CoProcessor Module

Triple-port BASIC CoProcessor

F2-CP128 $604.00

Overview

The BASIC CoProcessor Module interfaces the DL205 family of programmable controllers with bar code readers, operator interface terminals, instrumentation equipment, computers and other serial devices.

BASIC CoProcessor applications

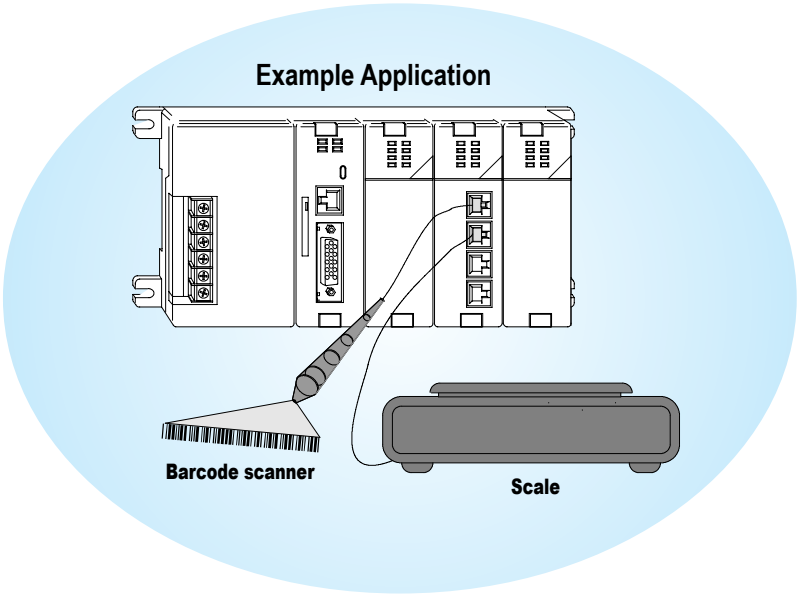
BASIC CoProcessors are designed for use with intelligent devices such as:

- Bar code readers
- Welders
- Board level controllers
- Serial printers
- Intelligent sensors
- Almost any device with an RS-232/422/485 port

They are also good solutions for applications requiring complex math: such as, floating point math, sine, cosine, tangent, exponential, square roots, etc.

Features

- FACTS Extended BASIC and ABM Commander for Windows software for IBM PCs makes program development fast and simple. Allows online, full-screen BASIC program editing and the ability to upload / download programs on disk. The CD-ROM includes Modbus Client and Server BASIC programs and other application examples.
- Non-volatile memory of up to 128K allows multiple program storage and execution, DL205 register expansion, and retentive data storage and retrieval.
- 26 MHz BASIC CoProcessor provides fast program execution independent of the CPU scan.
- Three buffered ports permit communication from the module to three external devices.
- The module is programmable from port 1 or 2 for complete serial port utilization without switching cables.
- A real-time clock/calendar maintains time/date with battery backup when power outages occur. Programmable time based BASIC interrupts to 0.010 of a second.
- Direct access of up to 254 bytes of DL205 CPU memory per scan is possible. No supporting ladder logic is required.
- Floating point math solves complex formulas to eight significant digits.



BASIC CoProcessor

Triple Port BASIC CoProcessor Module Specification	
Module Type	CoProcessor, Intelligent
Modules per CPU	Seven maximum, any slot in CPU base (except slot zero)
Communication	256 character type-ahead input buffer on all ports. Ports are independently programmed by software. Seven or eight data bits, one or two stop bits, even, odd, or no parity. XON/XOFF software flow control and RTS/CTS handshake.
F2-CP128	128K bytes of battery-backed RAM. 26MHz clock rate Port 1: RS-232/422/485, 115.2 Kbaud maximum Port 2: RS-232/422/485, 57.6 Kbaud maximum Port 3*: RS-232, 19.2 Kbaud max. * Port 3 physically located in the same RJ12 jack as Port 1 (RS-232). Port 3 uses the RTS/CTS pins on that jack. If you use these lines for other purposes (e.g. hardware handshaking on Port 1), then Port 3 cannot be used.
ABM Commander for Windows (CD included with module)	Programming /documentation software for IBM PCs comes standard. Key features include: • Shipped with each coprocessor module • Runs under Windows 98/2000 • On-line full-screen BASIC program editing (similar to GW Basic, with industrial application enhancements added for easier programming) • Internal Editor for block copy, block move, search and replace • Text upload and download BASIC programs on disk • Binary upload and download BASIC programs and data on disk • Download control statement allows multiple programs to be downloaded and saved with one download file. • CD includes Modbus Client and Server BASIC programs and other application examples
Field Termination	Four RJ12 jacks: Port 1/3 RS-232, Port 2 RS-232, Port 1 RS-422/485, Port 2 RS-422/485
Power Consumption	235mA @ 5VDC
Operating Environment	0ºC–60ºC (32ºF–140ºF), 5% to 95% humidity (non-condensing)
Manufacturer	FACTS Engineering

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 *ZIP*Link connection systems. See the I/O module specifications at the end of this section.

