

Unisen™



Unisen Model 2216 REMOTE TERMINAL UNIT

PRODUCT DESCRIPTION



General Description

The Willowglen Model 2216 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 in-plant data.

The 19-inch rack mountable Model 2216 RTU is designed for medium to large sized sites. Up to 16 I/O modules can be supported within the main I/O shelf and additional I/O shelves can be easily added.

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

This RTU features Willowglen's advanced ISC-11870 CPU module. It is the powerful fourth generation controller card available for the Willowglen Unisen™ Model 2216, 2208 and 2204 RTU SCADA Systems. This processor card is also available as a swap in replacement for existing ISC cards in Willowglen SCANTRACK™ 8016 and 1208 RTUs to provide an easy user upgrade.

Field proven RTU software is available for a broad range of process applications such as gas/oil well and pipeline flow control, plant process control and electrical utility power distribution monitoring and control. The RTU features a Web interface for easy configuration from any standard PC – without the need for any custom software. Uses stable open source Linux operating system.

Provides support for all 5 industry standard IEC 61131-3 PLC programming languages. This provides local intelligent control of RTU I/O.

Features

- CPU uses a high performance superscalar architecture Freescale™ Power Architecture processor with PowerPC® core. The 32-bit processor provides 760 MIPS at 400 MHz with DDR 266MHz SDRAM memory. Integrated double precision floating-point math unit, memory management unit, 10/100 Mbps Ethernet MAC, PCI bus, and power management
- 256 MB of high speed 32bit wide DDR SDRAM and 32 MB of on board Flash memory.
- Supports field and remote update of system programs.
- 4000+ I/O point capacity
- Provides support for industry standard IEC 61131-3 PLC programming languages.
- Modular design allows user specific configurations
- Multiple serial communication ports

Unisen Model 2216 RTU General Specifications

BASIC BUILDING BLOCKS

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

The Model 2216 RTU main controller chassis includes the CPU module (ISC), power supply module, backplane with 16 slots for I/O modules. For applications requiring extra I/O capacity, up to 15 expansion I/O chassis can be added for a maximum of 256 I/O cards in a single RTU.

PROCESSOR MODULE

CPU

- Freescale MPC5200B (Power Architecture®, PowePC® core) 32-bit processor: 400 MHz Clock, Double Precision FPU, MMU, Power saving modes
- Memory: 256 MB 133MHz DDR SDRAM, 32 MB of FLASH, 1.5 MB static RAM with 100 hour power back-up

ON-BOARD PERIPHERALS

- 10/100 Mbps Ethernet switch with 4 available ports
- 4 Port 2.0 USB Host controller with one internal port for USB Flash memory device
- Real Time Clock with temperature compensated crystal Clock. Power back-up from Super Capacitor
- Ambient temperature sensor
- Field I/O module bus interface unit provides low overhead for CPU

SERIAL COMMUNICATIONS PORTS

- Two RS-232 serial ports (4-wire interface)
- One RS-232 serial port (full 8-wire interface)
- Two software configurable ports: either RS-232 or RS-485 with 4-wire and 2-wire modes
- One high speed RS-485 port: software configurable as 4-wire full-duplex or 2-wire half-duplex
- Serial ports use convenient RJ45 modular connectors
- Serial data rates of 110 to 115k baud supported

FRONT PANEL USER INTERFACE

- LED indicators with automatic power off timer
- 9 LED indicators including RESET and WDT alarm
- LED status indicators on all serial ports for transmit and receive activity
- Two push-button switches for multiple functions including RESET, WDT alarm clear, LED indicator power enable

POWER MODULE

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

INPUT/OUTPUT MODULES

ACI-11256 Accumulator Input	8	accumulators
ASI-11358 Analog Scanner Interface	16	inputs
ASI-11269 AC Sense Input	16	inputs
COD-11561 Checkback Output Driver	16	outputs
DAC-11289 D/A Converter	8	outputs
DAC-11495 D/A Converter (Isolated)	4	outputs
DCI-11243 Digital Contact Input	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
ROI-11297 Relay Output Interface	8	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 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.

I/O Modules meet ANSI/IEEE C37.90 surge withstanding capability.

Please refer to the individual Input/Output module product description sheets for additional details.

LOCAL USER INTERFACE (Optional)

- Capable of interfacing to graphic or alphanumeric operator interface terminals using RS-232, USB or Ethernet port

DIMENSIONS AND WEIGHT

(Single rack unit including power supply and I/O cards)

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

For additional information on specific configurations and pricing for the Unisen™ Model 2216 RTU, please contact Willowglen Systems Inc.

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