



D2-262 CPU Specifications

D2-262 CPU Specifications	
System Capacity	
Total memory available (words)	30.4
Ladder memory (words)	15872 Flash
V-memory (words)	14592
Battery backup	Yes
Total CPU memory I/O pts. available (actual I/O pts. depend on I/O configuration method selected)	8192 (1024 X + 1024 Y + 2048 CR + 2048 GX + 2048 GY)
Local I/O (pts.)	256
Local Expansion I/O (pts.)	1280 (4 exp. bases max.) (Including local I/O)
Serial Remote I/O (pts.)	8192 max. (Including local & exp. I/O)
Remote I/O channels	8 (7+1 CPU port)
I/O per remote channel	2048
Ethernet Remote I/O	Yes
Discrete I/O pts.	8192 (Including local and exp. I/O)
Analog I/O channels	Map into V-memory
Remote I/O channels	Limited by power budget
I/O per remote channel	16,384 (16 fully expanded H4-EBC Servers using V-memory and bit-of-word instructions)
Performance	
Contact execution (Boolean)	0.61 μ s 0.1 μ s
Typical scan (1K Boolean)	1.9 ms 1.0 ms
Programming and Diagnostics	
RLL Ladder Style	Yes
RLL ^{PLUS} /Flowchart Style (Stages)	Yes/1024
Run time editing	Yes
Supports Overrides	Yes
Variable/fix scan	Variable
Instructions	231
Control relays	2048
Timers	256
Counters	256
Immediate I/O	Yes
Subroutines	Yes
For/Next loops	Yes
Timed Interrupt	Yes
Integer Math	Yes
Floating-point Math	Yes
Trigonometric functions	Yes
Table Instructions	Yes
PID	Yes, 16 loops
Drum Sequencers	Yes
Bit of Word	Yes
ASCII Print	Yes
Real-time clock/calender	Yes
Internal diagnostics	Yes
Password security	Multi-level
System and user error log	Yes
Communications	
Built-in ports	Port 1 RS-232 Port 2 RS-232/422/485
K-sequence (proprietary protocol)	Yes
DirectNET [™]	Yes
Modbus RTU Client/Server	Yes
ASCII communications	IN/OUT
Maximum baud rate	38.4K port 2



D2-262 Key Features



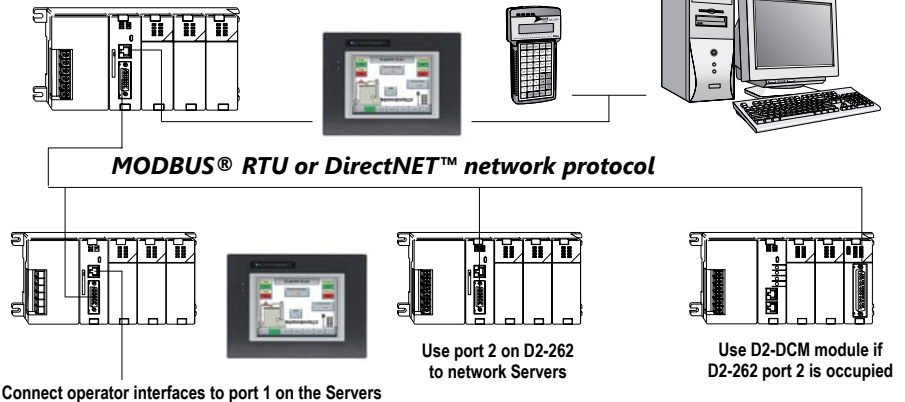
D2-262: Our most powerful DL205 CPU

Our D2-262 CPU provides all the capabilities of the D4-450 and D4-454 CPUs, plus several additional features rarely found in a PLC of this size. With such an incredible array of features, you may be able to replace PLCs costing hundreds (or thousands) more.

DirectSOFT is required to program the D2-262. If using a handheld programmer (H2-HPP), version 2.10 of the handheld programmer firmware is required. Here are a few key features about the D2-262 CPU

D2-262 can serve as network Client

Easily connect programming devices or HMI to CPU ports



Powerful built-in CPU communications

Each D2-262 CPU offers two communications ports that provide a vast array of communication possibilities. The top RJ-12

RS-232 port can be used for connection to a **C-more** operator interface panel or as a single K-sequence or DirectNET Server. The 15-pin bottom port (port 2) supports RS-232 or RS-422/RS485. This port offers several different protocol options such as:

- K-sequence
- **DirectNET** Client/Server
- Modbus RTU Client/Server
- ASCII In/Out Communications

