aTCA-N700

Dual Cavium CN6880 40 Gigabit Ethernet AdvancedTCA® Packet Processing Blade

Features

- Two Cavium OCTEON II CN6880 processors, each with 32 cnMIPS64 V2 cores
- Eight memory sockets support VLP DDR3-1333 REG/ECC up to 128GB
- Onboard Ethernet switch BCM 56842 provides connectivity to RTM, OCTEON II processor and backplane (Fabric) with L2 and L3 switch management software
- Dual 1000BASE-T Fabric Interface channels
- Powerful Local Management Processor - Freescale QorIQ P2041, quad-core @ 1.2GHz
- Flexible RTM support on 12 x10G SFP+ ports (RTM-RN710) or 2x 40G QSFP+ and 4x 10G SFP+ (RTM2-RN720)



AdvancedTCA®

Specifications

Network Packet Processor

NPU	Cavium OCTEON II CN6880 processor with 32 cnMIPS cores @1.2 GHz max.
Flash	Boot Image: dual redundant 8M NOR flash memory
	OS storage : dual redundant 2G NAND flash
Memory	Eight DDR3-1333 240-pin VLP RDIMM sockets, up to 128GB

Local Management Processor

LMP	QorIQ P2041 quad-core @ 1.2GHz
Flash	Boot image: dual redundant 256Kbit EEPROM
	OS storage: dual redundant 8G SSD

I/O Interfaces

Ethernet Switch	BCM56842, non-blocking L2/L3 switch fabric with QoS Support
Ethernet	Dual 10/100/1000BASE-T Base Interface channels
	Dual 40GBASE-KR4 Fabric Interface channels
	Quad SFP+ (10G/1G) egress ports
RTM	120 Gbps total available bandwidth supports: 12x 10G SFP+ ports (aTCA-RN710) or 2x 40G QSFP+ and 4x 10G SFP+ (aTCA-RN720)
Front Panel I/O	One USB 2.0 port on front panel
	3x RJ-45 serial ports: one for LMP or IPMC, two for NPs

PICMG Standards

AdvancedTCA	PICMG 3.0 R3.0 and PICMG 3.1 R2.0 Option 1, 9, 9-KR

Software support

Software development	Cavium CDK 2.3 and Broadcom SDK
Operating System	U-Boot boot loader & Open Linux environment

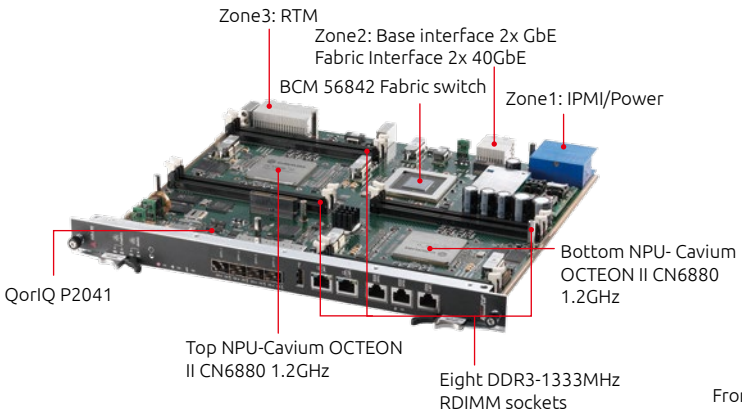
Mechanical and Environmental

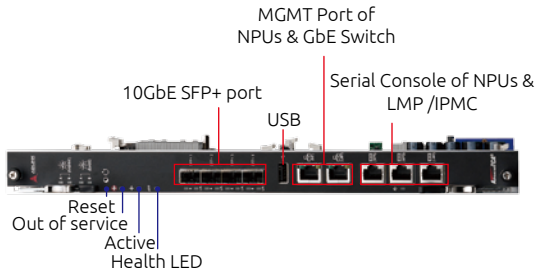
Form Factor	PICMG 3.0 R3.0 AdvancedTCA
Dimension	322.25mm x 280mm x 6HP (L x W x H)
Weight	3.29 kg.
Operating Temp.	0°C to +50°C
Storage Temp.	-40°C to +70°C
Humidity	5% to 95%, non-condensing
Shock	20G peak-to-peak, 11ms duration, non-operating
Vibration	Non-operating: 1.88Grms, 5-500Hz each axis
	Operating: 0.5Grms, 5-500Hz each axis
Power Consumption	320 W max. w/o TCAM, RTM: 25 W max.
Certification	FCC, CE, UL, NEBS Level 3 (design)

