

Modicon Quantum automation platform

Quantum-Sy/Max integration

Presentation

Integration solutions

Quantum-Sy/Max integration products are designed to help Sy/Max users gradually upgrade their installations to Quantum control systems at a comfortable and cost-effective pace. These products allow users to protect their investments in communication networks, application programs, I/O installations and training. They allow Sy/Max users to move gradually toward Quantum where they can take advantage of:

- Structured programming with Unity Pro and Concept's IEC 1131 languages.
- Faster logic-solve times and larger CPU memory sizes.
- More flexibility in terms of network choices, including Modbus, Modbus Plus, TCP/IP Ethernet, Quantum remote I/O (RIO).
- The high availability of hot standby control.
- A wide variety of choices from our Partners Collaborative Automation.

Upgrading strategies

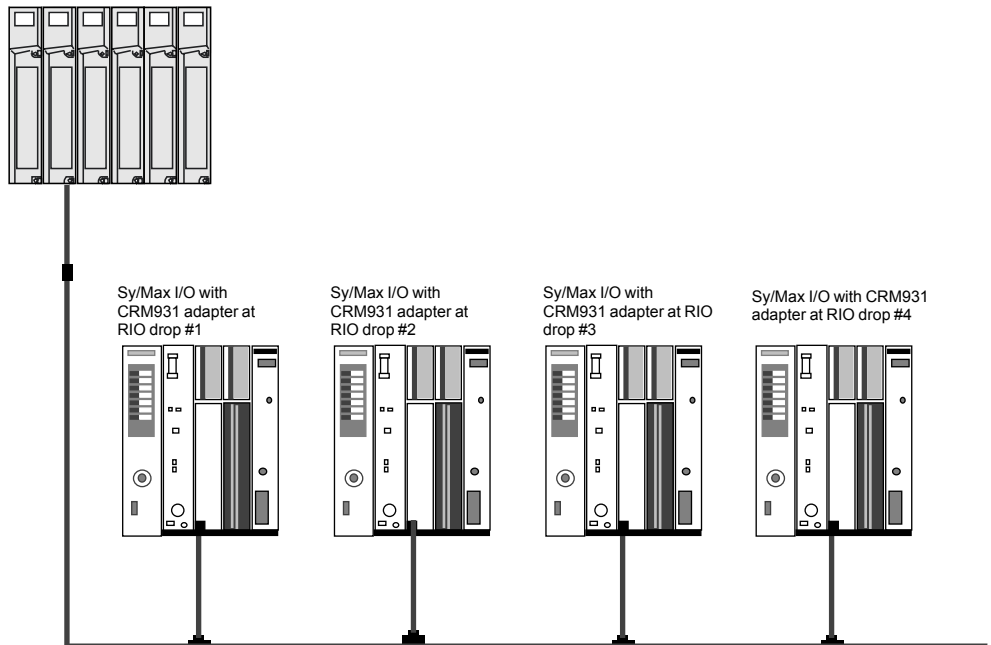
Upgrading Sy/Max processors

Modicon's Ladder Translation Service takes existing Sy/Max application programs and converts them into 984 ladder logic. The translations include comments and rung and ladder header files as well as fully functioning application logic. Contact our regional agency to know the availability of this service.

Upgrading Sy/Max I/O networks

A Class 8030 Type CRM931 remote I/O adapter can be placed in slot #1 of a Sy/Max remote I/O drop. This adapter enables Class 8030 discrete and intelligent I/O in that drop to operate under the control of a Quantum CPU over a Quantum RIO coaxial cable network. The 8030 CRM931 adapter can reside in any Class 8030 Type RRK-100, -200 or -300 register rack or any Class 8030 Type HRK-100, -150, or -200 digital rack.

Quantum head-end with CPU and RIO adapter



The original Sy/Max I/O wiring remains intact. Because the I/O is now on a Quantum RIO network, it can take advantage of the 1.544 Mbit/s data transfer rate with 16-bit CRC.

Each drop has 128 addressable registers (64 in and 64 out).

Presentation (continued)

Upgrading strategies (continued)

Sy/Max communication networks

The NW BM85Y422 Modbus Plus-to-Sy/Max gateway provides a bridge for information exchange between Sy/Max or PowerLogic® systems and a Modbus Plus local area network. Modbus Plus gives the system connectivity to many HMI, motion and products as well as small distributed PLCs.

The NW BM85Y422 gateway supports the following protocols:

- Sy/Max point-to-point.
- Sy/Max net-to-net.
- PowerLogic NIM.

The gateway has one Modbus Plus port and four configurable (RS 422) ports for direct pinout to Sy/Max devices. Each RS 422 port supports communications from 300...14.4 Kbaud. DIP (switch settings determine the gateway's mode of operation) configuration mode or protocol conversion mode. Configuration mode allows you to program communication parameters (baud and time-out values, for example) and store them in the gateway's Flash memory. Gateway parameters can be set in any of three ways:

- with an ASCII panel or a PC that has a terminal emulation program on serial port Nr.1.
- with MSTR ladder logic instructions.
- with Sy/Max TREAD or TWRITE instructions via serial ports Nr. 2, 3 or 4.

An MEB Modbus Plus-to-Sy/Max NIM module is also available from partner Niobrara R&D Corporation. This module fits in a Sy/Max RRK rack. It exchanges data between the existing Sy/Max network and a Modbus Plus network. Visit Niobrara's web site (www.niobrara.com) for more information.

Characteristics

Model		8030CRM931	NW-BM85Y422
Electrical	Current on Sy/Max power supply	mA 750 typical, 900 max	–
	Undervoltage lockout circuit	Halts and resets the module and removes it from the RIO network when d.c. supply falls below approximately 4.6 V	–
	Power	–	~ 115/230 V or 24 V
Ambient temperature	Operational	°C (F) 0...60	0...60
	Storage	°C (F) -25...80	-40...80
	Humidity	% 5...95 noncondensing	0...95 noncondensing
Agency compliance		UL 508, CSA C22-2, FM Class 1 division 2	UL ML file number 532F (industrial control equipment) CSA ML file number LR326 CC

References

Description	Connection type	References	Weight kg (lb)
Quantum RIO adapter module (1)	–	8030CRM931	–
Modbus Plus-to-Sy/Max NIM gateway	–	NW-BM85Y422	–
Niobrara Modbus Plus-to-Sy/Max NIM bridge module	BNC Ethernet 2 RS 485 ports	MEB TCP D (1)	–
Niobrara Modbus Plus-to-Sy/Max NIM bridge module	–	MEB TCP T (1)	–

(1) To order this product, consult our Niobrara partner: www.niobrara.com