Product Overview

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Cisco Catalyst IE3100H Heavy Duty Series Switch is a IP66/IP67 rated compact entry-level managed L2 switch. The switch is specifically designed as an I/O Network Switch for PLC-level connectivity, available in 8 Gigabit Ethernet (X-coded) or 2 Gigabit Ethernet (X-coded) + 6 Fast Ethernet (D-coded) M12 interface models. These switches cater to deployments including of automotive manufacturing, food and beverage, clean rooms or other industrial environments that are required to be cleaned regularly with harsh-chemicals and support a 24x7 production process.

The switch is an enclosed type equipment, it can be wall mounted and deployed without a housing cabinet, under either indoor or outdoor environment with Pollution Degree 2.

Switch Models

Table 1: Cisco Catalyst IE3100H Heavy Duty Series Switch Model Features

Hardware Specifications	IE-3100H-8T-E	IE-3100H-6FT2T-E
100-Mbps D-coded ports	0	6
1-Gbps X-coded ports	8	2
Removable storage	SD card[1]	
Console ports	1x A-code M12	
Power input (Marked Rating)	12–48 VDC, 1.5 A	
Power Connector	1xL-Code M12	

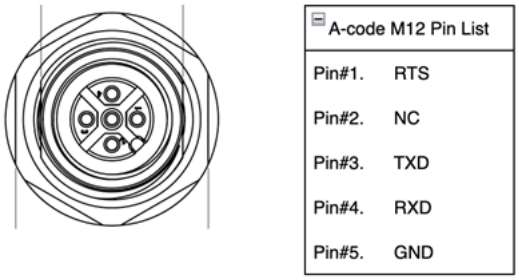
[1] The SD card is optional and is not shipped by default with the switch.

Console Management Port

You can connect the switch to a PC running Microsoft Windows or to a terminal server through the A-code M12 connector console port and configure it by using the CLI. The baud rate and format of the console port is:

- 9600 baud
- 8 data bits
- 1 stop bit
- No parity
- None (flow control)

Figure 1: Console Connector



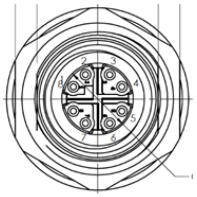
Note For specified cable, use Cisco Product CAB-CONSOLE-M12=

Ethernet Ports

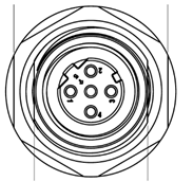
The Catalyst IE-3100H-8T-E switch has 8x Ethernet ports supporting 1000Base-T, 100Base-TX and 10Base-T with autonegotiation, auto-MDIX, and cable diagnostics on X-code M12 connectors.

The Catalyst IE-3100H-6FT2T-E switch has 2x 1Gigabit M12 X-code uplink Ethernet ports and 6x 10/100Mpbs M12 D-code downlink Ethernet ports.

Figure 2: M12 Ethernet Ports



X-code M12 Pin List	
Pin#1.	MDI1_P
Pin#2.	MDI1_N
Pin#3.	MDI0_P
Pin#4.	MDI0_N
Pin#5.	MDI2_P
Pin#6.	MDI2_N
Pin#7.	MDI3_N
Pin#8.	MDI3_P



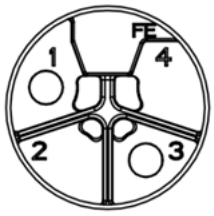
D-code M12 Pin List	
Pin#1.	TX+
Pin#2.	RX+
Pin#3.	TX-
Pin#4.	RX-

Power Connector

Power the switch using DC power through the front panel connector. The power connector labeling is on the panel. Torque power connection to 10in/lbs.

A Micro-Change (M12) Single-Ended Cordset, 4 Poles, L-Coded, Female power cord must be used to power the switch.