Ordering Information

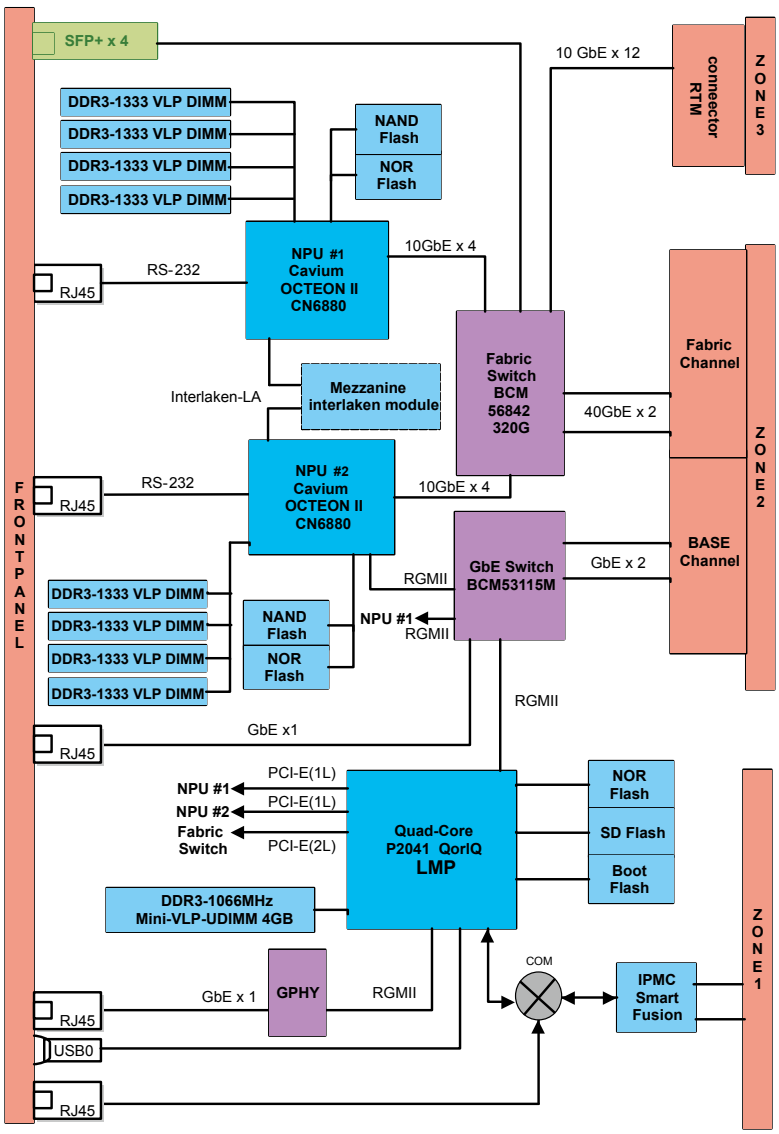
Model Number	Description/Configuration
aTCA-N700/DCN6880/M64G	Dual Cavium CN6880 1.2GHz Processor Blade, DDR3-1333 VLP RDIMM 8GB x8
aTCA-N700/SCN6880/M32G	Single Cavium CN6880 1.2GHz Processor Blade, DDR3-1600 VLP RDIMM 8GB x4
aTCA-RN710A	Rear transition module with 12x SFP+ 10GbE I/O connectivity
aTCA-RN720	Rear transition module with 4x SFP+ 10GbE, 2x 40GbE QSFP+ I/O connectivity

Mechanical Layout





Functional Diagram



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