Centellis 1000 Series

MicroTCA Communications Server

PRODUCT OVERVIEW

MOTOROLA

KEY FEATURES

11-slot MicroTCA™ shelf provides scalable, embedded communications computing system

19 in. (483 mm) wide, 7 in. (178 mm) high, 9.3 in. (237 mm) deep shelf with front-only I/O and 23 in. rackmount option

600 watt AC or -48 VDC power entry modules support full complement of AdvancedMCs

Redundant DC power entry modules, hot-swappable AdvancedMCs, and an easy-to-service design.

MicroTCA Carrier Hub (MCH) combines shelf management, clocking, and fabric switching in a single module, maximizing payload capacity

Gigabit Ethernet backplane fabric with optional PCI Express secondary fabric

MontaVista CGE or Wind River PNE Linux Edition operating system

Basic blade services software support provides blade hardware manager, firmware upgrade and SNMP agent

Configurable with broad portfolio of AdvancedMCs from Motorola and ecosystem partners

Complies with PICMG® MicroTCA R1.0 standard

Designed for embedding in rugged environments including NEBS

The Centellis™ 1000 series is designed to the MicroTCA open standard, making it physically smaller, with finer-grained scalability than Motorola's initial communications servers that are based on the AdvancedTCA® industry standard. This fine-grained scalability enables MicroTCA platforms to support a pay-as-you-grow business model that allows customers to realize solutions with less capital expenditure and expand the computing platform capabilities in small, low-cost increments as demand for the new service increases. This advantage is particularly relevant to some of the new point-of-access applications such as WiMAX and IP PBX.

Because MicroTCA builds on AdvancedTCA technology, products based on the MicroTCA standard can get to market quickly with lower development costs. A MicroTCA system uses the same Advanced Mezzanine Card (AdvancedMC™) modules that are deployed as mezzanines on AdvancedTCA blades. Reuse of existing hardware and software will improve cost efficiency through economies of scale. Architecture similarities make software migration between the two types of platforms relatively easy.

The Centellis 1000 family will be used in a wide range of applications, such as WiMAX access points, VoIP access gateways, and cellular base stations where reducing the capital cost of installing or extending next-generation network elements is very important. Small physical size, low power consumption, and enhanced serviceability also make these new communication servers ideal for a variety of applications in defense/aerospace, federal, medical, and industrial market segments.

RoHS 6/6 COMPLIANT

µTCA™

The Centellis 1000 Series MicroTCA communications server represents a quantum leap forward in platform outsourcing by providing highly integrated and verified hardware and software components, reducing development costs and accelerating time-to-market. This allows network equipment providers (NEPs), defense primes, and original equipment manufacturers (OEMs) in a broad range of market segments and applications, to focus their development efforts on critical, differentiating features that provide a competitive advantage.

SHELF SPECIFICATIONS

CHASSIS

4U, 9.3 in. (237 mm) x 19 in. (483 mm) rackmountable (optional 23 in. [584 mm] rackmount)

Two (2) DC or one (1) AC power module slot(s)

One (1) full-size MicroTCA carrier hub (MCH) slot

10 full-size AdvancedMC slots plus one (1) compact AdvancedMC slot (if second power module not present)

Cooling architecture

- Ingress: Bottom front
- Egress: Top sides and top rear

BACKPLANE

Radial IPMI from MCH slot to 11 payload slots; bussed, redundant IPMI to power and cooling modules

Three (3) radial clocks from MCH slot to 11 payload slots

Radial Port 0 from 11 payload slots to MCH ((base/ common fabric)

Radial Ports 4-7 from 11 payload slots to MCH (extended fabric)

Daisy-chain Ports 2 & 3 between payload slots

Ports 17-20 for payload slot-slot I/O

COOLING

One (1) front-replaceable bottom cooling module (8 fans)

Airflow up to 10CFM per slot average

IPMI 1.5 compliant; LEDs for extraction, IS/OOS

Integrated Telco alarm LEDs and relay output

Supports failure of one (1) fan (at reduced max ambient)

SHELF MANAGEMENT

One (1) MicroTCA Carrier Hub (non-redundant)

- AdvancedMC control, status. Power/cooling module control, status. Carrier manager and shelf manager. Fabric Switching.

POWER DISTRIBUTION

600w power modules (120-230V AC or -48V DC input; separate +12 VDC, +3.3 VDC outputs to each of 12 slots and cooling module)

Hot-swappable, IPMI 1.5 compliant

LEDs for extraction, IS/OOS

1+1 redundancy architecture supported for DC

NETWORK INFRASTRUCTURE

Gigabit Ethernet base fabric

- One (1) GbE link from MCH to 11 AdvancedMC slots (Port 0)
- Two (2) GbE expansion ports on MCH for inter-shelf connections
- Layer 2 switch architecture (unmanaged)

PCI Express extended fabric (optional)

- x1, x2 or x4 PCI Express links from MCH to 11 AMC slots (Ports 4-7)
- Up to three (3) PCI Express domains (root complexes)

BLADE OPTIONS

Intel Pentium M processor blade

1.4 GHz MPC7448 processor blade

Octal T1/E1 I/O blade

OC3/OC12 I/O blade

80GB SATA blade

SOFTWARE

Linux:

- Monta Vista CGE 4.0
- Wind River, PNE/LE 1.4

Basic Blade Services

- Operating system initialization scripts
- SNMP MIB support
- IPMI (MMC interface)
- Firmware upgrade

SOLUTION SERVICES

Motorola provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh. And solution extras include enhanced warranty and repairs.

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