Figure 3: Power Connector



L-code M12 Pin List	
Pin#1.	DC+
Pin#2.	NC
Pin#3.	DC-
Pin#4.	NC

1	DC+	3	DC–
2	NC	4	NC

Note

- To meet UL 61010-2-201 UL Listing requirement, Amphenol ADAD-DLFS0400152 connectors must be used with the Cisco Catalyst IE3100H switch.
- CSA 61010-2-201 certification allow IE3100H use any CSA/UL approved M12 L-Code Female Plug

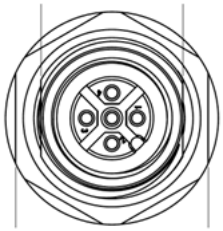
Console Management Port

You can connect the switch to a PC running Microsoft Windows or to a terminal server through the A-code M12 connector console port and configure it by using the CLI. The baud rate and format of the console port is:

- 9600 baud

- 8 data bits
- 1 stop bit
- No parity
- None (flow control)

Figure 4: Console Connector

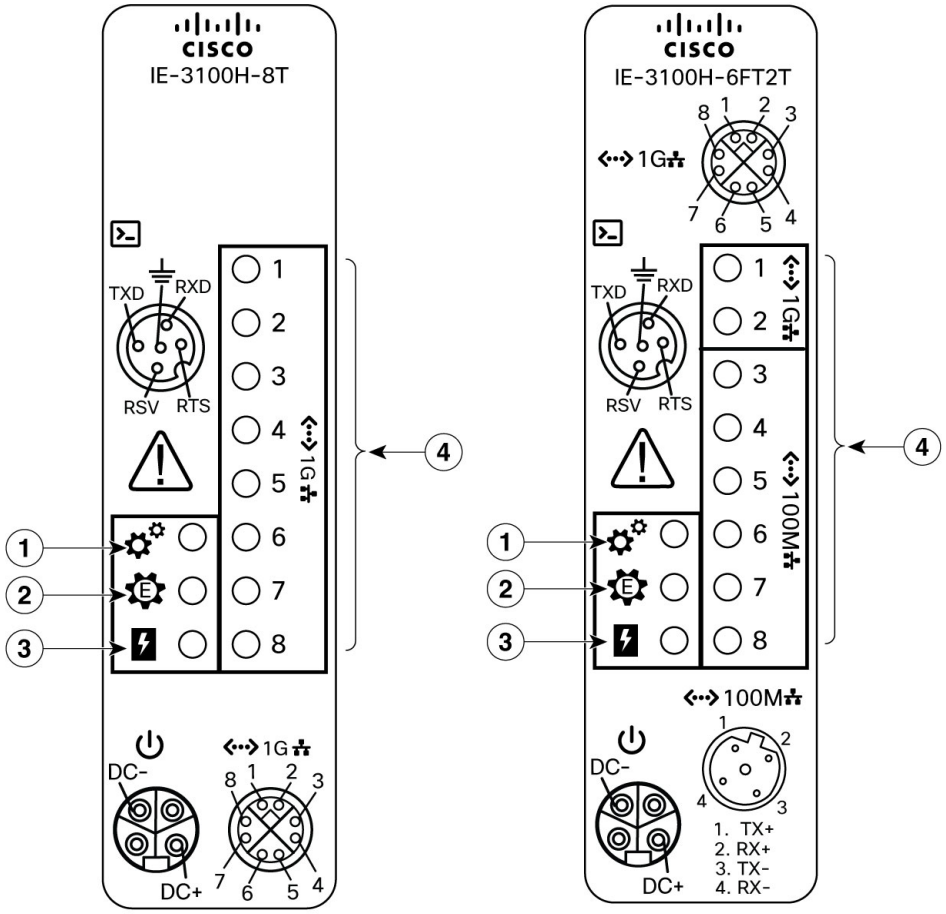


A-code M12 Pin List	
Pin#1.	RTS
Pin#2.	NC
Pin#3.	TXD
Pin#4.	RXD
Pin#5.	GND

Note For specified cable, use Cisco Product CAB-CONSOLE-M12=

LEDs

The LEDs display the overall system, power supply, and Ethernet port status.



1	System LED	3	Power LED
2	Express Setup LED	4	Ethernet Ports LEDs

System LED

The System LED shows whether the device is receiving power and is functioning properly.

