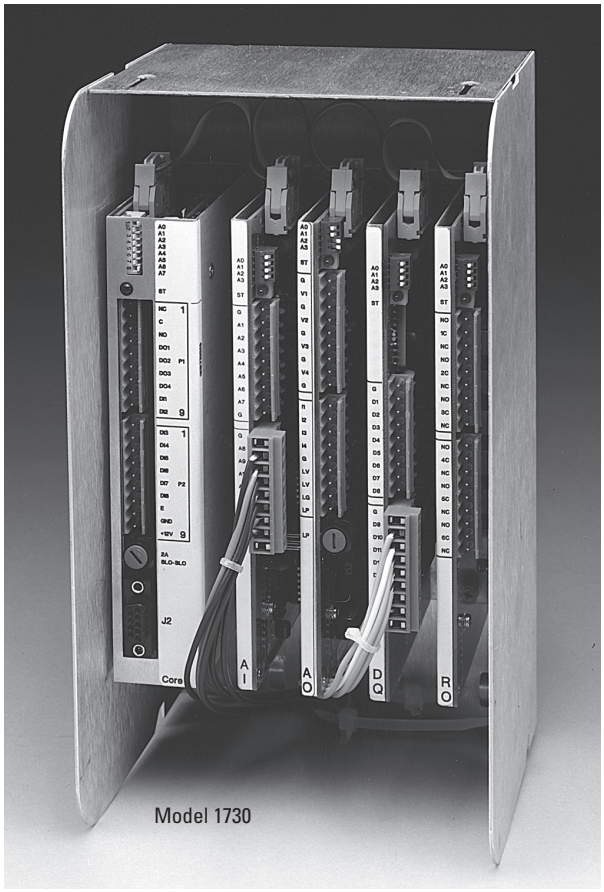
MODEL 1730 RTU CONTROLLER



The Model 1730 Controller offers a flexible, cost-effective way to connect RTUs over widely distributed remote sites to a central control program. The M1730 handles the wireless connection interface so the control program is only required to offer a standard wired data connection. The M1730 manages all of Zetron Remote Terminal Units - the M1708, the M1716, and the M1732.

With M1730's modular design the configuration of the controller can be sized to the application. Expansion slots allow the addition of digital or analog I/O so the controller can also perform RTU functions thus eliminating the need for another device at that location. head

FEATURES

- Manages up to 150 Zetron wireless RTUs
- Connects to MODBUS control applications
- Supports polled and exception reporting
- Modular design for expansion of I/O or communication interface
- 8 digital inputs, 4 digital outputs and 1 relay built into core module

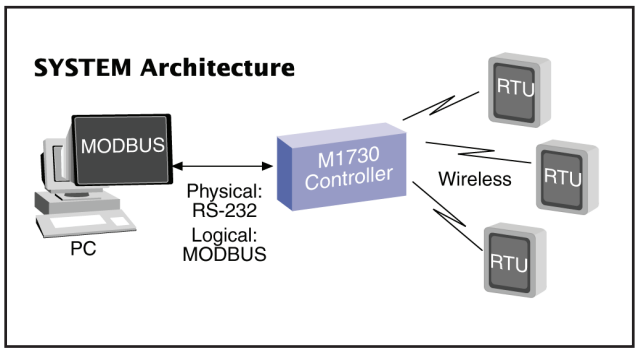
OVERVIEW

Zetron SCADA (Supervisory Control and Data Acquisition) systems offer a range of practical, economical solutions for monitoring and control of remote sites. While compatible with hard-wired communications, Zetron's SCADA systems, comprised of Remote Terminal Units (RTUs), System Controller, and Control Program, are particularly useful in applications that cover a wide geographic area and use conventional, trunked or spread-spectrum radio, cellular or dial-up telephone, or other "wireless" communications media.

