

AMC751 – Processor AMC, Intel Xeon E5-2648L v4, 40 GbE, with PinoutPlus™

PrAMC Xeon E5, 40 GbE



KEY FEATURES

- Processor AMC Intel® Xeon E5-2648L v4
- x16 PCIe Gen 3 via Tongue 2, optional PCIe to ports 12-15, 17-20
- 40GbE (or 10GbE) on ports 4-7 and 8-11 (AMC.2)
- Video output via DVI-I connector
- GbE to port 0 and 1, SATA to port 2 and 3 (AMC.3)
- Dual GbE to the front panel
- Four banks of DDR4 memory with ECC
- Double module, full-size per AMC.0
- Optional TPM (Trusted Platform Module)
- Serial over LAN
- IPMI 2.0 compliant

AdvancedMC™

Benefits of Choosing VadaTech

- PinoutPlus™ makes use of the tongue 2 connector per AMC.0 spec for up to 110 W of power and expanded PCIe connectivity
- Graphics output via DVI-I
- Four banks of on-board DDR4 memory
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company

The AMC751 is a Processor AMC (PrAMC) in a double module, full-size AdvancedMC (AMC) form factor based on the Intel® Xeon E5-2648L v4 which has 14 Cores @ 1.8 GHz. The module follows the AMC.2 and AMC.3 specifications.

The module provides PCIe Gen3 x16 PinoutPlus™ on tongue 2, providing high-bandwidth connectivity to co-processors such as GPU, Cavium, Tiler, FPGA, etc (where supported by appropriate chassis such as VadaTech VT815). The use of the tongue 2 connector complies with the AMC.0 specification. Additional expansion is supported on the AMC751 with optional PCIe on ports 12-15 and 17-20.

GbE is provided on ports 0 and 1 per AMC.2, and SATA on ports 2 and 3 per AMC.3. It also provides dual GbE to the front panel.

The AMC751 provides 32 GB of DDR4 memory with ECC and 32 GB of Flash for the OS. The module has Serial over LAN (SoL) with hardware Random Number Generator (RNG) as seed generator for authentication. The BIOS allows booting from on-board Flash, off-board SATA, PXE boot and USB. There are dual USB for extended storage or peripherals.

Linux OS is standard on the AMC751, consult VadaTech for other options.

