XPedite7040

Intel® Core™ Duo or Intel® Core™2 Duo Processor-Based AMC Module

Intel Core Duo or Intel Core 2 Duo processor at up to 1.5 GHz
Intel 3100 chipset
Front panel Gigabit Ethernet port
Front panel RS-232 serial port
Front panel USB 2.0 port
Complies with AMC.0 and MicroTCA.0 (μTCA)
AMC.1 x4 PCI Express interface
AMC.2 dual Gigabit Ethernet 1000BASE-BX interfaces
AMC.3 dual SATA interfaces
Two PC3200 SO-RDIMMs, up to 8 GB
4 GB of NAND flash
Up to 4 MB of Firmware Hub (FWH) storage
AMI BIOS
Linux BSP
Wind River VxWorks BSP
QNX Neutrino BSP
Green Hills INTEGRITY BSP
Microsoft Windows drivers

XPedite7040

The XPedite7040 is a single-width, mid-size or full-size Advanced Mezzanine Card (AMC) single board computer designed to provide maximum performance and I/O options while minimizing power consumption. The Ultra Low Voltage (ULV) Intel Core Duo processor or Low Voltage (LV) Intel Core 2 Duo processor provides the XPedite7040 with a significant performance-per-watt processing advantage. Additionally, the Intel 3100 chipset combines the functionality of an integrated server-class memory controller (Northbridge) and an I/O controller (Southbridge) into a single device that is specifically intended for power- and board-space-sensitive embedded applications.

The XPedite7040 can be installed in an AdvancedTCA (ATCA) AMC.0-compliant carrier or a MicroTCA.0 (μTCA)-compliant backplane. The XPedite7040 supports an AMC.1 x4 PCI Express interface, dual AMC.2 Gigabit Ethernet 1000BASE-BX interfaces, and dual AMC.3 SATA interfaces. Additional serial and GPIO is provided through the backplane connector.

The XPedite7040 supports two PC3200 SO-RDIMM modules and 4 GB of NAND flash for ample on-card memory capacity. 4 MB of Firmware Hub (FWH) space is also supported for redundant BIOS or OS kernel storage.

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Processor
• Intel Core Duo or Intel Core 2 Duo processor
• Up to 1.5 GHz
• Up to 4 MB L2 cache
• Up to 166 MHz (667 MT/s) FSB

Memory and I/O Controller Hub
• Intel 3100
• DDR2-400 ECC SDRAM
• 4 GB of NAND flash
• 4 MB of Firmware Hub (FWH) storage

AMC Backplane Interconnect
• Complies with AMC.0 and MicroTCA.0 (µTCA)
• AMC.1 x4 PCI Express interface
• AMC.2 dual Gigabit Ethernet 1000BASE-BX interfaces
• AMC.3 dual SATA interfaces
• Dual USB 2.0 interfaces
• RS-232/RS-422 serial interface

Front Panel I/O
• Micro DB-9, RS-232 serial port
• USB 2.0 port
• 10/100/1000BASE-T Gigabit Ethernet port

Software
• AMI BIOS
• Linux BSP
• Wind River VxWorks BSP
• QNX Neutrino BSP
• Green Hills INTEGRITY BSP
• Microsoft Windows drivers

Environmental Requirements
Contact factory for appropriate board configuration based on environmental requirements.
• Supported ruggedization levels (see chart below): 1
• Conformal coating available as an ordering option

Power Requirements
Tested at 25°C ambient with 2 GB DDR2 and 1.2-GHz CPU
• Less than 30 Watts

Supported Ruggedization Level

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Standard Air-Cooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling Method</td>
<td>0 to +55 °C ambient (300 LFM)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to +85 °C ambient</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>0.002 g²/Hz, 5 to 2000 Hz</td>
</tr>
<tr>
<td>Vibration</td>
<td>20 g, 11 ms sawtooth</td>
</tr>
<tr>
<td>Humidity</td>
<td>0% to 95% non-condensing</td>
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