CM42
Modbus Plus Module

Features

- Two Read/Write RFID Antenna Ports
- 25 MHz i386 Processor
- 512KB Flash Memory
- 512KB RAM
- DOS Compatible Operating System
- Two General Purpose Serial Ports for CM42
- Two Industrial-Level Inputs/Outputs
- LED Status Indicators
- NEMA 2 (IP31) Enclosure
- Modbus Plus Slave Device
- DIN Rail Mounting

Applications

- Material Handling
- Sortation Systems
- Work-in-Progress Monitoring
- Quality Control

Use With

- EMS Passive Read/Write
- EMS Passive Read Only
- EMS Active Read/Write
- RS232 and RS422 Serial Devices

EMS, a Datalogic Group Company, is the field-proven leader in the development and application of Radio Frequency Identification (RFID) Tags/Labels/PCBs, Antennas, Controllers and network interface modules for tough industrial environments. With over a dozen years of RFID successes in the automotive, electronics, material handling and food processing industries, EMS has built a global reputation in providing customers with complete supply chain solutions – from production to retail EMS has the complete solution!

Technical Description

The CM42 Modbus Plus Module is a general purpose programmable interface between the Modbus Plus network and up to two HS/HL500-Series Antennas, or as many as 32 HMS-Series Reader/Writers, RS-Series Readers or bar code scanners (or a combination of both) on a Mux32 line.

The CM42 can be used to give a Modbus Plus presence to a wide range of existing equipment, such as bar code readers, RFID controllers, bar code verifiers, sensors and switches. A PLC can communicate to the CM42 using the MSTR function block. An al-

ternate form of communication is a PC-based master such as Modicon's SA85, which can use the Modicon DOS or Windows driver to communicate with the CM42.

This programmable interface is provided with a standard program that allows Modbus Plus commands to control the reading and writing of a block (or non-contiguous blocks) of data, Mux32 connection status, serial inputs/outputs, and Tag fill functions. The standard program can readily be modified by EMS. For special applications; contact your EMS representative.
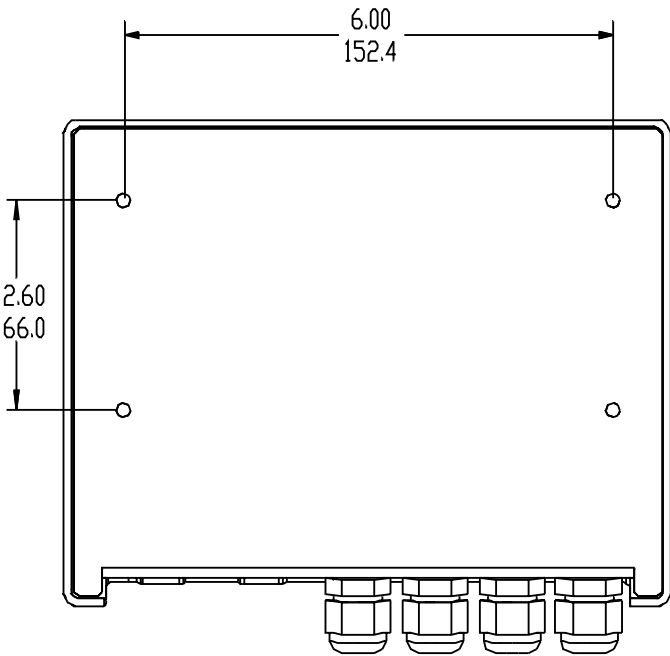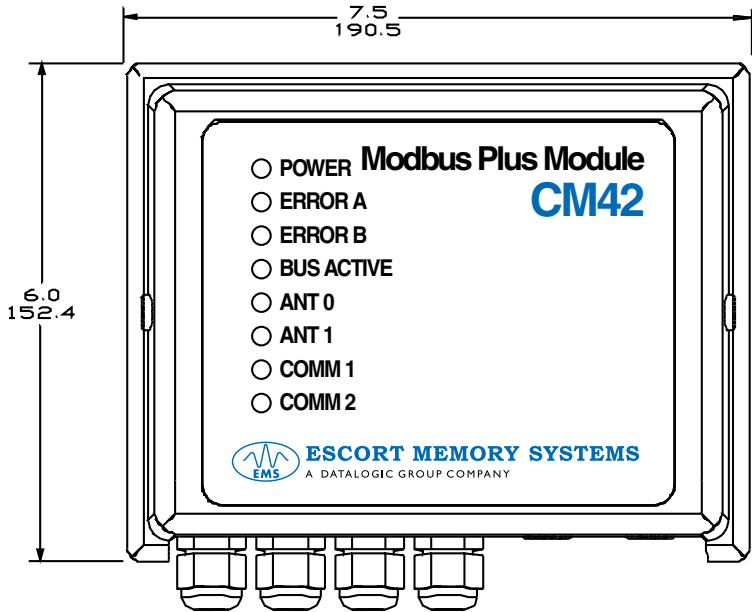
The CM42 is based on a real-time, DOS compatible operating system providing great speed and flexibility. As many as eight commands can be processed simultaneously. The CM42 is implemented as a two board set, interconnected by a stackable PC104 Connector.