Table 2: System LED

Color	Status
Off	Switch is not powered on.
Blinking green	Boot fast (power-on self test) is in progress.
Green	Switch is operating normally.
Red	Switch is not functioning properly.

Express Setup Button

Express Setup is a web-based procedure to configure initial IP address information to the new switch. It provides a simple way to manage the switch and connect it to an existing network of local routers and the internet.

The Cisco Catalyst IE3100H Heavy Duty Series Switch front panel has an Express Setup button and a setup LED. The button is recessed to prevent accidental activation; you need a paper clip or similar object to press it. You trigger different Express Setup features by varying the amount of time that you press the button.

Table 3: Express Setup Modes

Mode	Seconds Required to Trigger Mode	Description
Short Press	1 to 5	Places the switch into Express Setup mode
Medium Press	6 to 10	Causes the switch to start DHCP discovery phase on the VLAN1 interface
Long Press	16 to 20	Causes the switch to erase its startup configuration and reload. This in turn causes the switch to revert to its Day 1 default configuration.

When you first set up the switch, we recommend that you use Express Setup to enter the initial IP information. This process enables the switch to connect to local routers and the Internet. You can then access the switch through the IP address for more configuration.

For more information, see Running Express Setup.

Table 4: Express Setup LED Status

Color	Status
Black	System is UP
Blinking Green	Short Press
Blinking GREEN and RED Alternatively	Medium Press
Blinking GREEN(for 5 second), Blinking RED(for 5 more seconds), and OFF(BLACK for 10 to 15 seconds) then Blinking GREEN and RED	Long Press

Power Status LEDs

If power is present on the circuit, the LED is green. If power is not present, the LED color depends on the alarm configuration. If alarms are configured, the LED is red when power is not present; otherwise, the LED is off.

Table 5: Power Status LEDs

Color	System Status
Green	Power is present on the associated circuit, system is operating normally.
Off	Power is not present on the circuit or the system is not powered up.
Red	An alarm has been configured to indicate that power is not present on the associated circuit or the power input dropped below the lowest valid level.

For information about the power LED colors and behaviors during the boot fast sequence, see the "LEDs" section.

Port status LEDs

Each 10/100BASE-T or 10/100/1000Base-T port (identified by numbers 1-8, depnding upon the the model) has a port status led.

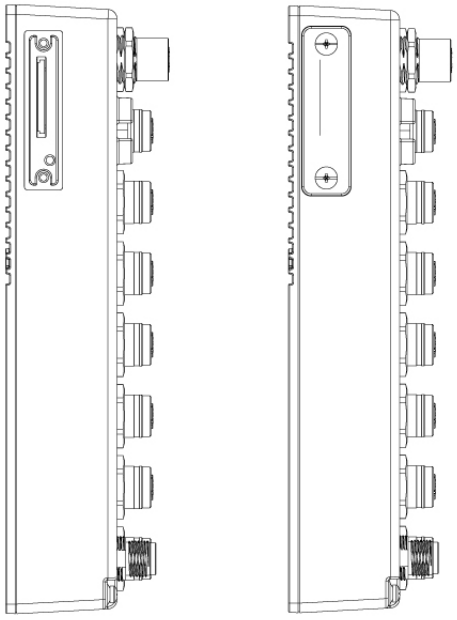
Table 6: Port status LEDs

Color	Status
Off	No link.
Solid green	Link present. No activity.
Blinking green	Port is actively sending or receiving data.
Alternating green-amber	Link fault. Errors that affect connectivity and throughput, such as excessive collisions, CRC errors, and alignment and jabber errors, are monitored.
Solid amber	Port is not forwarding. The port was disabled by management, an address violation, or STP. **Note** After a port is reconfigured, the port LED can remain amber for up to 30 seconds while STP checks the switch for loops.

SD Card Connector

The switch supports an SD card that makes it possible to replace a failed switch without configuring the replacement switch. You can also use the SD card to copy files on and off the system.

Figure 5: SD Card slot and its cover



The connector is on the side of the switch, behind a cover that protects the SD card and holds it in place. The switch supports SD card of upto 16 GB storage capacity.