerful 16-bit (NEC V53) with optional 80287 floating-point unit.
- **RAM:** Battery backed up RAM
- **ROM:** Flash memory devices for storage of configuration and operating program. Program updates may be performed remotely using the communication channel.
- **Boot ROM:** Flash memory device for Boot, monitor, system diagnostics, and configuration settings
- Crystal controlled real-time clock
- Watchdog Timer
- RS-232 serial communication ports support various communication protocols and maximum data rates of at least 38,400 bps.

Input/Output Modules

- ACI-11256 Accumulator Interface (8 accumulators)
- ASI-11269 AC Sense Interface (16 inputs)
- ASI-11358 Analog Scanner Interface (16 inputs)
- COD-11561 Check-back Output Driver (16 outputs)
- DAC-11289 Digital to Analog Converter (8 outputs)
- DAC-11495 Digital to Analog Converter (4 outputs)
- DCI-11243 Digital Contact Interface (16 inputs)
- DSI-11559 Digital SOE Interface (16 inputs)
- FRI-11349 Flow Rate Interface (4 meters)
- MPI-11348 Meter Prover Interface (8 provers)
- ROI-11272 Relay Output Interface (16 relays)
- RSI-11347 RTD Scanner Interface (8 RTDs)
- TOD-11329 Transistor Output Driver (32 outputs)

Field wires are terminated using screw terminals provided by the standard swing-down pluggable field termination connectors that allow convenient module removal and replacement without disconnecting field wiring. Terminals are rated for 250 Volts, 12 Amps and accommodate 22 to 12 AWG wire. The I/O cards meet the ANSI/IEEE C37.90 surge withstanding capability.

Communication

- Two serial ports are on the ISC module
- Ethernet plus serial ports are on the optional EIO-11796 iSBX expansion card.
- Four additional serial ports are on the SIO-11621 and SIO-11680 iSBX expansion cards.
- Modem and serial port on the MDM-11484 iSBX expansion card.
- Baud rates of 110 to 115,000 supported
- Optional RS-232 or RS-485 serial ports are available

Local User Interface (Optional)

- 4 line by 40 character alphanumeric LCD
- Integral Sealed membrane QWERTY Keyboard with software defined function keys

Additionally, a VISTA™-II based laptop computer can provide a colour user interface when connected to the RTU's serial communication channels.

Dimensions and Weight

(Single chassis unit)

- **Size:** 355 mm x 482 mm x 280 mm
(14 in. x 19 in. x 11 in.)
- **Weight:** 25 kg (56 lb.)

For additional information on specific configurations and pricing, please contact Willowglen Systems Inc.

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November 2009

Specifications subject to change without notice.
Printed in Canada



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