



Technical Specifications

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Overview of Technical Specifications for IR1800 Series Routers

This chapter provides specifications for the IR1800.

Complete specifications for the IR1800 can be found in the [marketing data sheet](#).

Router Specifications

The following table lists the specifications of the Cisco IR1800.

Description	Design Specification
Dimensions	11.00”W x 7.16” x 2.02”
Weight	2.4 kg (5.3 lb) (without any modules) 3.1 kg (6.8 lb) (fully configured)
Ingress Protection Rating	IP 40, IP54 with external kit attached.
Humidity	Noncondensing Relative Humidity: 5% to 95%

Description	Design Specification
Standard Safety Certifications	UL/CSA 60950-1 UL/CSA/EN/IEC 62368-1 CB report and certificate to IEC 60950-1 with all country deviations NOM to NOM-019-SCFI (through UL certificate of conformity) ANSI/ISA 12.12.01 (Class 1, Div 2, groups A-D) CSA 22.2 No. 213-17 UL/CSA 60079-0, -7 (Class 1, Zone 2, Gc/IIC) IEC 60079-0, -7 IECEx test report (Class 1, Zone 2, Gc/IIC) EN 60079-0, -7 ATEX certificate (Class 1, Zone 2, Gc/IIC)
Operating Temperature and Altitude	-40C to +70C (40 lfm Vented Enclosure) -40C to +60C (Sealed Enclosure) -34C to +74C (Min. 200 lfm Fan or Blower Equipped Enclosure) Altitude: up to 15,000 feet
Storage Temperature and Altitude	Temperature: -40 to +85 degrees C Altitude: up to 15,000 feet
Input Voltage	Nominal voltage: 12V/24V (+/-20%) Min/Max voltage: +9.6V to +36V DC input
Typical Current	5.5A
Typical/Maximum Power Consumption	65W

Thermal Mitigation

The following tables provide a description of thermal mitigation levels and throughput performance across all IoT industrial routers.

This applies to both the 4G LTE and 5G NR FR1 operation of the P-5GS6-GL.

Table 1: Thermal Mitigation Levels

Level	Description
Level 0	Normal mode, no thermal throttling.
Level 1	Uplink throttling, via reduced UL TX duty cycle.

Level	Description
Level 2	May include the following: • DL throughput capability reduction, such as 4 RX > 2 RX paths. • Drop Secondary Cells (SCells) all, or one by one. • 5G NR > 4G LTE fall back. • MTPL backoff or reduced TX power. • Reduced UL communication range.
Level 3	Limited service. Note Limited service typically means emergency calls only. The P-5GS6-GL does not support emergency call mode, therefore limited service means “no service” for the P-5GS6-GL .
Thermal Shutdown	This occurs after Level 3.



Note Cisco does not recommend operation deep into level 2 as this may affect communication range via MTPL backoff.

Table 2: Thermal Mitigation Table - IR1835

Hardware	Maximum Ambient Temperature (C/F)	Airflow (LFM)	Throughput Performance
IR1835 plus WP-WIFI6 Dual P-5GS6-GL	60°/140°	0	Normal, Level 0
	65°/149°	40	Normal, Level 0
	70°/158°	40	Throttled, Level 1
	70°/158°	200	Normal, Level 0
	75°/167°	200	Throttled, Level 1

Table 3: Thermal Mitigation Table for P-5GS6-R16SA-GL modules - IR1835

Hardware	Maximum Ambient Temperature (C/F)	Airflow (LFM)	Throughput Performance
IR1835plus WP-WIFI6 Single P-5GS6-GL Single P-5GS6-R16SA-GL	55°C/131°F	0	Normal
	70°C/158°F	40	Throttled
	75°C/167°F	200	Throttled

