# 1-800-633-0405 For the latest prices, please check AutomationDirect.com. Ethernet Remote I/O Client Modules



H2-ERM100 \$277.00



**Overview** 

The Ethernet Remote Client H2-ERM100 connects <u>D2-262</u> CPU systems to Server I/O over a high-speed Ethernet link.

#### Need a lot of I/O?

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

Note: Applications requiring an extremely large number of <u>T1H-EBC100</u> analog I/O or <u>H4-EBC</u> 16-channel analog I/O, could exceed the buffer capacity of a single H2-ERM100 module. In these cases, an additional H2-ERM100 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.

Specifications	H2-ERM100	
Communications	10/100BaseT Ethernet	
Data Transfer Rate	100 Mbps	
Link Distance	100m (328ft)	
Ethernet Port	RJ45	
Ethernet Protocols	TCP/IP, IPX, Modbus TCP/IP, DHCP, HTML (unsecure) configuration	
Embedded Web Server	HTTP (unsecure)	
Power Consumption	300mA @ 5VDC	
Manufacturer	Host Automation Products, L.L.C.	

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

# Networking ERMs with other Ethernet devices

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

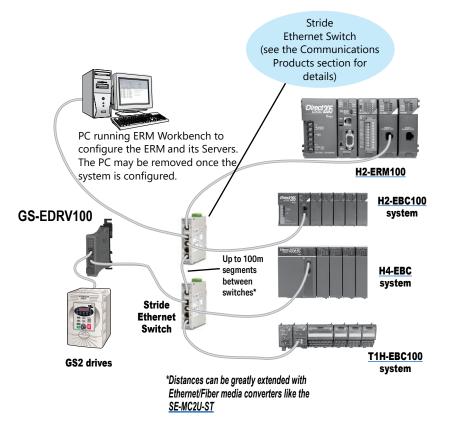
#### Software configuration

ERM Workbench is a software utility that must be used to configure the ERM and its remote Ethernet Servers. 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 and allows access to all ERM(100) I/O network parameters.

#### ERM Workbench Software

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### **Ethernet Base Controller Modules**



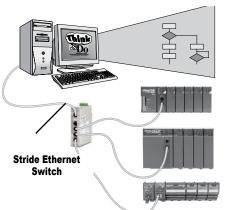


#### Use EBCs for PC-based control and for H\*-ERM100 remote I/O Servers

The H2-EBC100 Ethernet Base Controller module provide a low-cost, highperformance Ethernet link between DL205 I/O and your PC-based control system or DL205/DL405 CPUs using the H\*-ERM100 module for remote I/O. The H2-EBC100 can also be used to connect your DL205 I/O to a Modbus TCP/IP client (Client). The H2-EBC100 supports industry standard 10/100BaseT Ethernet communications. EBC modules offer:

- Lower cost on your *Direct*LOGIC I/O system compared to competitive I/O
- Virtually unlimited number of I/O points
- Deterministic I/O updates on dedicated networks
- Fast I/O updates (<1ms per base)
- On board serial port for possible operator panel, ASCII In/Out, etc. (serial port not supported when used with ERM module)

Specifications	H2-EBC100
Communications	10/100Base-T Ethernet
Data Transfer Rate	Up to 100Mbps
Link Distance	100 meters (328 ft)
Ethernet Port	RJ45
Ethernet Protocols	Do-more Ethernet remote I/O, Modbus TCP/IP, TCP/IP, UDP/IP, IPX, HTML (unsecure) configuration
Embedded Web Sever	HTTP (unsecure)
Serial Port	RJ12, K-sequence, ASCII IN/OUT, Modbus RTU, provides 5V 220mA
Max. Discrete I/O	256
Max. Analog I/O	64
Power Consumption	300mA



### Off-the-shelf solutions

You can purchase PCbased control software that is ready to use with the <u>H2-EBC100</u> module. PCbased control packages are equipped with compatible I/O device drivers, program development tools, and run-time environments. For a single-source integrated PC-based control solution that ships with everything you need to make your PC into an industrial controller, see the PC-based Control section of this catalog. Most of the

controller, see the PC-based Control section of this catalog . Most of the software packages listed below allow you to connect serial devices, such as barcode readers, to the H2-EBC100's serial port.

The chart below identifies vendors that have PC-based Control products ready to control DirectLOGIC I/O, or have products to be released in the immediate future.

#### Software developers

For programmers developing custom drivers for our I/O, we offer a free Ethernet Software Development Kit (SDK). The SDK, developed and offered by Host Automation Products, L.L.C., provides a simplified API for interfacing with the <u>H2-EBC100</u>. The software interface libraries are provided for WIN32, WIN16, and DOS operating systems. The source code is available to developers under a nondisclosure agreement. Visit the technical support link at our Web site, or go to <u>www.hosteng.com</u> for more information.