OPERATION MODES

The M1730 controller operates with the MODBUS interface enabling industry standard control programs to communicate with the RTU's in the field through the local M1730 controller. The M1730 operates as the RTU's proxy to the control program with the control program having no knowledge that the Zetron wireless RTUs are distributed across a wide geography. To gather status the M1730 can poll at regular intervals or receive reports by exception from the RTU storing the status until queried by the control program. In this way, the M1730 delivers the status without delays giving near instantaneous response.

The systems integrator or customer programmer sets the operational parameters using the M1732 configuration utility, a user-friendly software package from Zetron.



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MISSION-CRITICAL COMMUNICATION SYSTEMS

CONNECTION OPTIONS

Logically, the M1730 connects to the control program on one side and the remote RTU's connected through the wireless infrastructure on the other.

Control Application/Computer Connection

The typical connection to the control application involves an RS-232 cable between the M1730 and a nearby computer. Alternatively, the connection may be via modems to a remote computer. This option is typically used as back-up for applications that require exceptionally high availability.

Wireless Telecommunications/RTU Connections

The power of the M1730 is in its ability to connect to remote RTUs using a variety of wireless technologies, which include conventional or trunked radio systems in licensed and unlicensed spectrums at 1200 bps. The connection follows standard radio protocol (listening before sending) and then remains in effect for the duration of the data transmission. The typical transmission for most applications is a matter of a few seconds, at which point the radio channel is released for other voice or data users.

Coverage area is as extensive as the reach of the wireless communication infrastructure. In many cases, a wireless system is easier, faster to install, and more economical than wired solutions.

CENTRAL CONTROL SOFTWARE

The Zetron SCADA System can communicate with and be cotrolled by process control applications or Programmable Logic Controllers (PLC) via the MODBUS communications protocol. MODBUS is an industry standard communications protocol allowing devices from different manufacturers to communicate. The MODBUS protocol can control and monitor the M1730 control hardware which in turn communicates with the remote RTUs.

Zetron operates with a variety of software packages that control, monitor, analyze, or report on your automation applications. These HMI SCADA applications include an extensive library of graphics, Intenet connections with the web client feature, trending data display, dial out alarms to a commercial paging service and much more.

SPECIFICATIONS

Agency Compliance

EIA standards for Electrostatic Discharge (ESD)

Compliant with FCC Part 15 for Electromagnetic Interference (EMI)

Power Requirements

10.8 to 16VDC Power

350 mA max, 240 mA typical, base unit

OPTIONAL I/O MODULES

32 I/O modules with a max of 16 of any one type

(Common I/O modules to M1732)

Unit Housing

Zetron case	For up to 4 expansion modules, approximately 7.5" x 12" x 7" < 2 lbs.
Medium NEMA case	For up to 13 expansion modules, approximately 14" x 16" x 6"
Large NEMA case	For up to 28 expansion modules, approximately 20" x 24" x 8"

COMMUNICATIONS SPECIFICATIONS

Zetron Radio Interface

Input levels	50 mV to 5 Vpp, Adjustable with two gain ranges
Input impedance	> 50 Ohms at KHz
Output level	50 mV to 5 Vpp, Adjustable with two gain ranges
Output impedance	< 700 ohm at 1 KHz, Flat audio in and flat audio out, COR adjustable 0.1 to 4.5VDC
PTT output relay	< 300 mA max, normally open or to ground closed position

RS-232 Connection

One RS-232 channel with full handshake (RTS, CTS, and DTR, RI)

Speeds to 9600 bps

For more information on this and other Zetron products, contact:

ZETRON USA
PO Box 97004
Redmond, WA
98073-9704
USA
TEL 425 820 6363
FAX 425 820 7031
zetron@zetron.com

ZETRON UK
27-29 Campbell Court
Bramley TADLEY
Basingstoke RG26 5EG
UK
TEL +44 (0)1256 880663
FAX +44 (0)1256 880491
uk@zetron.com

ZETRON AUSTRALASIA
PO Box 3045
Stafford Mail Centre
Stafford QLD 4053
Australia
TEL +61 7 3856 4888
FAX +61 7 3356 6877
ausales@zetron.com

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