Ethernet Remote I/O Master Modules

Ethernet remote I/O master

The Ethernet Remote Master H4-ERM (100, -F) connects DL430, DL440 and DL450 CPU systems to Ethernet Base Controller (EBC) slave I/O over a high-speed Ethernet link.

Need a lot of I/O?

Each ERM module can support up to 16 DL205 EBC systems (H2-EBC100), 16 Terminator I/O EBC systems (T1H-EBC100), or 16 fully expanded DL405 EBC systems (H4-EBC). See the next page for more information. Of course, combinations are fine, too. The ERM also supports Edrives. See the Drives section for details.

Specifications	H4-ERM	H4-ERM100	H4-ERM-F
Communications	10BaseT Ethernet	10/100BaseT Ethernet	10BaseFL Ethernet
Data Transfer Rate	10 Mbps	100 Mbps	10 Mbps
Link Distance	100 meters (328 ft)		2K meters (6560 ft)
Ethernet Port	RJ45		ST-style fiber optic
Ethernet Protocols	TCP/IP, IPX	TCP/IP, IPX, Modbus TCP/IP, DHCP, HTML configuration	TCP/IP, IPX
Power Consumption	320 mA @5 VDC	300 mA @5 VDC	450 mA @5 VDC
Manufacturer	Host Automation Products, L.L.C.		

Note: Applications requiring an extremely large number of T1H-EBC analog I/O or H4-EBC 16-channel analog I/O could exceed the buffer capacity of a single H4-ERM(100) module. In these cases, an additional H4-ERM(100) may be required.

Simple connections

The ERM connects to your control network using Category 5 UTP cables for cable runs up to 100 meters. Distances can be greatly extended with Ethernet/Fiber media converters like the SE-MC2U-ST.

Our fiber optic version uses industry standard 62.5/125 ST-style fiber optic cables and can be run up to 2,000 meters.

The CPU, ERM and EBC slave modules work together to update the remote I/O points. These three scan cycles are occurring at the same time, but asynchronously. It is recommended that critical I/O points that must be monitored every scan be placed in the CPU base.

Networking ERMs with other Ethernet devices

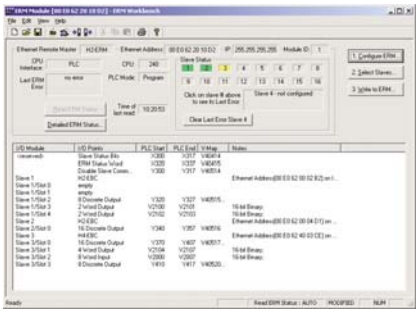
It is required that a dedicated Ethernet remote I/O network be used for the ERM and its slaves. While Ethernet networks can handle a very large number of data transactions, and normally handle them very quickly, heavy Ethernet traffic can adversely affect the reliability of the slave I/O and the speed of the I/O network. Keep ERM networks, multiple ERM networks and ECOM/office networks isolated from one another.

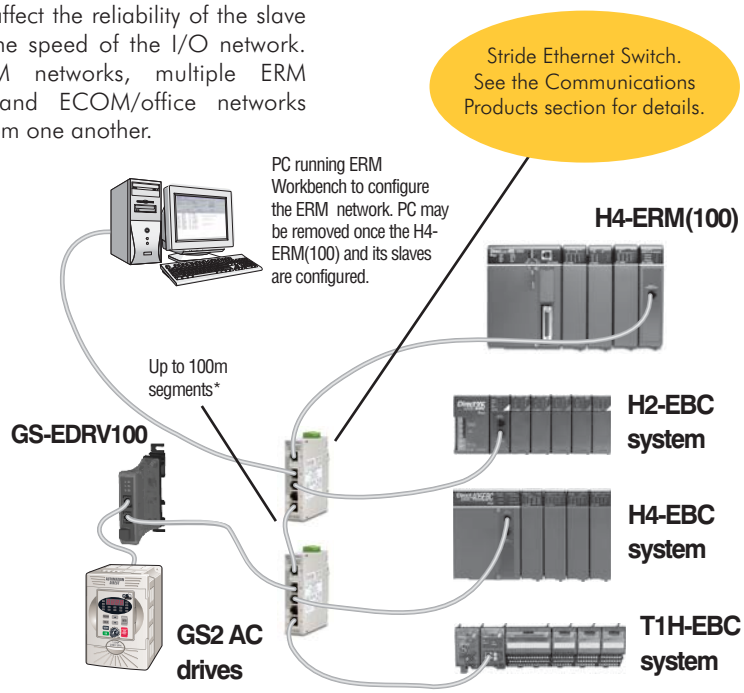
Software configuration

ERM Workbench is a software utility that must be used to configure the ERM and its remote Ethernet slaves. ERM Workbench supports two methods of configuring the ERM I/O network:

- ERM Workbench PLC Wizard - greatly simplifies the configuration procedure when a PLC is used as the CPU interface.
- ERM Workbench - configures the I/O network whether the CPU interface is a PLC or WinPLC, and allows access to all ERM I/O network parameters.

ERM Workbench Software





*Distances can be greatly extended with Ethernet/Fiber media converters like the SE-MC2U-ST.