

## Symmetry™ MultiNODE M2150 Intelligent Controller Datasheet

### KEY FEATURES

- Modular mix and match configuration
- Connects to Symmetry management software via LAN, WAN, RS232 or modem
- Each M2150 can control up to 16 doors and readers
- Manages 20,000 card holders and 65,000 offline transactions (expandable to 250,000 cardholders)
- Connect smart card, proximity or legacy magstripe readers using MultiNODE Current Loop Protocol (MCLP) or OSDP (OSDP panels do not support MCLP)
- Wiegand and Biometric reader support using optional WIM
- Elevator model controls up to 64 floors
- Wireless or secure AES encrypted communication options
- Available with or without enclosure and power supply

The multiNODE M2150 range of controllers provides distributed intelligence for your access control system and ensures complete system security, resilience and reliability. When integrated with Symmetry security management software, the M2150 controller range delivers a seamless security management system to protect all types of buildings while maintaining a low cost of ownership.

At the core of a standard access control installation is the M2150 Database Controller (DBC), an intelligent controller with built in database and support for 2, 4 or 8 card readers. Expansion of the system is simple using remote Door Controllers (DC) that offer the functionality of the DBC without a database onboard, up to a maximum of 16 doors.

Expansion beyond 16 doors is achieved by installing additional DBCs and DCs as required, providing solutions that can scale up to many thousands of doors. Each DBC can manage 20,000 cardholders, and this can be increased to a maximum of 250,000 using plug-in memory modules.

The M2150 DBU offers the ultimate in flexibility and system design architecture by delivering database intelligence with connectivity to remote door controllers.

The M2150 range of controllers provides a resilient and fault tolerant access control solution that will continue to operate in the unlikely event of database server or network infrastructure failure.

Using additional input or output modules and controllers the M2150 range can be extended to manage a number of applications, including alarm monitoring.

The M2150 OSDP door controller is available only in an 8 door option and requires Symmetry Access Control software version 9.9.



## M2150 Database Unit with Integrated Door Controller (DBC)

Each M2150 controller supports 20,000 cardholders (expandable to 250,000) and up to 16 card readers with the addition of optional door controllers. Includes integrated RS232 port. Door input and output controllers connect using RS485. Optional network interface modules are able to provide LAN or wireless access. See price list for models including enclosure and 3.5A 12VDC power supply (20VAC or 24VDC input). Also available with fitted transformer. See price list for details. A hand geometry variant is available.

Reference	Model	Doors	Enclosure	Size
M2150-2DBC	2DBC	2	Board only	W: 8.67 in (220 mm), H: 9.18 in (233 mm)
M2150-4DBC	4DBC	4	Board only	W: 10.24 in (260 mm), H: 11.03 in (280 mm)
M2150-8DBC	8DBC	8	Board only	W: 11.03 in (280 mm), H: 10.24 in (260 mm)
M2150-8DBC-OSDP	8DBC-OSDP	8	Board only	W: 16.5 in (420 mm), H: 21.7 in (550 mm), D: 3.7 in (95 mm)

## M2150 Database Unit (DBU)

M2150 database unit supports 20,000 cardholders (expandable to 250,000) and up to 16 card readers with separate door controllers. Includes integrated RS232 port. Door input and output controllers connect using RS485. Optional network interface modules are able to provide LAN or wireless access. An integrated RS232 port is provided. Board only, requires enclosure and power supply.

*NOTE: The EN-DBU is also available - See separate datasheet*

Reference	Model	Doors	Enclosure	Size
M2150-DBU	DBU	-	Board only	W: 9.45 in (240mm), H: 6.3 in (160 mm)

## M2150 Door Controller (DC)

Extends DBU and DBC to support up to 16 readers. Connects to DBU, 2DBC, 4DBC and 8DBC via RS485. See price list for models including enclosure and 3.5A 12V DC power supply (20V AC or 24V DC input). Also available with fitted transformer. See price list for details.

