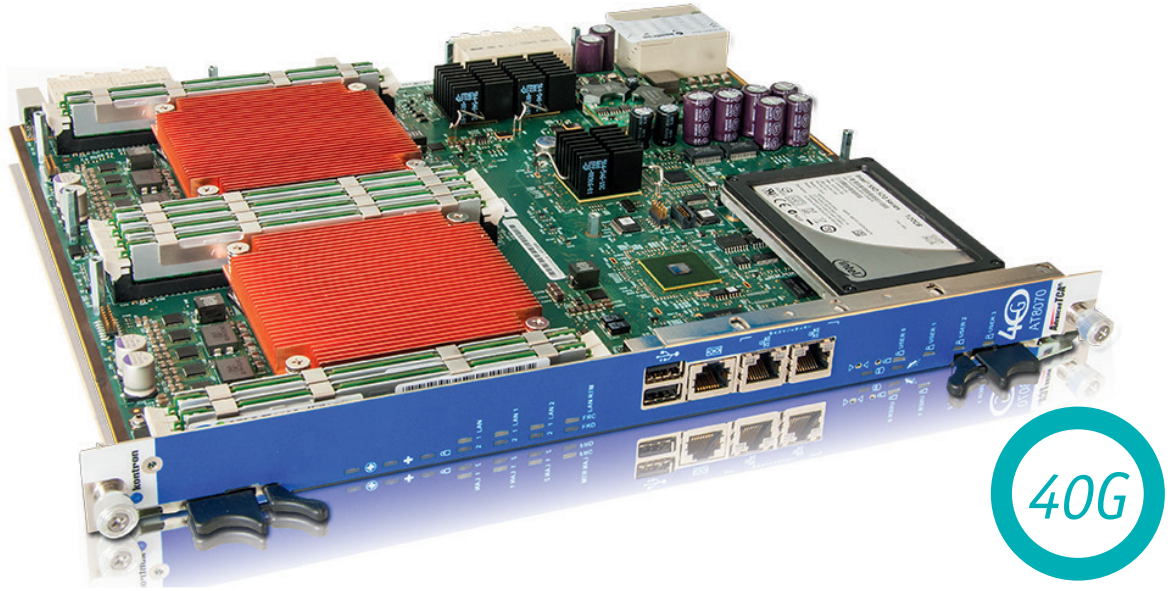
» AT8070 «



AT8070 40G ATCA Dual Xeon Processor Blade

» Dual Intel® Xeon® E5-2600 v2 10-Core Series
» Total of 128GB Memory (Up to 64GB via 4 DDR3 channels per CPU)
» High speed dual 40GBase-KR4 to fabric interface
» Lowest PCIe/memory latency with Dual 8GT/s QPI interfaces between CPUs
» Onboard drive 2.5" SAS/SATA HDD/SSD
» Kontron Active Power Management via Power Node manager
» Two User-defined power level modes:
NEBS mode up to 225W; High power mode up to 350W
» Compatible with Rear Transition Module RTM8063-CC with
2 hot swap 2.5" SAS/SATA hard drives
» Support for IPMI v2.0

40G Bandwidth for Core Networks

Kontron AT8070 complements 40G ATCA platform solutions

Kontron has a full range of ATCA board and application-ready platforms for Telecom Equipment Manufacturers (TEMs) to help accelerate their network system development for LTE Evolved Packet Core, carrier cloud and content delivery applications.

TEMs designing for 40G based platforms can begin development immediately with the OM9141-40G ATCA platform which consists of a 40G chassis with advanced cooling, 40G switching, 40G packet processing, and now, 40G general purpose multicore processing capabilities.

Introducing the Kontron AT8070, a 40G ATCA Dual Xeon processor blade with the highest performance and flexibility for addressing the high traffic and increasing delivery costs of fixed broadband and wireless network applications managed by budget-constrained service providers.

