Centellis 1000 Series

MicroTCA Communications Server

Embedded Computing for Business-Critical Continuity™

DATA SHEET

The Centellis 1000 Series represents a quantum leap in platform outsourcing

- 11-slot MicroTCA™ shelf provides scalable, embedded communications computing system
- 17.6 in. (466 mm) wide, 8.75 in. (222 mm) high, 9 in. (226 mm) deep shelf with front-only I/O and 19 in., 23 in. and 600 mm rackmount options
- 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 from Emerson Network Power is designed to the MicroTCA open standard, making it physically smaller, with finer-grained scalability than 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.

The Centellis 1000 provides 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.

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™

EMERSON™
Network Power

Shelf Specifications

CHASSIS

- 5U x 17.6 in. (446 mm) x 9 in. (226 mm). Optional 19 in., 23 in. (584 mm) or ETSI (600 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 - negative pressure forced air
  - 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 top cooling module (8 fans)
- Airflow over 12CFM per slot
- IPMI 1.5 compliant; LEDs for extraction, OK/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, OK/OOS
- 1+1 redundancy architecture supported for DC modules and input (A/B) feeds

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)
  - PCI Express clock from MCH to 11 AMC slots (CLK3)

Blade Options

- Intel Pentium M processor blade
- 1.4 GHz MPC7448 processor blade
- Intel Core2 Duo processor module
- 80GB SATA blade

SOFTWARE

- Linux:
  - MontaVista 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

Emerson Network Power 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. Plus solution extras include enhanced warranty and repairs.

Emerson Network Power.
The global leader in enabling
Business-Critical Continuity™.

- AC Power Systems
- Connectivity
- DC Power Systems
- **Embedded Computing**
- Embedded Power
- Integrated Cabinet Solutions
- Outside Plant
- Power Switching & Control
- Precision Cooling
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Emerson Network Power

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