Reference	Model	Doors	Enclosure	Size
M2150-2DC	2DC	2	Board only	W: 4.65 in (118 mm), H: 11.03 in (280 mm)
M2150-4DC	4DC	4	Board only	W: 6.89 in (175 mm), H: 12.6 in (320 mm)
M2150-8DC	8DC	8	Board only	W: 11.03 in (280 mm), H: 10.24 in (260 mm)
M2150-8DC-OSDP	8DC-OSDP	8	Board only	W: 16.5 in (420 mm), H: 21.7 in (550 mm), D: 3.7 in (95 mm)



## Network Interface Modules

Plug-in module that connects to the DBU, 2DBC, 4DBC and 8DBC to provide an IP network interface connection.

Reference	Description
MN-NIC-5	Provides a 10/100 Mbps network connection for M2150 DBU, 2DBC, 4DBC, 8DBC and 8DBC-OSDP.
MN-NIC-5-ENC*	Provides a 10/100Mbps network connection for M2150 DBU, 2DBC, 4DBC, 8DBC and 8DBC-OSDP. Recommended for improved security, it replaces both MN-NIC-4 and MN-NIC-4-ENC. Note: TLS 1.2 and encryption capable, may require an export license for supply outside of the USA which may delay shipment.
MN-NIC-WI	Provides an 802.11b wireless network connection for DBU, 2DBC, 4DBC, 8DBC and 8DBC-OSDP.

## Database Unit with Integrated Elevator Interface

Each M2150 elevator controller supports 20,000 cardholders (expandable to 250,000) and up to 64 floors, includes enclosure and power supply.

Reference	Elevators/Floors	Size
M2150-ELEV	1 elevator 32 floors 2 elevators 16 floors	W: 20 in (510 mm), H: 20 in (510 mm), D: 6.8 in (172 mm)
M2150-ELEV-EXT	1 elevator 64 floors 2 elevator 32 floors 4 elevator 16 floors or 4 elevators.	W: 20 in (510 mm), H: 20 in (510mm), D: 6.8 in (172 mm) Extends to M2150-ELEV to support up to 64 floors or 4 elevators. (Add-on extension for the M2150-ELEV, which must be ordered separately.)

## Input and Output Modules

Plug-in input and output modules mount onto the DBC and DC to provide additional inputs and outputs. The 2DBC, 2DC, 8DBC-OSDP and 8DC-OSDP support one module. The 4DBC and 4DC support two modules.

Reference	Inputs	Outputs	Size
M2150-AC8/4	8	4	W: 4.53 in (115 mm), H: 3.23 in (82 mm)
M2150-OC4/8	4	8	W: 4.53 in (115 mm), H: 3.23 in (82 mm)

