

PRODUCT DESCRIPTION



General Description

The Willowglen Model 2204 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 compact Model 2204 RTU is designed for small to medium sized sites. Up to 4 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.

The 2204 RTU can be housed in a NEMA/CEMA enclosure or within a standard 19-inch rack mount enclosure with a back panel.

This RTU features Willowglen's advanced ISC-11870 CPU module. It is the powerful fourth generation controller card available for the Willowglen UnisenTM 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 SCANTRACKTM 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 FreescaleTM 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.
- 2000+ 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 2204 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 2204 RTU main controller chassis includes a CPU module (ISC), a power supply module, a backplane with 4 slots for I/O modules. For applications requiring extra I/O capacity, up to 31 expansion I/O chassis can be added for a maximum of 252 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 a modular, removable power supply with 24 VDC input.

COMMUNICATIONS MODULE

Specialized communications is provided by a modular, removable module that can utilize cellular, wireless or wire-line modems.

INPUT/OUTPUT MODULES

ACI-11519 Accumulator Input	3	accumulators
ASI-11516 Analog Scanner Interface	8	inputs
ASM-11524 120VAC Digital Input	8	inputs
COD-11606 Checkback Output Driver	8	outputs
DAC-11518 D/A Converter	4	outputs
DCI-11517 Digital Input (isolated)	8	inputs
DCI-11654 Digital Input (non-isolated)	16	inputs
DSI-11605 Digital SOE Interface	8	inputs
FRI-11665 Flow Rate Interface	2	meters
GPS-11749 GPS Time Clock	1	interface
MPI-11664 Meter Prover Interface	2	provers
ROI-11521 Relay Output (Form C)	6	relays
ROI-11520 Relay Output (Form A)	8	relays
RSI-11699 RTD Scanner Interface	4	RTDs
SDI-11630 Stepper Motor Driver	1	interface
TOD-11620 Transistor Output Driver	16	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

(Including power supply and I/O cards)

Size: 296mm x 166mm x 229mm (11.65"x6.55"x9.0")
Height x width x depth
Weight: 2.72 kg (6 lb).

For additional information on specific configurations and pricing for the Unisen™ Model 2204 RTU, please contact Willowglen Systems Inc.

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