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
Operator Interface		
C-more Micro-Graphic	210	0

Power Supplied			
Device	***Price***	***5V(mA)***	***24V Auxiliary***
Bases			
D2-03B-1	$211.00	2600	300
D2-03BDC1-1	$282.00	2600	None
D2-04B-1	$230.00	2600	300
D2-04BDC1-1	$311.00	2600	None
D2-06B-1	$305.00	2600	300

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
CPUs		
D2-262	336	0
DC Input Modules		
D2-08ND3	50	0
D2-16ND3-2	100	0
D2-32ND3	25	0
D2-32ND3-2	25	0
AC Input Modules		
D2-08NA-1	50	0
D2-08NA-2	100	0
D2-16NA	100	0
Input Simulator Module		
F2-08SIM	50	0
DC Output Modules		
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 Modules		
D2-08TA	250	0
F2-08TA	250	0
D2-12TA	350	0
Relay Output Modules		
D2-04TRS	250	0
D2-08TR	250	0
F2-08TR(S)	670	0
D2-12TR	450	0
Combination In/Out Module		
D2-08CDR	200	0

Power Supplied			
Device	***Price***	***5V(mA)***	***24V Auxiliary***
Bases			
D2-06BDC1-1	$337.00	2600	None
D2-06BDC2-1	$284.00	2600	300
D2-09B-1	$328.00	2600	300
D2-09BDC1-1	$356.00	2600	None
D2-09BDC2-1	$379.00	2600	300

Power Consumed		
Device	***5V(mA)***	***24V Auxiliary***
Analog Modules		
F2-04AD-1	100	5
F2-04AD-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
F2-04THM	110	60
Specialty Modules		
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 Devices		
D2-HPP	200	0

*** Requires external 5VDC for outputs**

Note 1: Add an additional 20 mA per output loop.

Dimensions and Installation

Understanding the installation requirements for your DL205 system will help ensure that the DL205 products operate within their environmental and electrical limits.

Plan for safety

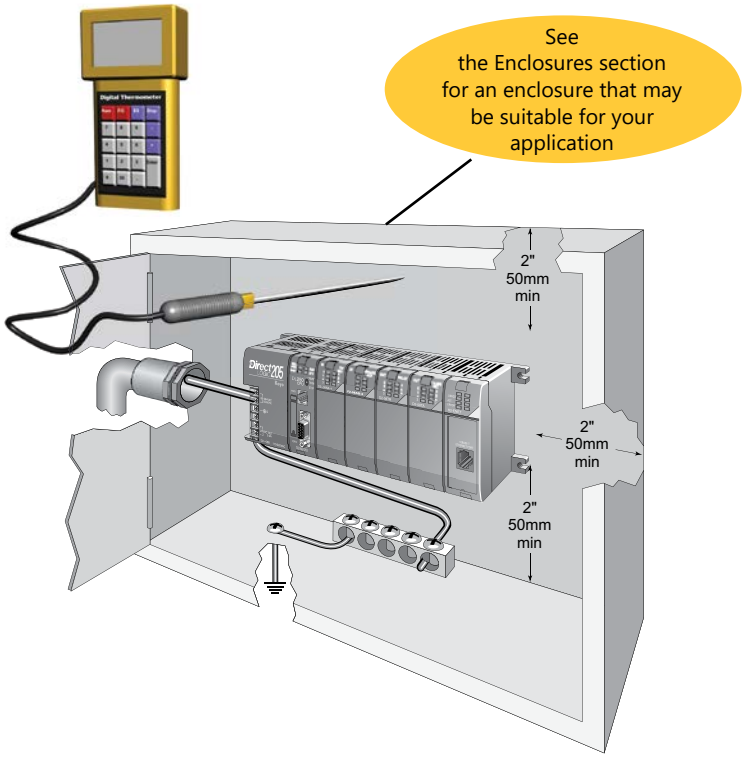
This catalog should never be used as a replacement for the user manual. The user manual, D2-USER-M (downloadable online), contains important safety information that must be followed. The system installation should comply with all appropriate electrical codes and standards.

Environmental specifications

The Environmental Specifications table at the right lists specifications that apply globally to the DL205 system (CPUs, bases, and I/O modules). Be sure that the DL205 system is operated within these environmental specifications.

Base dimensions and mounting

Use the diagrams below to make sure the DL205 system can be installed in your application. To ensure proper airflow for cooling purposes, DL205 bases must be mounted horizontally. It is important to check these dimensions against the conditions required for your application. For example, it is recommended that approximately 3" of space is left in front PLC surface for ease of access and cable clearances. Also, check the installation guidelines for recommended cabinet clearances.



Environmental Specification	Rating
Storage Temperature	-4°F to 158°F (-20°C to 70°C)
Ambient Operating Temperature	32°F to 131°F (0°C to 55°C)
Ambient Humidity	30% to 95% relative humidity (non-condensing)
Vibration Resistance	MIL STD 810C, Method 514.2
Shock Resistance	MIL STD 810C, Method 516.2
Noise Immunity	NEMA (ICS3-304)
Atmosphere	No corrosive gases

Base	A		B		C		D	
D2-03B-1, D2-03BDC1-1	6.77"	172mm	6.41"	163mm	5.8"	148mm	7.24"	184mm
D2-04B-1, D2-04BDC1-1	7.99"	203mm	7.63"	194mm	7.04"	179mm	8.46"	215mm
D2-06B-1, D2-06BDC1-1, D2-06BDC2-1	10.43"	265mm	10.07"	256mm	9.48"	241mm	10.90"	277mm
D2-09B-1, D2-09BDC1-1, D2-09BDC2-1	14.09"	358mm	13.74"	349mm	13.14"	334mm	14.56"	370mm