BLOCK DIAGRAM

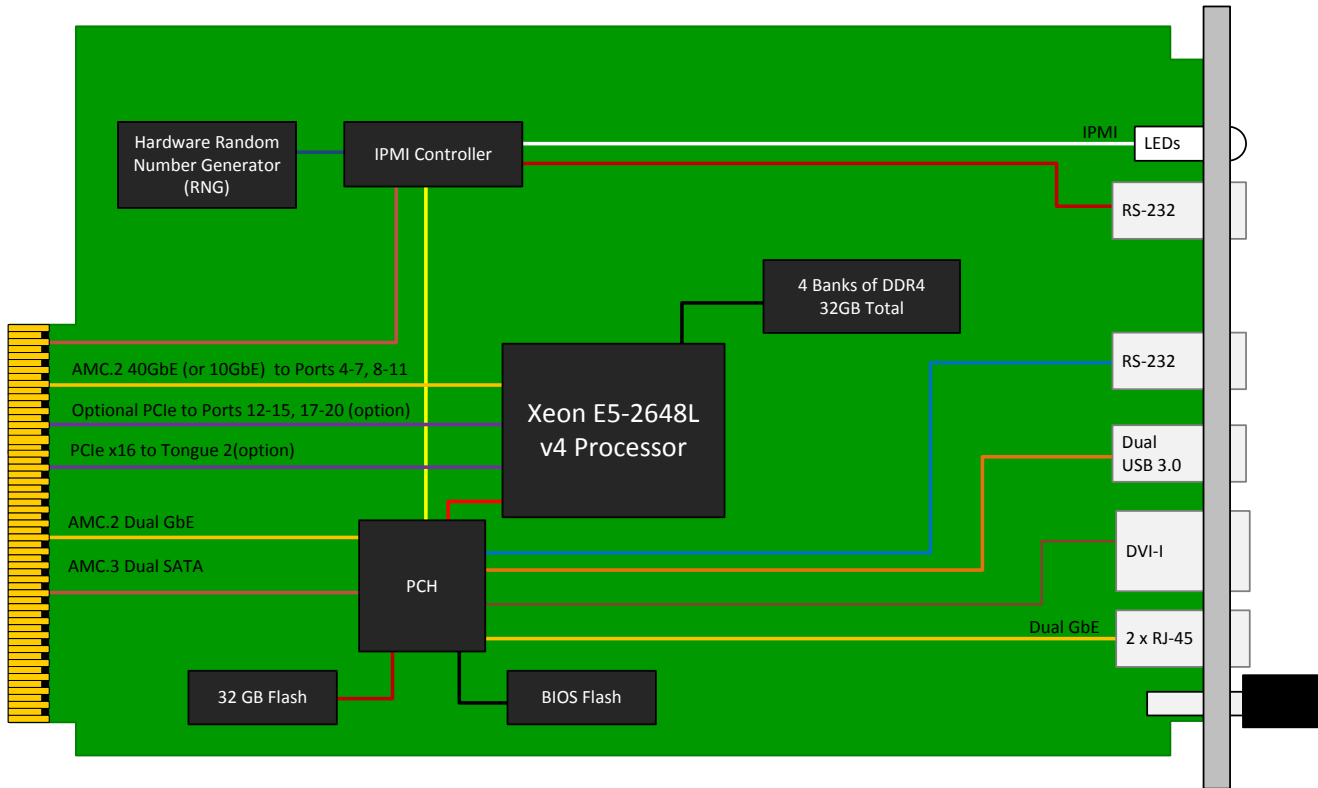


Figure 1: AMC751 Functional Block Diagram

SPECIFICATIONS

| Architecture | | |
|-------------------|---|--|
| Physical | Dimensions | Double-module, full-size |
| | | Width: 5.85 in. (148.5 mm) |
| | | Depth: 7.11 in. (180.6 mm) |
| Type | AMC Processor | Intel® v4 Generation Xeon E5 with fourteen cores up to 1.8 GHz |
| Standards | | |
| AMC | Type | AMC.2 and AMC.3 |
| Module Management | IPMI | IPMI Version 2.0 |
| XAUI / PCIe | Lanes | 40 GbE on ports 4-7 and 8-11, PCIe Gen3 x16 on tongue 2, optional PCIe Gen3 on ports 12-15 and 17-20 |
| Configuration | | |
| Power | AMC751 | ~110 Watts |
| Environmental | Temperature | Operating Temperature: -5° to 55°C (air flow > 400LFM) industrial and military versions also available (See environmental spec sheet) |
| | | Storage Temperature: -40° to +85°C |
| | | Vibration |
| | Shock | Operating 325G/2ms, 160G/1ms |
| | Relative Humidity | 5 to 95 percent, non-condensing |
| Front Panel | LEDs | IPMI Management Control |
| | | Activity |
| | I/O | Dual GbE via RJ-45 |
| | | Dual USB 3.0 via standard type A |
| | | Graphics output via DVI-I |
| | | Dual RS-232 via micro USB |
| | Mechanical | Hot Swap Ejector Handle |
| Software Support | Operating Systems | Linux and Windows (consult VadaTech for other options) |
| Other | | |
| MTBF | Per MIL-217F Handbook > TBD MTBF Hrs. | |
| Certifications | Designed to meet FCC, CE and UL certifications where applicable | |
| Standards | VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards | |
| Compliance | RoHS and NEBS | |
| Warranty | Two (2) years | |

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and μ TCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

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ORDERING OPTIONS

AMC751 – ABC – D00 – 00J

A = Ports 12-15 and 17-20

- 0 = Not routed
- 1 = Routed as PCIe

B = Tongue 2

- 0 = Not installed
- 1 = Installed

C = Front Panel Size

- 1 = Reserved
- 2 = Reserved
- 3 = Full-size
- 4 = Reserved
- 5 = Reserved
- 6 = Full-size, MTCA.1 (captive screw)

D = Trusted Platform Module

- 0 = None
- 1 = TPM provided

J = Temperature Range & Coating

- 0 = Commercial (–5° to +55° C), no coating
- 1 = Commercial (–5° to +55° C), Humiseal 1A33 Polyurethane
- 2 = Commercial (–5° to +55° C), Humiseal 1B31 Acrylic
- 3 = Industrial (–20° to +70° C), no coating
- 4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane
- 5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic
- 6 = Military (–40° to +85° C), Humiseal 1A33 Polyurethane*
- 7 = Military (–40° to +85° C), Humiseal 1B31 Acrylic*

*Edge of module for conduction-cooled boards

RELATED PRODUCTS



AMC740 Tiler
PrAMC



UTC004 MCH for μTCA
Chassis (3rd generation)



UTC020 Power Module
for μTCA Chassis

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