Technical Information

Processor	Dual (up to) 10-Core Intel® Xeon® Processor E5-2600 v2 Family; Passive heatsink
	AVX: Float 16 accelerates data conversion between 16-bit floating point format to 32-bit and vice-versa; useful for image processing and graphical applications allowing for compression of data so less memory and less bandwidth is required
	VT: APIC virtualization (APICv) to decrease overhead in the handling of instruction interrupts in the core
	Data Direct I/O Technology (Intel® DDIO) to reduce memory accesses from I/O on local socket and speed up processor data transfers. Security features include Execute Disable (XD) and Intel® Trusted Execution Technology (Intel® TXT) for malware resistance.
Cache Memory	High bandwidth, low latency, bi-directional ring interconnect allows faster access to 20MB multi-banked last level cache
Chipset	Intel® C600 Chipset
Bus interface	Dual up to 8.0GT/s QPI interfaces between both processors for lowest PCIe and memory latency
System Memory	Up to 128 GB Memory, 4DIMMS per processor (Up to 64 GB across 4 independent DDR3 channels per processor)
Flash Memory	Single eUSB flash drive supported are 16GB or more capacity
	Automatic BIOS settings content backup in flash memory
Storage	Onboard drive 2.5" SAS/SATA HDD/SSD
	Dual Hot-Swap SAS HDD via Rear Transition Module, RTM8063
I/O	Front Panel: Two RJ45 Gigabit Ethernet; One RS-232 serial interface, two USB
	Base Interface: Two 10/100/1000Base-T interfaces are provided by the 82576 controller
	Fabric Interface: each channel supports 40GbE - 40GBASE-KR4; 10GbE - 10GBASE-KX4 (XAUI); 1GbE - 1000BASE-KX
Reliability	Targeted MTBF is 250000 @ 30°C, calculations based on Telcordia SR-332
Safety / EMC	Safety: meets all requirements of UL/CSA/EN/IEC 60950-1
	EMC: compliant with the Electromagnetic Compatibility Directive, EC Council Directive 2004/108/EC
Board Specifications	PICMG3.0 R3.0; PICMG 3.1 R1.0 specification options 1 and 9
Target Certifications	Designed for NEBS Level 3
RTM (RTM8063)	Regular PICMG3.0 Managed FRU/Hot Swap Dual SAS/SATA Hard Disk; 2x USB, 2x SFP, Serial RJ-45; and external SAS connector

Technical Information

BIOS	UEFI BIOS from AMI (UEFI Aptio4) with Compatibility Support Module (CSM), providing legacy BIOS compatibility	
	Save AMI Setup configuration in non-volatile memory option	
	Boot from Ethernet PXE (Base and Fabric interfaces and management Lan)	
	Boot from Ethernet iSCSI (Fabric interfaces)	
	Boot from SAS; and boot from USB 2.0 (Floppy, CD-ROM, Hard Disk)	
	Diskless, Keyboard less, and battery less operation extensions	
	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, 4.0)	
	Console redirection to serial port (VT100) with CMOS setup access, and SOL (Serial over LAN)	
	Event (correctable/uncorrectable ECC, POST errors, PCI Express Error to IPMC); log support to IPMC	
OS Compatibility	Red Hat Enterprise Linux Server version 5.8 64-bit; Red Hat Enterprise Linux Server 6.1 64-bit	
	Support for Intel® Data Plane Development Kit (Intel® DPDK)	
IPMI Features	Management Controller compliant IPMI v2.0	
	Remote control capability (power on-off /graceful shutdown/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 “graceful ACPI shutdown” policy on disk storage deactivation (RTM)	
	Full standard PCIe Hot Plug operation embedded with PICMG RTM activation	
	Robust HPM.1 for IPMC/BIOS/FPGA update with rollover capability; IPMC is without any payload impact (HPM.1)	
	Override configuration for activation of the board/RTM without Shelf Manager Intervention	
	Manageability features via Embedded Web Server (such as remote control, System Event Log viewer, firmware upgrade)	
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 are monitored	
	Extensive sensors monitoring (around 100 IPMI sensors) and event generation base on thresholds and discrete reading	
Warranty	Two years limited warranty	
Power Requirements	Board power consumption is less than 315W; no RTM. Power Policies can be used to control power requirements. * The power consumption will vary depending on your product configuration (RTM & extra memory)	
Environmental	Operating	Storage and Transit
Temperature*	-5 °C to +55 °C / 23 to 131°F	-40 °C to +85 °C / -10 to 185°F
Humidity*	5% to 93% @40°C / 104°F	5% to 93% @40°C / 104°F
	non-condensing	non-condensing
Altitude*	-300 m to 4000 m / -984ft to 13,123 ft	-300 m to 14 000m / -9,84 ft to 45,931 ft
Shock*	11 ms half sine, 3 g, 3 shocks in each direction	6 ms half sine, 18 g, 100 shocks in each direction
Vibration*	5 Hz to 10 Hz @ +12 dB/oct (slope up) 10 Hz to 50 Hz @ 0.02 m2/s3 (0.0002 g2/ Hz) (flat) 50 Hz to 100 Hz @ -12 dB/oct (slope down)	5 to 200 Hz 0.2 g

* Designed to meet or exceed.

Ordering Information (continued)

Article	Part No.	Description
AT8070		**For additional details contact us at:** gss@ca.kontron.com

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