FWA-6520

Intel® Xeon® E5-2600 v3 Processor-based 2U Network Application Platform

NEW

Features

- 2 x Intel® Xeon® E5-2600 v3 processors up to 145W TDP
- DDR4 1866/2133 ECC registered memory up to 512GB
- PCIe gen. 3 support
- Up to 8 x NMC (Network Mezzanine Card) slots for a wide range of GbE, 10GbE and 40GbE NMCs with or without advanced LAN bypass
- 2 x PCIe x16 slots support FH/HL add-on cards
- 2 x 2.5" removable external SATA HDDs/SSDs
- IPMI 2.0 compliant Remote Management
- Advanced Platform Reliability and Serviceability

RoHS COMPLIANT 2002/95/EC   CCC   c UL us   C E FCC

Introduction

Based on the latest Intel® Xeon® processor platform, the FWA-6520 system is a straight upgrade from Advantech's leading FWA-6510 dual socket platform. The FWA-6520 has been designed for maximum performance, scalability and functionality in a 2U rack mount footprint. This multi-core processor-based, high-end network communications appliance is optimized for computing power and high speed, high density I/O with best-in-class energy efficiency.

Two Intel® Xeon E5-2600 v3 processors (Socket R3) provide the latest architectural enhancements, larger on chip cache memories as well as two Intel® QuickPath Interconnects running at up to 9.6GT/s for reduced cross-socket memory I/O latencies and increased throughput. Each socket supports 4 DDR4 channels with speed up to 2133 MHz for up to 512 GB of ECC memory when using the latest RDIMM technology. Advanced RAS modes such as mirroring and sparing increase platform reliability. Advanced thermal system design enables support for processors with 135W TDP on standard SKUs and up to 145W on special SKUs available via Advantech's Customized COTS framework. This allows the appliance to scale from mainstream 12 and 14 core CPUs to the highest performance 18 core processors available today.

With 80 PCIe Express lanes, the FWA-6520 can support up to 8 Network Mezzanine Cards (NMCs) for modular, configurable networking I/O and acceleration. PCIe gen3 technology on all NMC slots provides sufficient bandwidth to support multiple 40GbE and quad 10GbE modules. The platform is ready to support double sized NMCs for future upgrades with 100GbE connectivity.

Advanced Lights Out Management based on Aspeed's latest iBMC AST2400 and AMI's MegaRAC IPMI suite improves system manageability and reliability, providing platform thermal management, H/W monitoring and supervision. Remote firmware upgrade capability and hardware-based BIOS redundancy make the FWA-6520 an ideal platform for mission-critical and highly available networks. Front and rear hot swappable FRUs such as power and fan modules along with service friendly design features such as fan failure LEDs further help to reduce system down time and enhance serviceability.
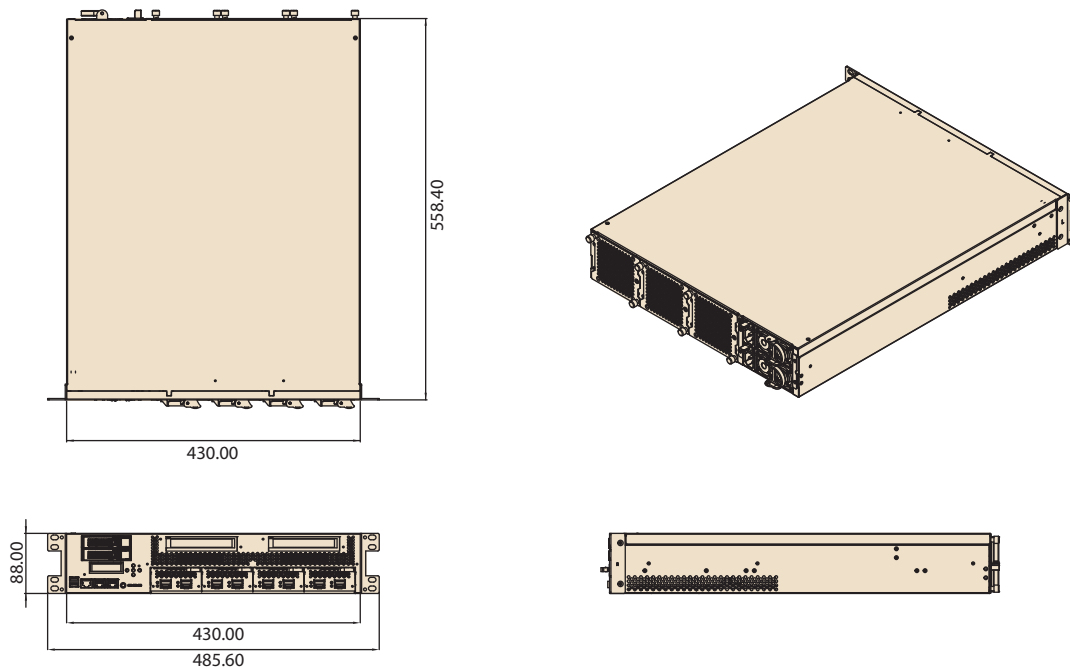
Support for standard two PCI Express expansion slots and a TPM (Trusted Platform Module) for enhanced platform security round off the feature set of this platform. Management and IO elements include two management Ethernet ports, a console port, two USB ports, a LCD module, LEDs for power/locate/alert indication and two front-loadable 2.5" SATA HDDs/SSDs. The system is FCC, UL, CB, CCC and RoHS compliant.