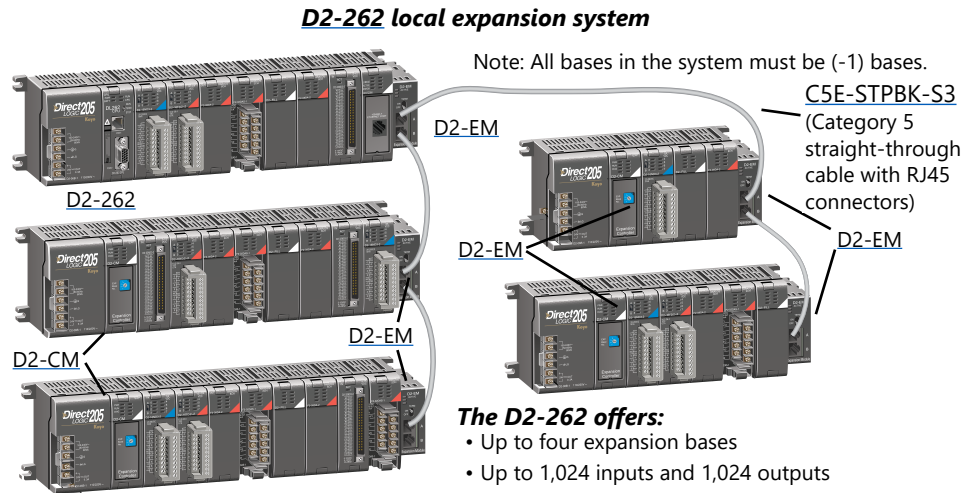
Port 2 can also serve as a remote I/O Client. The D2-262 supports the Ethernet Communication module and Data Communication Module for additional communications ports.



D2-262 Key Features

Local expansion I/O

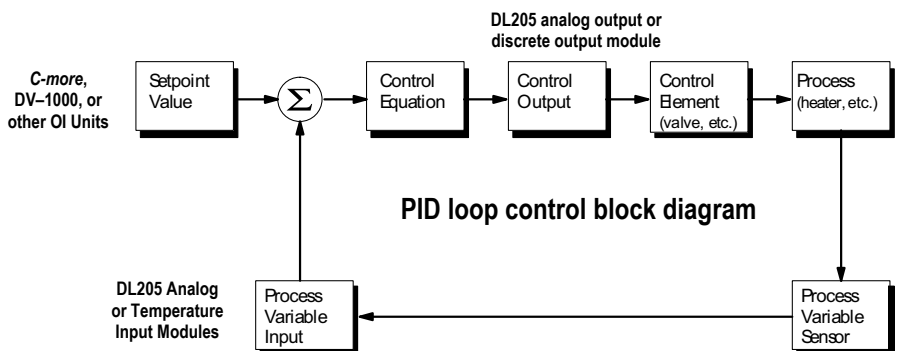
The D2-262 supports local expansion up to five total bases (one CPU base and four expansion bases). Expansion bases are commonly used when there are not enough slots available in the CPU base, when the base power budget will be exceeded, or when placing an I/O base at a location away from the CPU base (but within the expansion cable limits). All local and expansion I/O points are updated on every CPU scan. Each local expansion base requires the D2-CM in the CPU slot. The local CPU base requires the D2-EM Expansion Module, as well as each expansion base. For more information on local expansion, refer to the Expansion Modules pages later in this section.



16 PID loops with auto-tuning

The D2-262 CPU can process up to 16 PID loops directly in the CPU. You can select from various control modes including automatic, manual, and cascade. There are also a wide variety of alarms including Process Variable, Rate of Change, and Deviation. The loop operation parameters (Process Variable, Setpoint, Setpoint Limits, etc.) are stored in V-memory, which allows easy access from operator interfaces or HMIs. Setup is accomplished with easy-to-use setup menus and monitoring views in DirectSOFT programming.

The auto-tuning feature is easy to use and can reduce setup and maintenance time. Basically, the CPU uses the auto-tuning feature to automatically determine near optimum loop settings.





D2-262 Key Features

Full array of instructions

The right instruction can greatly simplify your programming task and can save hours of programming time.

