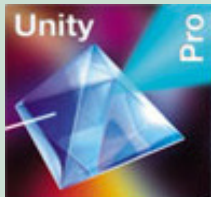


# NR&D



QUCM+102



Collaborative Automation  
by  
**Schneider**  
Electric

**Niobrara Research & Development Corporation**  
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# QUCM

## Quantum Universal Communications Module

### Overview

Niobrara's Quantum Universal Communications Modules are programmable communication modules for Schneider Electric's Quantum PLC with up to four serial ports, a PLC interface, a LCD display and keypad, a real-time clock, and up to two Ethernet ports.

### QUCM Language

The QUCM is programmed via Niobrara's QUCM language. The language has a BASIC-like structure which makes it easy to read and follow. Powerful language extensions for data communications and PLC interfacing make it ideal for use as a PLC communication language. A TCP/IP stack is built in, making it easy to write application layer protocols using TCP, UDP, PPP, and IP. The language is compiled for the fastest possible execution. The compiler is included at no extra charge.

Although the QUCM is designed for user programming, many companies choose to have Niobrara write their QUCM code. Contact Niobrara for a quote.

### Serial Ports

There may be up to four serial ports on the QUCM. Ports 1 and 2 are normally software selectable RS-232 or RS-485 while optional ports 3 and 4 are fixed RS-232. They use Modicon's pinouts, so standard cables work well. They are independently configurable as to baud rate, parity, data bits, and stop bits.

### Ethernet Port

Several versions of the QUCM include 100BaseTX RJ45 Ethernet ports. Units with two ports have an embedded Ethernet switch supporting RSTP for copper ring redundancy. The QUCM has a TCP/IP stack which the user's application can access for easy implementation of various application layer protocols.

### Backplane

The programmer has a choice of backplane interfaces for the Quantum PLC rack. The QUCM can be either an I/O Module (local or remote rack) or an Option Adapter (local rack only).

### LCD / Time Clock

The QUCM has a high resolution LCD and a keypad for user configuration. The user application has full control of this operator interface. A real-time clock is available to the applications. It is especially useful for scheduling events or time-stamping data.

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## Ordering Information

The QUCM is available as:

- **QUCM+002** No Ethernet, two RS-232/RS-485 serial ports (replace QUCM-O)
- **QUCM+102** One Ethernet, two RS-232/RS-485 serial ports (replace QUCM-OE)
- **QUCM+204** Two Ethernet, two RS-232/RS-485, two RS-232 serial ports

## Related Equipment

- **MM1** Programming cable, RS-232, RJ45 to DB9S
- **QXBP** Single-slot rack with power supply for stand-alone operation
- **DDC2I** Isolated RS-232<>RS-485 DIN rail mounted converter
- **BB85** RS-485 DIN rail mounted terminal block



QUCM+002



QUCM+204

## Specifications

<b>Warranty/Manual</b>	The QUCM comes with a user manual on CD, and a one-year warranty from the date of shipment. See Niobrara's Standard Terms and Conditions of Sale for additional warranty information.
<b>Dimensions</b>	Single width Quantum register module. 1.59" wide by 9.84" tall by 4.09" (40 x 250 x 104 mm) deep. Approximately 12 oz. (340 g.) net. All connectors and indicators are front mounted except for the Quantum bus card edge connector on the back.
<b>Power Requirements</b>	From Quantum bus, 5 VDC, 500mA maximum;
<b>Serial Ports</b>	Ports 1 and 2 selectable RS-232/RS-485 RJ45 with RX and TX LEDs. Ports 3 and 4 fixed RS-232 RJ45 with RX and TX LEDs.
<b>Ethernet</b>	100BaseTX auto-crossover RJ-45 with Link and 10/100 LEDs. Units with two Ethernet ports have an internal Ethernet switch.
<b>Indicators</b>	64x128 pixel LCD display with 5 button keypad.
<b>PLC Addressing</b>	I/O Mode: 32 words in, 32 words out . May be used in local, remote, or distributed I/O racks. Option Mode: local CPU rack NOE 771 01 emulation
<b>Operating Conditions</b>	0 to 50 degrees C operating temperature; -40 to 80 degrees C storage. Humidity up to 90 percent noncondensing. Pressure altitude -200 to +10,000 feet MSL.

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