



WAVE-594 and WAVE-694 Hardware Specifications

This appendix provides hardware specifications for the WAVE-594 and WAVE-694 appliance. It contains the following sections:

- [Appliance Specifications](#)
- [Interface Module Specifications](#)

Appliance Specifications

[Table A-1](#) provides a summary of the features and specifications of the WAVE-594 and WAVE-694.

Table A-1 WAVE-594 and WAVE-694 Features and Specifications

Specification	Description
Microprocessor	<ul style="list-style-type: none"> • 1 Intel Xeon Quad-Core Processor X3430, or 1 Intel Xeon Quad-Core Processor X3450 • 2.4 GHz and 2.67 GHz respectively • 8 MB cache
Memory	<ul style="list-style-type: none"> • 8 GB to 24 GB ECC DDR3 SDRAM (RDIMM) 1333MT/s
Mass storage	<p>WAVE-594</p> <ul style="list-style-type: none"> • 1 500-GB SATA hard disk drive or RAID-1 array with two 500-GB SAS hard disk drives OR • 1 400-GB SATA Solid State Drive (SSD) or RAID-1 array with two 400-GB SATA SSD <p>WAVE-694</p> <ul style="list-style-type: none"> • RAID-1 array with two 800-GB SATA solid state drives
Fans	<ul style="list-style-type: none"> • 6 externally accessible, hot-plug fans
Expansion slots	<ul style="list-style-type: none"> • 1 Interface Module Slot for Cisco Interface Modules

Table A-1 WAVE-594 and WAVE-694 Features and Specifications (continued)

Specification	Description
Dimensions	<ul style="list-style-type: none"> Height: 42 mm (1.69 in) Depth: 516 mm (20.33 in); includes power supply handles Width: 429 mm (16.89 in)
Weight	<p>Maximum Weight (no carton): 10.21 kg (22.51 lb)</p> <p>(Includes the weight of one Cisco Interface Module, one power supply, and two hard disk drives.)</p>
Electrical Input Requirements ¹	<ul style="list-style-type: none"> Range Line Voltage: 90 to 132 VAC, 180 to 264 VAC Maximum Rated Input Current: 5 A - 2.5 A (100 - 240VAC) Rated Input Frequency: 47 to 63 Hz Maximum Real Input Power: 530W total (shared load when redundant)
BTU Rating	1808 BTU/hr Maximum
Power supply output	<ul style="list-style-type: none"> Rated steady-state power: 450 W (across input of 100 - 240 VAC) Efficiency: Minimum of 85% at 100% electrical load
Acoustic noise ²	<ul style="list-style-type: none"> Idle: 43.9 dBA Operating (70% load): 46.9 dBA
Environment	<ul style="list-style-type: none"> Air temperature: <ul style="list-style-type: none"> Operating³: 0 to 40 °C (32 to 104 °F) Non-operating: -30 to 60 °C (-22 to 140 °F) Humidity: <ul style="list-style-type: none"> Operating: 10% to 90% RH (non-condensing) Nonoperating: 5% to 95% RH (non-condensing) Altitude: <ul style="list-style-type: none"> Operating: 3,050 m (10,000 ft) Nonoperating: 4572 m (15,000 ft)

1. Electrical input specifications apply at 23 °C (73.4 °F).

2. Levels are A-weighted sound pressures measured in a 23 °C (73.4 °F) ambient environment. Measurements were made per ISO 7779 (ECMA 74; ANSI S12.10) methods and are declared per ISO 9296 (ECMA 109).

3. All temperature ratings shown are for sea level to 1,000 meters (3,281 ft) with de-rating of maximum temperature for increase in altitude. If operating location is above 1,000 meters (3,281 feet), deduct 3 °C (5.4 °F) from the maximum operating temperature for each additional 1,000 meters (3,281 ft).

Interface Module Specifications

Table A-2 describes the Interface Module technical and general specifications.

Table A-2 *Inline Network Adapter Specifications*

Specification	Description
Copper Gigabit Ethernet Bypass (4-port and 8-port)	
IEEE standard	Gigabit Ethernet, 1000BASE-T, IEEE 802.3-2000 Fast Ethernet, 100BASE-T, IEEE 802.3-2000 Ethernet, 10BASE-T, IEEE 802.3-2000
Duplex	Supports both half-duplex and full-duplex operation in all operating speeds
Autonegotiation	Autonegotiates between full-duplex and half-duplex operations and between 1000 Mbps, 100 Mbps, and 10 Mbps speeds
Data transfer rate	1000 Mbps, 100 Mbps, and 10 Mbps speeds per port in half-duplex mode 2000 Mbps, 200 Mbps, and 20 Mbps speeds per port in full-duplex mode
Ports	4-Port Interface Module: 4 × RJ-45 socket connectors 8-Port Interface Module: 8 × RJ-45 socket connectors
Fiber Optic Gigabit Ethernet Bypass (4-port)	
IEEE standard	Gigabit Ethernet, 1000BASE-SX, IEEE 802.3-2000
Duplex	Supports full-duplex only
Optical reach	137 m (449 ft) to any individual port to account for 274 m (899 ft) total when operating in bypass mode
Data transfer rate	2000 Mbps
Ports	4 Fixed LC Duplex Connectors
SFP+ 10 Gigabit Ethernet (2-port)	
IEEE standard	The Cisco 10 Gigabit Ethernet Interface Module for WAAS only supports Cisco pluggable optical transceiver modules. Consult the following data sheet URL for supported modules: Cisco 10GBASE SFP+ Modules
Duplex	Supports full-duplex only
Autonegotiation	Autonegotiates pluggable transceiver type 1 Gbps or 10 Gbps
Data transfer rate	2000 Mbps and 20,000 Mbps
Ports	2-Port Interface Module: 2 Pluggable SFP/SFP+ sockets
Optical reach	Varies per module type. Consult the following data sheet URL for supported modules: Cisco 10GBASE SFP+ Modules
General Technical Specifications	
Dimensions	38 mm (1.5 in) H x 121 mm (4.75 in) W x 264 mm (10.38 in) D
Weight	0.73 kg to 0.91 kg (1.61 lb to 2.01 lb)

Table A-2 Inline Network Adapter Specifications (continued)

Specification	Description
Operating humidity	10 to 90% RH (non-condensing)
Operating temperature	0 to 40 °C (32 to 104 °F)
Operating altitude	3,050 m (10,000 ft)
Non-operating temperature	-30 to 60 °C (-22 to 140 °C)
Non-operating humidity	5 to 95% RH (non-condensing)
Non-operating altitude	4,572 m (15,000 ft)