ATCA Node Blade — Two Feature-Rich Processor Options:

— Single Intel® Xeon® **Six-Core** 5600 Series
— Single Intel® Xeon® **Quad-Core** 5500 Series

» Optimized for Virtualization
» 8 threads (5500) to 12 threads (5600)
» Support for up to 48 GB on 3-channels, DDR3 1066 MHz, ECC, registered SDRAM on 6 DIMM sockets total
» 1 X Mid-size AdvancedMC bay
» Dual 10 Gigabit on Fabric (PICMG 3.1, Option 9)
» Hot Swap SAS/SATA HDD available via RTM8050
The Kontron AT8050 AdvancedTCA processor board redefines the design possibilities with a new Intel® microarchitecture processor, which offers greater efficiency and performance.

The AT8050 is a single-socket design with two feature-rich processor options: an Intel Xeon Quad-Core 5500 (45nm) processor; or an Intel Xeon Six-Core 5600 (32nm) processor. Both feature an Integrated Memory Controller, Turbo Boost Technology, Intel® QuickPath interconnect, and Intel® Hyper-Threading Technology (SMT).

The overall performance of the Kontron AT8050 will handle even the most demanding storage, medical imaging, security, and communications infrastructure applications.

With the available AdvancedMC bay, wireless/telecom equipment manufacturers can add multiple functionality with an assortment of Kontron AMC modules such as the Kontron AM42xx series of Intelligent packet processor AMC modules, designed with the OCTEON Plus 5650 Network Service MIPS Processor from Cavium Networks.
## Technical Information

### BIOS

- **AMI BIOS**
  - Warm reset support with memory protection for post-mortem analysis
  - Save CMOS in non-volatile memory option
  - Boot from Ethernet PXE (Base and Fabric interfaces and management Lan)
  - Boot from Ethernet iSCSI (Base and Fabric interfaces)
  - Boot from SAS; and boot from USB 2.0 (Floppy, CD-ROM, Hard Disk)
  - Diskless, Keyboard less, and battery less operation extensions
  - System and LAN BIOS shadowing
  - Robust BIOS flash Update with rollover capability (HPM.1); Fail safe field updateable BIOS
  - Advanced Configuration and Power Interface (ACPI 1.0, 2.0 & 3.0)
  - Console redirection to serial port (VT100) with CMOS setup access, and SOL (Serial over LAN)
  - Event (correctable/uncorrectable ECC, POST errors); log support to IPMI

### OS Compatibility

| OS Compatibility | Red Hat Enterprise Linux V.5.4, Wind River PNE Linux 2.0 |

### IPMI Features

- Management Controller compliant IPMI v2.0 and design to meet CP-TA TPM v1.1.
- Remote control capability (power on/off, clean shutdown/warm reset/cold reset) via any IPMI channels including LAN when the payload power is off.
- Full speed 115200 bps Serial Over LAN (+LAN access to BIOS menu setup) and IPMI Over LAN (IPMI v2.0) always available.
- Serial data caching and replay to ease software application troubleshooting and post mortem analysis.
- BIOS Post Code error sent to shelf manager System Event Logging.
- Configurable automatic “clean ACPI shutdown” policy on disk storage deactivation (AMC or RTM).
- Full standard PCIe Hot Plug operation embedded with FICOM AMC/RTM activation.
- Robust BIOS Firmware Update with rollover capability, without any payload impact (HPM.1).
- Override configuration for activation of the board/AMC/RTM without Shelf Manager Intervention.

### Supervisory

- Supports a system management interface (KCS interrupt driven) via an IPMI V2.0 compliant controller.
- Standard IPMI Watchdog for all CPU running phase (BIOS execution / OS loading and running).
- IPMI Hardware system monitor (power/voltages), memory and all critical components temperature is monitored.
- Extensive sensors monitoring (around 100 IPMI sensors) and event generation base on thresholds and discrete reading.

### Warranty

- Two years limited warranty

### Power Requirements

| Power Requirements | Intel Xeon 5500: 120 W * -38V @ -72V with 12GB of memory, no RTM & no AMC. Max of 225W |

### Environmental

<table>
<thead>
<tr>
<th>Environmental</th>
<th>Operating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature*</td>
<td>0 to 55 °C / 32 to 131°F</td>
</tr>
<tr>
<td>Humidity*</td>
<td>5% to 93% @40°C / 104°F non-condensing</td>
</tr>
<tr>
<td>Altitude*</td>
<td>4 000m / 13,123 ft</td>
</tr>
<tr>
<td>Shock*</td>
<td>3G each axis</td>
</tr>
<tr>
<td>Vibration*</td>
<td>5-200Hz. 0.2G, each axis</td>
</tr>
<tr>
<td>Airflow</td>
<td>Chassis CP-TA Class B.4</td>
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</tbody>
</table>

* Designed to meet or exceed.