MODBUS PLUS PRESENCE FOR AUTO ID PRODUCTS

CM42 Modbus Plus Module

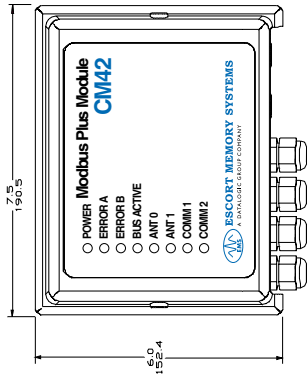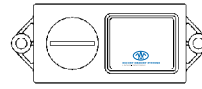| Electrical	Power Requirements From External Connector	24VDC ±15% 350mA (Module Only) 900mA (with Antennas)
Communication	Modbus Plus RFID	Slave Device, 16 Bit Registers, Dual Redundant Bus Two EMS HS/HL-Series Antenna Ports, HMS-Series through Serial Ports
Ports	COM1 COM2 Input Output	RS232 RS232/RS422/RS485(Mux32 Protocol) Two Industrial-Level Inputs, 10-30VDC Two Industrial-Level Outputs, 5-30VDC@400mA Either Sourcing or Sinking
Mechanical Specifications	Dimensions (W x H x D) Weight Enclosure	7.5 x 6.0 x 2.1in. (191 x 152 x 51mm) 2.0lbs. (0.9kg) ABS Shell
Environment	Operating Temperature Storage Temperature Humidity Shock Resistance Vibration Resistance Protection Class	32° to 120°F (0° to 49°C) -4° to 158°F (-20° to 70°C) 90% Non-Condensing IEC 68-2-27 Test EA 30g; 11ms; 3 Shocks Each Axis IEC 68-2-6 Test FC 1.5mm; 10-55Hz; 2 Hours Each Axis NEMA 2 (IP31)

Mechanical Dimensions

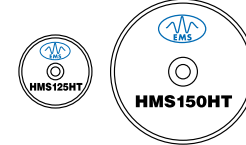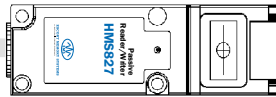# CM42 Modbus Plus Module

Connections

CM42 Modbus Plus Module

Two Read/Write Ports
Connect to HS500-Series Antennas
Use any HS200R, HS200XL or HS200LR-Series Tags

One Serial Port for Connection to as many as 32 Readers/Writers or other Serial Devices.
Connect to RS400-Series Readers with ES600-Series Read Only Tags.
Connect to HMS-Series Reader/Writers with HMS100-Series Read/Write Tags.

Software Upgrade Port (Debug Port)
or RS232 Serial Device Connection (HMS800-Series, RS400-Series)

Available Models

Model	Description
CM41	Modbus Plus Communication Module, NEMA 4 (IP66)
CM42	Modbus Plus Communication Module, NEMA 2 (IP31)

Accessories

Model	Description
00-1096	DIN Rail Mounting Clips (2) with screws, for use with CM42
CBL-1440-01	CMx2 to HS500 Cable (1 meter length)
CBL-1440-03	CMx2 to HS500 Cable (3 meter length)
CBL-1440-06	CMx2 to HS500 Cable (6 meter length)
CBL-1440-30	CMx2 to HS500 Cable (30 meter length)