HS850B
Serial Eurocard Controller

Features

- Controls up to Four HS-Series Antennas Simultaneously
- Antenna Cable Length Up to 4000 Feet
- 3000 Bytes/Second Data Transfer – Reading and Writing
- Simple Host Serial Protocol
- RS232, RS422 and RS485 Multidrop Link

Applications

- Material Handling
- Sortation Systems
- Work-in-Progress Monitoring
- Quality Control

Use With

- HS200R-Series Tags
- HS200XL-Series Tags
- HS200LR-Series Tags
- HS500-Series Read/Write Antennas
- HS510 Long-Range Read/Write Antenna

EMS, a Datalogic Group Company, is the field-proven leader in the development and application of Radio Frequency Identification (RFID) Tags/Labels/PCBs, Antennas, Controllers and network interface modules for tough industrial environments. With over a dozen years of RFID successes in the automotive, electronics, material handling and food processing industries, EMS has built a global reputation in providing customers with complete supply chain solutions – from production to retail EMS has the complete solution!

The HS850B Serial Eurocard Controller provides the complete interface between the serial port of the user's host computer and up to four EMS HS-Series Antennas. Up to 45 HS850B Controller cards can be connected on one RS485 multidrop line, allowing a single host port to control up to 180 EMS Antennas. The connection between the Eurocard Controller and each Antenna is via two twisted pairs (four wires), with a maximum cable length of up to 4,000 ft. (1,200 meters). Eight status LEDs are mounted on the front of the Controller to aid in system debug and maintenance. The HS850B has backplane connections to the host, Antennas and power, for use in the EMS HS640B-850 single card rack.

CONTROLS UP TO FOUR RF ANTENNAS

HS850B Serial Eurocard Controller

| Electrical | Supply Voltage | 21-28VDC |
| | Current Consumption | 100mA Typ., 200mA Max. |

| Memory | Memory Type | RAM Tag Buffer |
| | Memory Capacity | 32KB |

| Interface with Antenna | Max. Cable Length | 4000ft. (1200m) |

Interface	Host Interface Options	RS232, RS422, RS485 Multidrop
	Baud Rate	110, 300, 1200, 2400, 4800, 9600
	Parity	Odd, Even, None
	Data Bits	8
	Stop Bits	1
	Software Protocol	ASCII or Binary

Mechanical Specifications	Dimensions (W x H)	6.3 x 3.9in. (160 x 100mm)
	Connector	64-Pin DIN (32 x 2)
	Indicators	On, Error, RX, TX, Antenna LEDs

Environment	Operating Temperature	32° to 120°F (0° to 49°C)
	Storage Temperature	-40° to 185°F (-40° to 85°C)
	Humidity	95% Non-Condensing
	Protection Class	NEMA 1 (IP30)

Electrical Connections

Pinouts
HS850B (64-Pin DIN) and HS640B-850 (2 x 32 Terminal Blocks)

| PIN	Description	Type	PIN	Description	Type
A2	Antenna 0 Pin 1	In/Out	C2	RS232 TX	Output
A4	Antenna 0 Pin 2	In/Out	C4	RS232 RX	Input
A6	Antenna 0 Pin 3	In/Out	C6	Signal Ground	Power
A8	Antenna 0 Pin 4	In/Out	C8	RS422/485 TX+	Output
A10	Antenna 1 Pin 1*	In/Out	C10	RS422/485 TX-	Output
A12	Antenna 1 Pin 2*	In/Out	C12	RS422/485 RX+	Input
A14	Antenna 1 Pin 3*	In/Out	C14	RS422/485 RX-	Input
A16	Antenna 1 Pin 4*	In/Out	C16	(spare)	
A18	Antenna 2 Pin 1*	In/Out	C18	(spare)	
A20	Antenna 2 Pin 2*	In/Out	C20	(spare)	
A22	Antenna 2 Pin 3*	In/Out	C22	(spare)	
A24	Antenna 2 Pin 4*	In/Out	C24	(spare)	
A26	Antenna 3 Pin 1*	In/Out	C26	(spare)	
A28	Antenna 3 Pin 2*	In/Out	C28	(spare)	
A30	Antenna 3 Pin 3*	In/Out	C30	+24VDC	Power
A32	Antenna 3 Pin 4*	In/Out	C32	Ground	Power