Specifications

Processor System	CPU	2 x Intel® Xeon E5-2600 v3 processor up to 145W TDP	
	LLC	Up to 45MB per socket	
Memory	Technology	16 x DDR4 DIMMs (ECC RDIMM) Memory speed up to 2133 MHz (1 DIMM per Channel)	
	Capacity	Up to 512GB (16x 32GB RDIMMs)	
Ethernet	Network expansion slots	Up to 8 x NMC expansion slots (SKU dependent) Double-wide form factor NMC support (optional, SKU dependent)	
	Management port	2 x RJ45 management ports with Lights Out Management Support	
PCIe	PCH	Intel® C612	
	Expansion slots	Up to 2 x PCIe gen3 x16 expansion slots for FH/HL cards (SKU dependent) Up to 8 NMC slots (SKU dependent)	
Storage	External	2 x 2.5" hot-swappable SATA SSDs/HDDs on the front	
	Internal	2 x mSATA slots / 1 x USB DOM SSDs	
Peripherals	USB	2 x USB 3.0 ports on the front	
	Serial	1 x console port by RJ-45 connector on the front	
Power	Wattage	820W (1+1 redundant)	
	Input	(AC) 100 ~ 240 V @ 50 ~ 60 Hz, full range (DC) -36 ~ - 72V, 30 ~ 16A	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40° C (32 ~ 104° F)	-20 ~ 80° C (-4 ~ 167° F)
	Humidity	5 ~ 85 % @ 40° C (104° F)	5 ~ 95 %
Physical Characteristics	Dimensions (W x L x H)	430 x 550 x 88 mm (W x L x H), 17" x 21.5" x 3.5"	
	Weight (N.W)	20 kg	

Dimensions

Unit: mm

558.40

430.00

88.00

430.00

485.60

Ordering Information

Model number	Configuration
FWA-6520-01E	FWA-6520 2U barebone system 2 Intel® Xeon® E5-2600 v3 sockets up to 145W 16 x DDR4 RDIMM slots 4 x NMCs slots 2 x PCIe x 16 gen.3 slots AC PSU
FWA-6520-11E	FWA-6520 2U barebone system 2 Intel® Xeon® E5-2600 v3 sockets up to 145W 16 x DDR4 RDIMM slots 4 x NMCs slots 2 x PCIe x 16 gen.3 slots DC PSU

Packing List

Part Number	Description
1700018950	Cable RJ-45 to Console 9P 220 cm

Accessories

Part Number	Description
1702002600	Power cord 3P 180cm, USA
1702002605	Power cord 3P 180cm, Europe
1702031801	Power cord 3P 180cm, UK
1700000237	Power cord 3P 180cm, JP
1700009652	Power cord 3P 180cm, China

Recommended NMC Module List

Part Number	Description
NMC-0806-000110E	8 port Copper GbE NMC with 2x i350 and advanced LAN bypass
NMC-0121-000110E	4 port Copper GbE NMC with i350 and advanced LAN bypass
NMC-0120-000110E	4 port SX/LX GbE NMC with i350 and advanced LAN bypass
NMC-1008-000110E	2 port SR/LR 10GE NMC with i82599 and advanced LAN bypass
NMC-4005-000010E	4 port SFP+ 10GE NMC with XL710
NMC-4006-000010E	2 port QSFP+ 40GE NMC with XL710