

Local Expansion Modules

Base Expansion Module D2-EM



Expansion Base Controller Module D2-CM



D2-EM Expansion Module Specifications	
Module Type	Base expansion unit
I/O Slots Consumed	None; attaches to right side of (-1) bases
I/O Points Consumed	None
Expansion Connectors	Two 8-pin RJ45
Cable	Category 5 with RJ45 connectors (straight-through)
Maximum Cable Length	30m (98ft.) total expansion system
Power Consumption	130mA @ 5VDC (supplied by base)
Operating Environment	0°C to 60°C (32°F to 140°F), 5% to 95% humidity (non-condensing)

D2-CM Controller Module Specifications	
Module Type	Expansion base controller module
Modules per Base	One, CPU slot of (-1) base only
I/O Points Consumed	None
Expansion Base Number Select Switch	Rotary switch select 1-4 in any order
Power Consumption	100mA @ 5VDC (supplied by base)
Operating Environment	0°C to 60°C (32°F to 140°F), 5% to 95% humidity (non-condensing)

CPU Supported / I/O Points				
CPU	# of Exp. Bases	Total I/O*	Max. Inputs	Max. Outputs
D2-260	4	1280	1024	1024
D2-250-1	2	768	512	512
D2-240	These CPUs do not support local expansion systems.			
D2-230				
H2-WPLC*-.**				

* Includes CPU base and local expansion bases

Local expansion modules

The D2-260 supports local expansion up to five total bases (one CPU base + four expansion bases), and the D2-250-1 supports local expansion up to three total bases (one CPU base + two 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 with every CPU scan.**

Expansion base I/O addressing is based on the numerical order of the D2-CM rotary switch selection. The CPU recognizes the expansion bases on power-up.

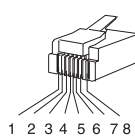
Local expansion requires (-1) bases

Part number D2-xxB(yyy)-1 I/O bases must be used in local expansion systems. Each expansion base requires that the D2-CM module is placed in the CPU slot. The CPU base and each expansion base require the D2-EM unit that attaches to the right side of the (-1) bases.

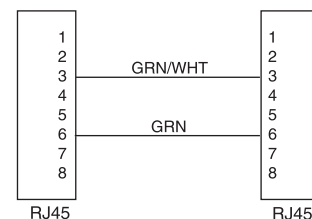
D2-EXCBL-1 local expansion base cable

The category 5 straight-through cable D2-EXCBL-1 (1m) is used to connect the expansion modules together. If longer cable lengths are required, we recommend that you purchase commercially manufactured cables with RJ45 connectors already installed. The maximum total expansion system cable length is 30m (98 ft.).

8-pin RJ45 Connector
8P8C



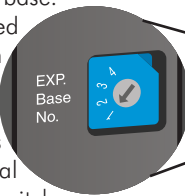
D2-EM to D2-EM Cable Pin-outs
(Use Category 5 straight-through cable)



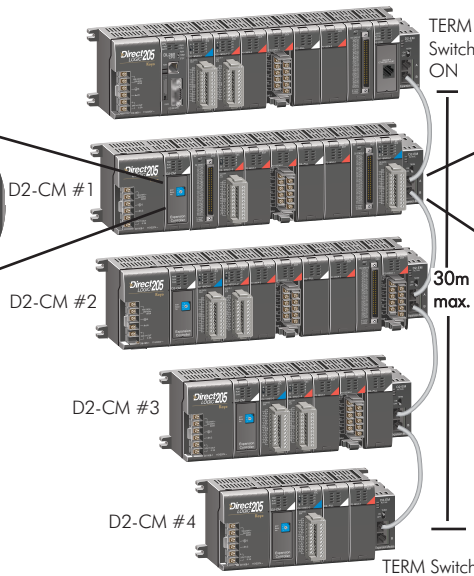
Local Expansion Modules

D2-CM Expansion Base Controller Module

The D2-CM module is placed in the CPU slot of each expansion base. The rotary switch is used to select the expansion base number. The expansion base I/O addressing (Xs & Ys) is based on the numerical order of the rotary switch selection and is recognized by the CPU on power-up. Duplicate expansion base numbers will not be recognized by the CPU. An example of base I/O addressing order is shown to the right.