*These connections only apply using HS850B-4

Mechanical Dimensions
### HS850B Serial Eurocard Controller
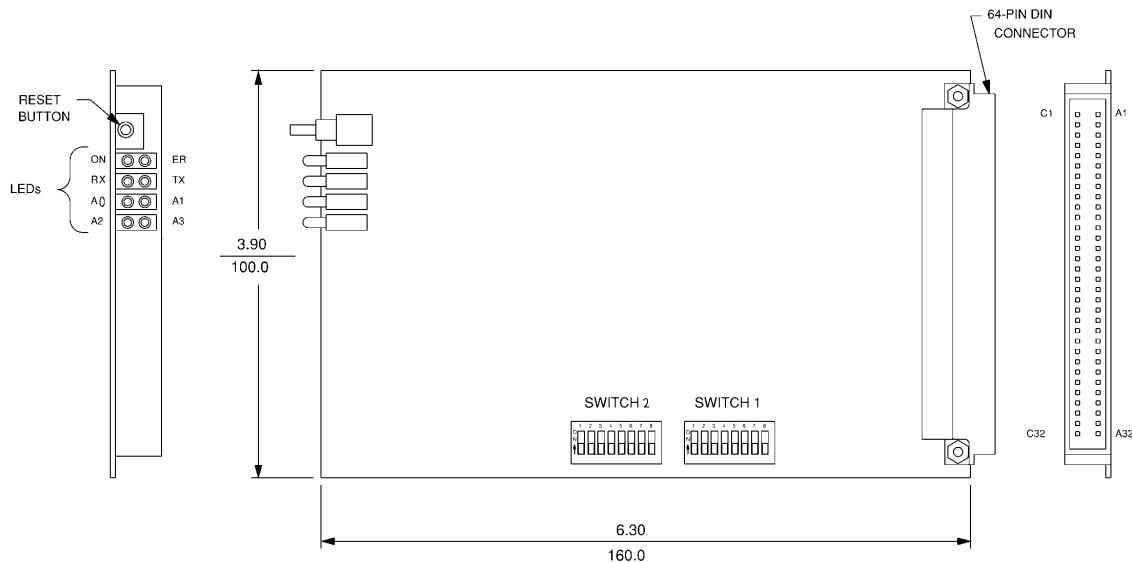
Mechanical Dimensions
HS640B-850 Eurocard Enclosure
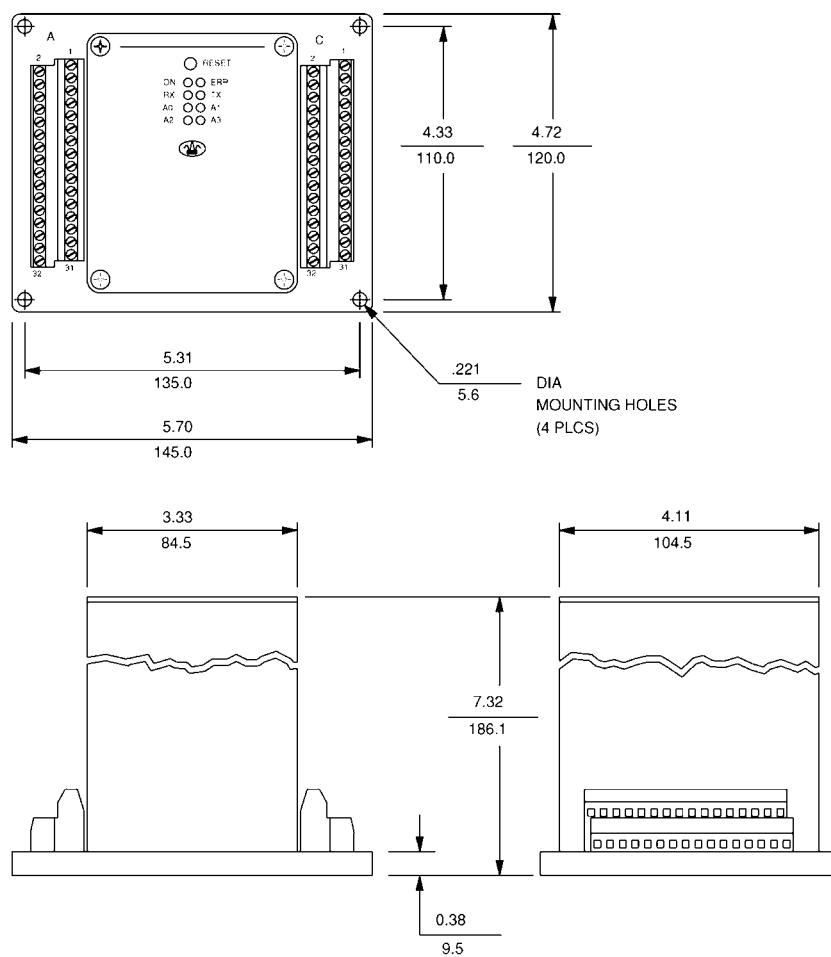
HS850B Serial Eurocard Controller