### Easy to use, reliable and fast

The <u>H2-EBC100</u> module plugs into the CPU slot of any DL205 I/O base and supports all DL205 discrete and analog I/O modules, the <u>H2-SERIO(-4)</u> and <u>H2-CTRIO2</u> specialty modules. All EBC modules can be configured using NetEdit3, a free Windows software utility. The H2-EBC100 also supports HTML configuration.

Vendor	Product	Web Address
KEPware	KEPServerEX	www.kepware.com
Wonderware	InControl	www.wonderware.com
MDSI	OpenCNC	www.mdsi2.com

The D2-INST-M installation and I/O Manual covers information about DL205 I/O modules, power budgeting, and installation and wiring. This catalog does not cover CPU-slot controllers.



### **Power Requirements**

#### These charts help determine your power requirements

This section shows the amount of power supplied by each of the base power supplies and the amount of power consumed by each DL205 device. The Power Consumed charts list how much INTERNAL power from each power source is required for the DL205 devices. Use this information when calculating the power budget for your system.

In addition to the internal power sources, the DL205 bases offer a 24 VDC auxiliary power supply with external power connections. This auxiliary power supply can power external devices.

# Use *ZIP*Links to reduce power requirements

If your application requires a lot of relay outputs, consider using the **ZIP**Link AC or DC relay output modules. These modules can switch high current (10A) loads without putting a load on your base power budget. Refer to the Terminal Blocks and Wiring Solutions section in this catalog for more information.

This logo is placed next to the I/O modules that are supported by the ZIPLink connection systems. See the I/O module specifications at the end of this section.



Pov	ver Consun	ned
Device	5V(mA)	24V Auxiliary
Operator Interfac	e	
<b>C-more</b> Micro- Graphic	210	0

Power Supplied			
Device	Price	5V(mA)	24V Auxiliary
Bases			
D2-03B-1	\$200.00	2600	300
D2-03BDC1-1	\$249.00	2600	None
D2-04B-1	\$217.00	2600	300
D2-04BDC1-1	\$274.00	2600	None
<u>D2-06B-1</u>	\$268.00	2600	300

P	ower Con	sumed
Device	5V(mA)	24V Auxiliary
CPUs		
D2-262	336	0
DC Input Mod	ules	
D2-08ND3	50	0
D2-16ND3-2	100	0
D2-32ND3	25	0
D2-32ND3-2	25	0
AC Input Modu	ules	÷
D2-08NA-1	50	0
D2-08NA-2	100	0
D2-16NA	100	0
Input Simulato	or Module	
F2-08SIM	50	0
DC Output Mo	dules	ł
D2-04TD1	60	20
D2-08TD1	100	0
D2-08TD2	100	0
D2-16TD1-2	200	80
D2-16TD2-2	200	0
F2-16TD1P	70	50
F2-16TD2P	70	50
D2-32TD1	350	0
D2-32TD2	350	0
AC Output Mo	dules	
D2-08TA	250	0
F2-08TA	250	0
<u>D2-12TA</u>	350	0
Relay Output I	Modules	
D2-04TRS	250	0
D2-08TR	250	0
F2-08TR(S)	670	0
D2-12TR	450	0
Combination I	n/Out Module	
D2-08CDR	200	0

Power Supplied			
Device	Price	5V(mA)	24V Auxiliary
Bases			
D2-06BDC1-1	\$304.00	2600	None
D2-06BDC2-1	\$279.00	2600	300
D2-09B-1	\$333.00	2600	300
D2-09BDC1-1	\$360.00	2600	None
D2-09BDC2-1	\$359.00	2600	300

Device	5V(mA)	24V Auxiliary
Analog Modules	. ,	,
	100	5
-2-04AD-2	110	5
F2-08AD-1	100	5
F2-08AD-2	100	5
F2-02DA-1	40	60 (note 1)
F2-02DA-2	40	60
F2-02DAS-1 F2-02DAS-2	100 100	50 / channel 60 / channel
F2-08DA-1	30	50 (note 1)
F2-08DA-2	60	140
F2-4AD2DA	60	80 (note 1)
F2-8AD4DA-1	35	100 (note 1)
F2-8AD4DA-2	35	80 (note 1)
F2-04RTD	90	0
=2-04THM	110	60
Specialty Module	es	
D2-CTRINT	50*	0
D2-CM / D2-EM	100/130	0
H2-CTRIO2	275	0
D2-DCM	300	0
H2-EBC100	300	0
H2-ECOM100	300	0
F2-CP128	235	0
Remote I/O		
H2-ERM100, (-F)	300, (-F: 450)	0
Programming De	vices	
D2-HPP	200	0