

Pluggable Interface Modules for the Industrial IoT Routing Portfolio

Keep pace without the full rip and replace

As organizations are automating and establishing remote fixed and mobile operations, extending connectivity to industrial IoT locations can be challenging, especially when requirements differ depending on location and use case. As cellular and wireless technologies evolve, in tandem with customer requirements, solutions need to keep pace without a full rip and replace.

To meet these needs, Cisco's industrial routers are modular, allowing you the flexibility to swap or upgrade as your requirements change or new technologies become available. We are continually expanding the capabilities of our industrial routers and modules. Check out our portfolio of Pluggable Interface Modules (PIMs) for each of our industrial routers:



Pluggable Modules for the Cisco Catalyst IR1100 Rugged Series Routers



Table 1. Pluggable modules for the Cisco Catalyst IR1100 Rugged Series Routers

Module name	PID number	Description
Expansion Model 1	IRM-1100-SP	Expansion module for dual active Long-Term Evolution (LTE) and Small Form-factor Pluggable (SFP)
Expansion Model 2	IRM-1100-SPMI	Expansion module for dual active LTE, local storage for applications, SFP and input/output port
Expansion Model 3	IRM-1100-4A2T	Serial and Ethernet Expansion Module for Asynchronous Serial and GE interfaces
FirstNet Ready Category 4 LTE module	P-LTE-XX (MNA, VZ, US, GB, IN, JN)	FirstNet Ready Category 4 LTE multi-carrier module for the US (MNA) and category 4 LTE for Verizon (VZ), AT and T (US), and additional countries (GB, IN, JN)
Category 7 LTE module	P-LTEA7-NA/ P-LTEA7-EAL/ P-LTEA7-JP	CAT 7 LTE for North America, (NA), Middle East, EMEA, APAC, LatAm, (EAL) and Japan (JP)
FirstNet Ready Category 18 LTE module	P-LTEAP18-GL	Category 18 LTE for North America, Europe, and Asia Pacific
5G Sub 6 GHz module Standalone/ Non-standalone	P-5GS6-R16SA-GL	Next-generation 5G supporting Standalone (SA) and Non-standalone (NSA) for public and private networks. Global PIM. Massive capacity and performance with lower latency. (CBRS/Private LTE-enabled and FirstNet Ready certification coming soon.)
450MHz LTE module	P-LTE-450	Provides large geographical coverage and high resiliency along with deep indoor signal penetration
LoRaWAN module	P-LPWA-900/ P-LPWA-800	Provides low-power, Long-Range Wide Area Network (LoRaWAN) connectivity to IoT end devices
100 GB additional storage module	IRM-SSD-100G	Expandable industrial-grade field-replaceable 100 GB storage

Visit cisco.com/go/ir1100 to learn more.

Pluggable Modules for the Cisco Catalyst IR1800 Rugged Series Routers



Table 2. Pluggable modules for the Cisco Catalyst IR1800 Rugged Series Routers

Module name	PID number	Description
FirstNet Ready Category 4 LTE module	P-LTE-XX (MNA, VZ, US, GB, IN, JN)	FirstNet Ready Category 4 LTE multi-carrier module for the US (MNA) and Category 4 LTE for Verizon (VZ), AT and T (US), and additional countries (GB, IN, JN)
Category 7 LTE module	P-LTEA7-NA/ P-LTEA7-EAL/ P-LTEA7-JP	CAT 7 LTE for North America, (NA), Middle East, EMEA, APAC, LatAm, (EAL) and Japan (JP)
FirstNet Ready Category 18 LTE module	P-LTEAP18-GL	Category 18 LTE for North America, Europe and Asia Pacific
Wi-Fi 6 module	WP-WIFI6	Enables access point and backhaul capabilities to connect to infrastructure Wi-Fi. Can run in Control and Provisioning of Wireless Access Points (CAPWAP), Embedded Wireless Controller (EWC), or Work Group Bridge (WGB) modes
5G Sub 6 GHz module Standalone/ Non-standalone	P-5GS6-R16SA-GL	Next-generation 5G supporting Standalone (SA) and Non-standalone (NSA) for public and private networks. Global PIM. Massive capacity and performance with lower latency. (CBRS/Private LTE-enabled and FirstNet Ready certification coming soon.)
450MHz LTE module	P-LTE-450	Provides large geographical coverage and high resiliency along with deep indoor signal penetration
LoRaWAN module	P-LPWA-900/ P-LPWA-800	Provides low-power, Long-Range Wide Area Network (LoRaWAN) connectivity to IoT end devices
Automotive dead reckoning Global Navigation Satellite System (GNSS) module*	IRM-GNSS-ADR	Provides accurate estimates of a vehicle's position by combining speed and heading data from internal sensors with On-Board Diagnostics (OBD-II) data from the vehicle's CAN bus
100 GB storage module*	IRM-SSD-100G	Expandable industrial-grade field-replaceable 100 GB storage

*Only available with the IR1833 and IR1835 models

Visit cisco.com/go/ir1800 to learn more.