## Input and Output Controllers

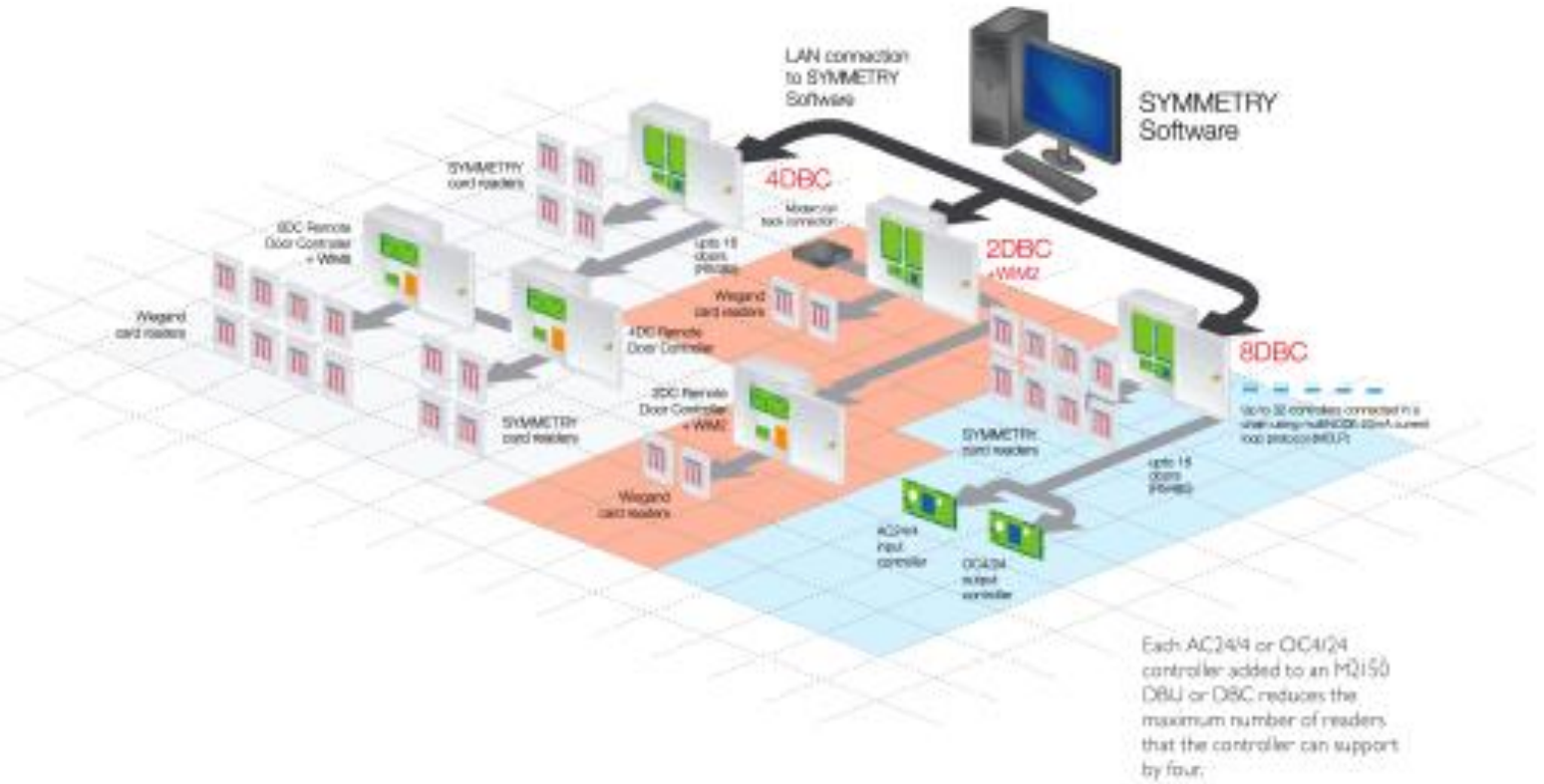
Input and output controllers connect to the DBU, 2DBC, 4DBC, 8DBC and 8DBC-OSDP via RS485 to provide additional I/O. Each input or output controller added to an M2150 reduces the maximum number of readers that the controller can support by four.

Reference	Inputs	Outputs	Enclosures	Size
M2150-AC24/4	24	4	Board only	W: 6.89 in (175 mm), H: 12.6 in (320 mm)
M2150-OC4/24	4	24	Board only	W: 6.89 in (175 mm), H: 12.6 in (320 mm)

\*Requires export control licensing when exported to certain countries

\*6A power supply (18VAC or 24VDC input)