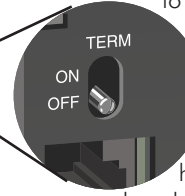


D2-260 expansion system



D2-EM Base Expansion Module

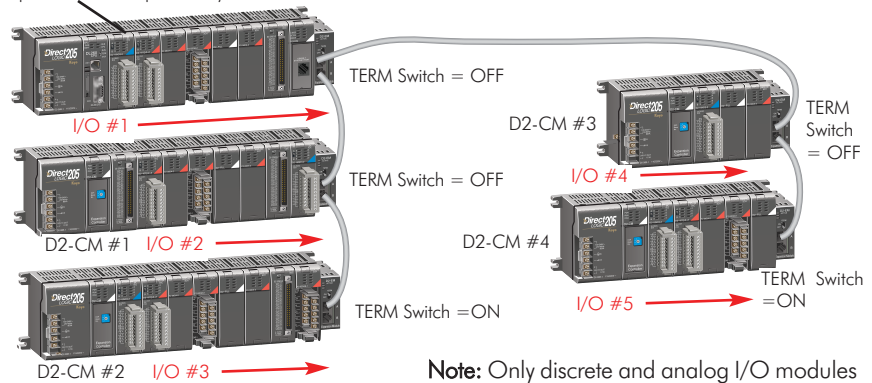
The D2-EM expansion unit is attached to the right side of each base in the expansion system. The D2-EMs on each end of the expansion system should have the TERM switch placed in the ON position. The expansion units between the end-most units should have the TERM switch placed in the OFF position. The CPU base can be located at any base position in the expansion system. It does not have to be located at one end or the other.



D2-260 expansion system

The D2-260 supports local expansion up to five total bases (one CPU base + four expansion bases) and up to a maximum of 1280 total I/O points. All local and expansion I/O points are updated on every CPU scan. No specialty modules can be located in the expansion bases. Refer to the Module Placement Table earlier in this section for restrictions. The maximum total expansion system cable length is 30m (98 ft.). The red text and arrows in the example to the right indicate the I/O addressing order.

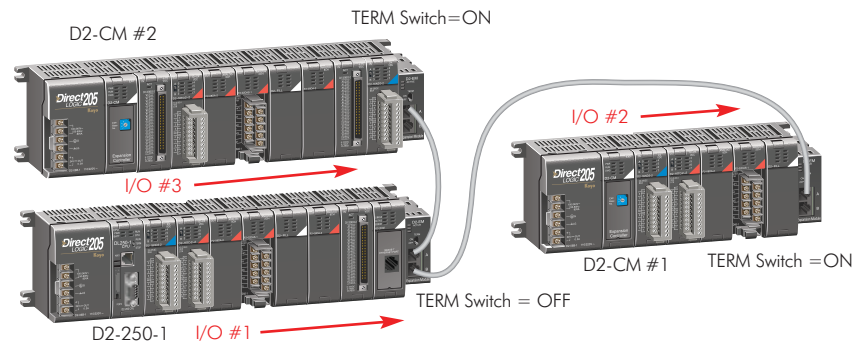
The D2-260 CPU base can be located at any base position in the expansion system.



Note: Only discrete and analog I/O modules are supported on the expansion bases. No specialty or communications modules can be used on the expansion bases at this time.

D2-250-1 expansion system

The D2-250-1 supports local expansion up to three total bases (one CPU base + two expansion bases) and up to a maximum of 768 total I/O points. All local and expansion I/O points are updated on every CPU scan. The D2-250-1 does not support the use of specialty modules located in the expansion bases. The maximum total expansion system cable length is 30m (98 ft.). The red text and arrows in the example to the right indicate the I/O addressing order.



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