Pluggable Modules for the Cisco Catalyst IR8100 Heavy Duty Series Routers



Table 3. Pluggable modules for the Cisco Catalyst IR8100 Rugged Series Routers

Module name	PID number	Description
FirstNet Ready Category 4 LTE module	IRMH-LTE-MNA/ IRMH-LTE-MNA-900	Category 4 LTE for AT and T
Category 6 LTE module	RMH-LTEA-EA/ IRMLTEA-EA-900/ IRMH-LTEA-LA	Category 6 LTE for Europe and North America (EA) or 900MHz WPAN (EA-900) as well as category 6 LTE for APAC, LATAM, and ANZ
Category 7 LTE module (coming soon)	IRMH-LTE7-NA-900 IRMH-LTE7-EA-900	CAT7 LTE module for North America w/900Mhz filter CAT7 LTE Module for Europe w/900Mhz filter
FirstNet Ready Category 18 LTE module	IRMH-LTEAP18-GL3	Category 18 LTE for all global regions
5G Sub 6 GHz module Standalone/ Non-standalone (coming soon)	P-5GS6-R16SA-GL	Next-generation 5G supporting Standalone (SA) and Non-standalone (NSA) for public and private networks. Global PIM. Massive capacity and performance with lower latency. (CBRS/Private LTE-enabled and FirstNet Ready certification coming soon.)
5G Sub 6GHz	IRMH-5GS6-GL	Deliver massive capacity, performance, and data with lower latency all with the power of 5Gce Module with 9
100 GB additional storage module	IRM-SSD-100G	Expandable industrial-grade field-replaceable 100 GB storage
Wireless Personal Area Network (WPAN) Wi-SUN module	IRMH-WPAN-NA/ IRMH-WPAN-BRZ	WPAN module for Cisco Resilient Mesh or Wi-SUN mesh deployments for North America, Argentina, and Columbia (NA) as well as Brazil (BRZ)
Battery backup unit module	IRMH-BATT-4AH	Battery backup module for the IR8140H model
CPU/supervisor module	IRMH-SUP-SP	Supervisor module with 1 copper and 1 fiber port (for H)
60-Watt AC power module	IRMH-PWR60W-AC	60W AC power supply module for the IR8140H

Visit cisco.com/go/ir8100 to learn more.

Pluggable Modules for the Cisco Catalyst IR8300 Rugged Series Router



Table 4. Pluggable modules for the Cisco Catalyst IR8300 Rugged Series Router

Module name	PID number	Description
FirstNet Ready Category 4 LTE module	P-LTE-MNA	Category 4 LTE module for North America and Europe
Category 7 LTE module	P-LTEA7-NA/ P-LTEA7-EAL/ P-LTEA7-JP	CAT 7 LTE for North America, (NA), Middle East, EMEA, APAC, LatAm, (EAL) and Japan (JP)
FirstNet Ready Category 18 LTE module	P-LTEAP18-GL	Category 18 LTE module for all global regions
5G Sub 6 GHz module Standalone/ Non-standalone	P-5GS6-R16SA-GL	Next-generation 5G supporting Standalone (SA) and Non-standalone (NSA) for public and private networks. Global PIM. Massive capacity and performance with lower latency. (CBRS/Private LTE-enabled and FirstNet Ready certification coming soon.)
100GB additional storage module	IRM-SSD-100G	Expandable industrial-grade field-replaceable 100 GB storage
IR Series Timing module	IRM-TIMING-MOD	Pluggable timing module with various timing ports including Time of Day (ToD) + 1 Pulse Per Second (PPS). Output-provide or receive time of day message or 1 pulse per second, analog and digital input/output interfaces and GNSS receiver
IR Series RS232 8 Port Serial Network Interface module	IRM-NIM-RS232	Provides serial connectivity to the router
IR Series T1/E1 Network Interface module	IRM-NIM-2T1E1	Provides T1/E1 connectivity to the router

Visit cisco.com/go/ir8300 to learn more.

Pluggable Modules for the entire IoT Routing Portfolio

Table 5. Pluggable modules for the industrial routing portfolio

Module name	IR1101	IR1821-K9	IR1831-K9	IR1833-K9	IR1835-K9	IR8140H-K9	IR8140H-P-K9	IR8340-K9
Category 4 LTE modules	✓	✓	✓	✓	✓	✓	✓	✓
Category 7 LTE module	✓	✓	✓	✓	✓	✓	✓	✓
Category 18 LTE module	✓	✓	✓	✓	✓	✓	✓	✓
5G Sub 6 GHz module	✓	✓	✓	✓	✓	✓	✓	✓
450MHz LTE module	✓	✓	✓	✓	✓			
LoRaWAN module	✓	✓	✓	✓	✓			
Automotive dead reckoning GNSS module				✓	✓			
Wi-Fi 6 module		✓	✓	✓	✓			
100 GB additional storage module	✓			✓	✓	✓	✓	✓
Wireless Personal Area Network (WPAN) Wi-SUN module						✓	✓	
Battery backup unit module						✓	✓	
CPU/supervisor module						✓	✓	
60-Watt AC power module						✓	✓	
IR Series Timing Module								✓
IR Series RS232 8 Port Serial Network Interface Module								✓
IR Series T1/E1 Network Interface Module								✓

Learn more about Cisco's industrial routing portfolio [here](#).