\*\* Not available in North America



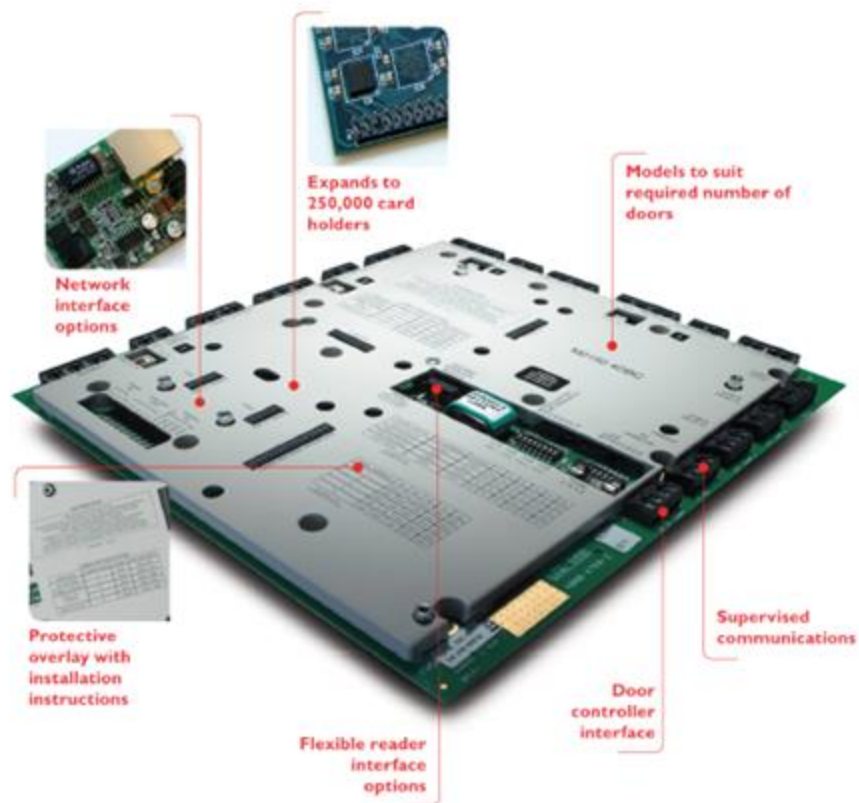
## ENCLOSURES

MN-ENC1	Enclosure with screw fix lid and 3.5A 12VDC power supply (18 VAC or 240VDC input) W: 17.3 in (440 mm), H: 13.9 in (352 mm), D: 3.3 in (85 mm). Available space for: One 4DBC or 4DC
MN-ENC1L	Enclosure with screw fix lid and combined 2A 12VDC plus 2A 24VDC power supply (20VAC or 24VDC input) plus space for 2 X 12V backup batteries. W: 19.0 in (482 mm), H: 15.7in (400 mm), D: 4.5in (105 mm) Available space for: One 4DBC or 4DC or 2DBC or 2DC
MN-ENC3	Enclosure with screw fixed lid and 3.5A 12VDC power supply (20VAC or 24VDC input). W: 16.5 in (420mm) H: 21.7 in (550 mm), D: 3.7 in (95 mm). Available space for: <ul style="list-style-type: none"> <li>DBU with any one of the following: AC24/4, OC4/24, 4DC or 2DC</li> <li>Any two of the following: 2DC, 4DC, AC24/4, OC4/24</li> <li>One 8DBC, 8DC, 4DBC or 2DBC</li> </ul>
MN-ENC4	Enclosure with screw fixed lid and 3.5A 12VDC power supply (20VAC or 24VDC input). W: 19.7 in (500 mm), H: 22 in (560 mm), D: 4.1in (105 mm). Available space for: <ul style="list-style-type: none"> <li>DBU with any two of the following: AC24/4, OC4/24, 4DC, 2DC</li> <li>One 8DBC, 8DC, 4DBC or 2DBC plus any one of the following: AC24/4, OC4/24, 4DC</li> <li>One 4DC, AC24/4 or OC4/24 optionally with up to two 2DC's</li> </ul>