Connections to Antennas
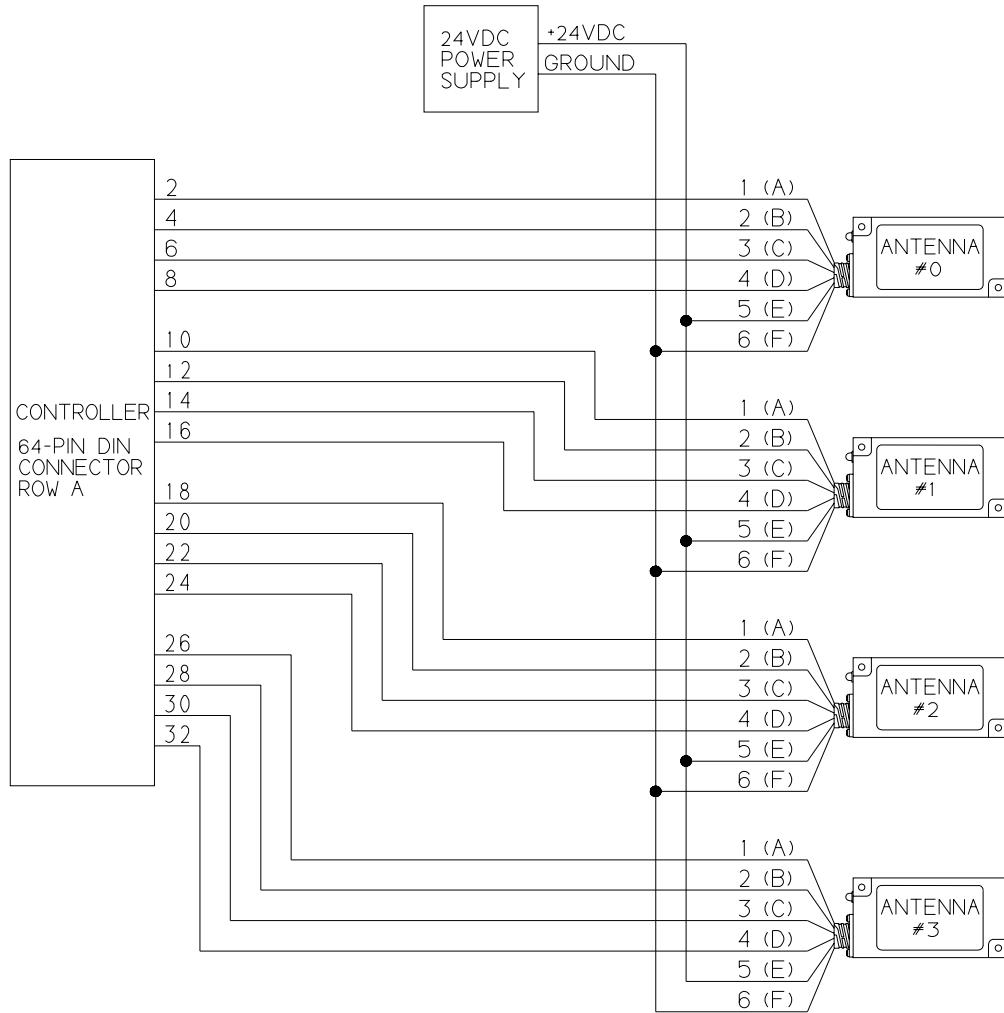
Note: Connections to Antennas 1, 2 and 3 Apply Only When Using the HS850B-4 Controller.

Available Models

Model	Description
HS850B-1	Serial Eurocard Controller for One Antenna
HS850B-4	Serial Eurocard Controller for Four Antennas

Accessories

Model	Description
HS640B-850	Single-Card Enclosure for HS850B Eurocard, Stainless Steel, NEMA 12 (IP54)