The D2-262 supports over 280 powerful instructions, such as:

- Four types of drum sequencers
- Leading / trailing edge triggered one-shots
- Bit-of-word manipulation
- Floating point conversions
- Trigonometric functions
- Table instructions
- ASCII IN/OUT instructions

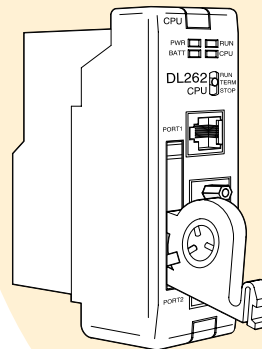
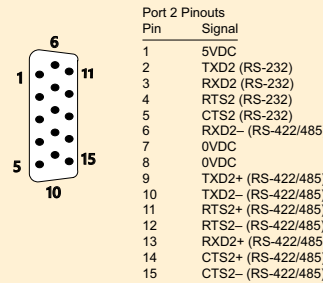
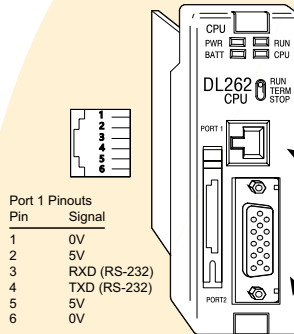
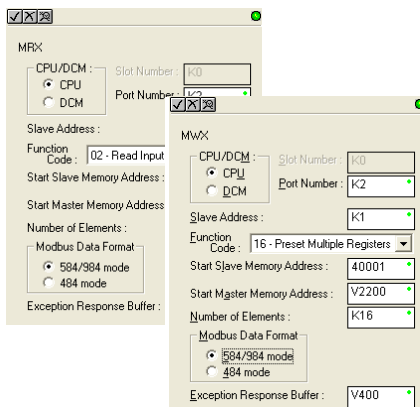
For a complete list of instructions supported by all DL205 CPUs, see the end of this section.

Modbus RTU instructions

The D2-262 CPU supports easy-to-use Modbus Read/Write instructions that expand our existing Modbus network instruction capabilities. The MRX or MWX instructions allow you to enter native Modbus addressing in your ladder program with no need to perform octal-to-decimal conversion. We added Function codes 05, 06 and the ability to read Server Exception Codes. These flexible instructions allow the user to select the following parameters within one instruction window:

- 584/984 or 484 Modbus data type
- Server node (0-247)
- Function code
- Modbus starting Client / Server memory address
- Number of bits
- Exception code starting address

Examples of MRX and MWX instructions in DirectSOFT



ZIPLink communications adapter modules

ZIPLink cables and communications adapter modules offer fast and convenient screw terminal connection for the bottom port of the D2-262 CPUs. The adapter modules are RS232/422/485 compatible and are offered with or without indicating LEDs and surge protection. See the Terminal Blocks and Wiring Solutions section in this catalog for more information.



ZL-CMA15L shown

On-board memory

CPU Status Indicators		
RUN	ON	CPU is in RUN mode
	OFF	CPU is in PROGRAM mode
BATT	ON	Battery backup voltage is low
	OFF	Battery backup voltage is OK or disabled
CPU	ON	CPU internal diagnostics detects error
	OFF	CPU is OK
PWR	ON	CPU power good
	OFF	CPU power failure
Mode Switch		
RUN		Puts CPU into RUN mode
TERM		Allows peripherals (HPP, DirectSOFT) to select the mode of operation
STOP		Forces CPU out of RUN mode
Port 1		
Protocols		K-sequence Server, DirectNET ™ Server, Modbus RTU Server
Devices		Can connect w/HPP, DirectSOFT , C-more , O/I panels, or any DirectNET Client
Specs.		6P6C phone jack connector RS-232 9,600 baud Fixed address Odd parity only 8 data bits one start, one stop asynchronous, half-duplex, DTE
Port 2		
Protocols		K-sequence Server, DirectNET Client/Server, Modbus RTU Client/Server, ASCII IN/OUT, Remote I/O Client
Devices		Can connect w/many devices, such as PCs running DirectSOFT , DSDData, HMI packages, C-more , other O/I panels, any DirectNET or Modbus RTU Client or Server, or ASCII devices
Specs.		HD15 connector RS-232, RS-422/485* 2400/4800/9600/19.2K/38.4K baud Odd, even, or no parity Selectable address (1-90, HEX 1 - 5A) 8 data bits, one start, one stop Asynchronous, Half-duplex, DTE
Battery (Optional)		
D2-BAT-1		Coin type, 3.0V Lithium battery, 560 mA, battery number CR2354
Note: Batteries are not needed for program backup. However, you should order a battery if you have parameters in V-memory that must be maintained in case of a power outage.		
*RS485 for Modbus protocol only		

The D2-262 has 15.5K words of flash memory on board for your program plus 14.2K words of data registers. With flash memory, you don't have to worry about losing the program due to a bad battery.

Built-in remote I/O connection

The bottom port on the D2-262 can be used as a Client for serial remote I/O networks.