MN-CAB5	Hinged lid enclosure with lock and 6A 12VDC power supply (20VAC or 24VDC input). W: 20.8 in (529 mm), H: 26.2 in (666 mm), D: 4.1in (105 mm). Available space for: One, or any two of the following: 8DBC or 8DC
MN-RAK3	19" 2U rack mount enclosure and 3.5A 12VDC power supply (100 to 240VAC input). Available space for: <ul style="list-style-type: none"> <li>▪ DBU with any one of the following: AC24/4, OC4/24, 4DC or 2DC</li> <li>▪ Any two of the following: 2DC, 4DC, AC24/4 or OC4/24</li> <li>▪ One 8DBC, 8DC, 8DBC-OSDP, 8DC-OSDP, 4DBC or 2DBC</li> </ul>



## OPTIONAL COMPONENTS

MN-RS232-1	RS232 interface module. Provides a second RS232 interface for the DBU, 2DBC, 4DBC, 8DBC or 8DBC-OSDP
M2150-MEM-050K	50,000 cardholder memory module for DBU, 2DBC, 4DBC, 8DBC or 8DBC-OSDP
M2150-MEM-100K	100,000 cardholder memory module for DBU, 2DBC, 4DBC, 8DBC or 8DBC-OSDP
M2150-MEM-250K	250,000 cardholder memory module for DBU, 2DBC, 4DBC, 8DBC or 8DBC-OSDP
WIM2	Wiegand interface module for 2DBC or 2DC. Enables connection of 2 Wiegand readers
WIM4	Wiegand interface module for 4DBC or 4DC. Enables connection of 4 Wiegand readers
WIM8	Wiegand interface module for 8DBC, 8DBC-OSDP, 8DC or 8DC-OSDP. Enables connection of 8 Wiegand readers
MN-RS485-DUAL	RS485 reader interface module for 2DBC or 2DC. Enables connection of 2 RS485 readers (contact technical support for compatible readers)
MN-RS485-QUAD	RS485 reader interface module for 4DBC or 4DC. Enables connection of 4 RS485 readers (contact technical support for compatible readers)



## SPECIFICATIONS

### Management Software

- Symmetry Professional and Enterprise 8.1 or later. For OSDP, need version 9.9 or later.

### Operating Environment

- +14°F to 131°F (-10°C to 55°C)
- 15% to 90% humidity, non-condensing

### Communications

#### IP Network

- M2150 DBU and DBC LAN interface (10/100 Mbps)
- M2150 DBU and DBC wireless LAN interface (802.11b)

#### Hardwired

- DBU or DBC or DBC-OSDP to PC or modem (RS-232) = 45 ft (15 m). RS232 port included as standard
- DBU or DBC or DBC-OSDP to DBU or DBC or DBC-OSDP (20mA) = 3,000 ft (1,000 m). Up to 32 controllers per chain
- DBC to DC (RS485) = 3,000 ft (1,000 m). Up to 16 readers per controller
- DBC-OSDP to DC or DC-OSDP (RS485) = 3000 ft (1,000m). Up to 16 readers per controller
- DBC or DC to Symmetry reader (20mA) = 3,000 ft (1,000 m)
- DBC or DBC-OSDP or DC or DC-OSDP to Wiegand reader (requires Wiegand interface module) = 325 ft (100 m)

### Storage Capacities

- 20,000 cardholders and 65,000 offline transactions
- Optional memory modules increase capacity to 50,000, 100,000 or 250,000 cardholders

### Inputs/Outputs

- M2150 controllers support multiNODE 20mA current loop protocol (MCLP) readers
- M2150-OSDP controllers support OSDP and Wiegand readers (MCLP not supported)
- Wiegand reader support via optional (WIM) interface module
- Door monitor and Exit request inputs support 2, 3 or 4 state supervision
- Relay outputs are rated at 30VDC, 3A max
- All input modules and alarms controllers support 2, 3, 4 or 6 state input supervision
- Each AC24/4 or OC4/24 controller added to an M2150 DBU or DBC reduces the maximum number of readers that the controller can support by four

**Note:** For single door applications supporting Power over Ethernet, please see the separate EN-1DBC datasheet.

Please refer to price list for part numbers for each referenced item.