



APPENDIX **A**

Wide Area Virtualization Engine Hardware Specifications

This appendix provides hardware specifications for the Wide Area Virtualization Engine (WAVE) 274 and 474 appliances. It contains the following sections:

- [Appliance Specifications, page A-1](#)
- [Inline Adapter Specifications, page A-4](#)

Appliance Specifications

[Table A-1](#) provides a summary of the features and specifications of the WAVE-274 and WAVE-474.

Table A-1 **WAVE-274 and WAVE-474 Features and Specifications**

Specification	Description
Microprocessor	<ul style="list-style-type: none">• Intel Core2 Duo E6400 Processor, 2.13-GHz• 2 MB Level 2 cache• 1066-MHz front-side bus (FSB)
Memory	<ul style="list-style-type: none">• 3 GB DDR2 Synch DRAM
Drives standard	<ul style="list-style-type: none">• DVD-ROM/CD-RW combination drive• 250 GB SATA 3.0 Gb/s, 7200 rpm

Table A-1 WAVE-274 and WAVE-474 Features and Specifications (continued)

Specification	Description
Size	<ul style="list-style-type: none"> • Height: 3.94 in. (10.0 cm) • Depth: 15.0 in. (38.0 cm) • Width: 13.4 in. (34.0 mm)
Weight	18.6 lb (8.4 kg) typical
Ports	<ul style="list-style-type: none"> • USB: 6 USB 2.0 (2 front, 4 rear) • Console: 2 RS232 serial ports individually configurable to power 5 V and 12 V. COM1 can be configured for 5 V, 9 V, and 12 V • Parallel: 1 • PS/2: 2 • Video: 1 • Audio: 2, line in and line out • NIC: RJ-45 • Inline Network Adapter: 2 (see Inline Adapter Specifications, page A-4)
Power	<ul style="list-style-type: none"> • Operating Voltage Range: 90 to 264 VAC • Rated Voltage Range: 100 to 240 VAC • Rated Line Frequency: 50/60 Hz • Operating Line Frequency Range: 47 – 63 Hz • Rated Input Current: 5 A @ 90 VAC (3.5 A at 90 VAC with 80% efficient power supply) • Heat Dissipation: typical 273 btu/hr (69 kg-cal/hr), maximum 1024 btu/hr (258 kg-cal/hr) • Power Supply Fan: 80 mm variable speed fan

Table A-1 WAVE-274 and WAVE-474 Features and Specifications (continued)

Specification	Description
Environment	<ul style="list-style-type: none"> • Air temperature: <ul style="list-style-type: none"> – Device on: 50 to 104° F (10 to 40° C); altitude: 0 to 2000 m (6500 ft) – Device off: –22 to 140° F (–30 to 60° C); maximum altitude: 9144 m (30000 ft) • Humidity <ul style="list-style-type: none"> – Device on: 20 to 80% (noncondensing at ambient) – Device off: 5 to 90% (noncondensing at ambient)
¹ Acoustical noise emissions	<ul style="list-style-type: none"> • Declared sound power, idle: 3.8 bel² • Declared sound power, operating: 4.9 bel
³ Heat Output	<ul style="list-style-type: none"> • Minimum configuration: 1230 Btu⁴ (360 watts) • Maximum configuration: 3390 Btu (835 watts)

1. These levels were measured in controlled acoustical environments according to the procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 7779 and are reported in accordance with ISO 9296. Actual sound-pressure levels in a given location might exceed the average values stated because of room reflections and other nearby noise sources. The declared sound-power levels indicate an upper limit, below which a large number of computers will operate.
2. In acoustics, the logarithm of the ratio of a quantity to a reference quantity of the same kind is called a level. The base of the logarithm (always ten, unless otherwise specified), the reference quantity, and the kind of level shall be specified. bel is a unit of level when the base of the logarithm is ten, and the quantities concerned are proportional to power.
3. Power consumption and heat output vary depending on the number and type of optional features installed and the power-management optional features in use.
4. BTU = British Thermal Unit.

Inline Adapter Specifications

Table A-2 describes the inline network adapter technical and general specifications.

Table A-2 *Inline Network Adapter Specifications*

Specification	Description
Copper Gigabit Ethernet Specifications	
IEEE standard	Gigabit Ethernet, 1000BASE-T Fast Ethernet, 100BASE-T Ethernet, 10BASE-T
Full duplex and half 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	2 × RJ-45 socket connectors
General Technical Specifications	
Interface standard	PCI-Express Base Specification Revision 1.0
Size	PCI Short add in card: 6.6 × 4.4 in. (167.6 × 111.2 mm)
PCI Express card type	×4
PCI Express connector	Gold Finger: ×4
PCI voltage	+3.3 V ±9% +12 V ±8%
Weight	6.4 oz (180.0 g)
Operating humidity	0 to 90%, noncondensing
Operating temperature	32 to 122 °F (0 to 50 °C)
Storage temperature	-4 to 149 °F (-20 to 65 °C)