coreIPM®

MicroTCA Carrier Management Controller & Shelf Manager

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coreIPM MicroTCA Carrier Management Controller and Shelf Manager (coreIPM-MCMC)
PICMG® Micro Telecommunications Computing Architecture (MicroTCA™) is a modular platform for computer systems. *coreIPM-MCMC* is a free and open source, full spec compliant software that provides management functions for a MicroTCA chassis.

coreIPM-MCMC is one component of the *coreIPM* management architecture. Other components of *coreIPM* provide management capability for elements of the ATCA and MicroTCA environment such as ATCA carriers, Cooling Units, Power Modules, AMC Management Controllers and ATCA Shelf Managers.

coreIPM-MCMC is compliant with the Intelligent Platform Management Interface (IPMI) specification v2.0 + PICMG ® 3.0 R2.0 AdvancedTCA, PICMG® AMC.0 R2.0 Advanced Mezzanine Card and PICMG ® MTCA.0 MicroTCA R1.0 specification extensions for blades and micro blades.

coreIPM-MCMC provides monitoring, control and inventory tracking functions for a MicroTCA chassis. It monitors AMC blades, Cooling and Power units.

coreIPM-MCMC integrates all system management functions into an off-the-shelf single chip microcontroller. It enables building very low cost MicroTCA shelf managers.

coreIPM-MCMC currently runs on the NXP 32-bit ARM7 based LPC2368 microcontroller.

Supported features
- Multiple i^2c buses: IPMB-L (up to 8), IPMB (dual redundant) and local
- Timers
- General purpose IO pins for latches, LEDs, backplane addressing, HW control and other uses
- RS232 debug port
- ADC
- Watchdog timer

- Edge or level sensitive interrupt pins
- In circuit flash programming enabling in chassis firmware upgrades
- TCP/IP stack with RMCP+, SNMP Traps, Serial over LAN & crypto support
- JTAG interface
- xx75 family temperature sensors on local i^2c bus
- Multi-session access
- User Privilege Levels
- Cipher Suites
    Authentication Algorithms
    - HMAC-SHA1
    - HMAC-MD5
    Integrity Algorithms
    - HMAC-SHA1-96
    - HMAC-MD5-128
    - MD5-128
    Confidentiality Algorithms
    - AES-CBC-128

Development
Full set of development tools using either gcc or commercial compilers and debuggers from multiple vendors. JTAG interface enables program downloads and on-chip debugging.

Licensing
Source code is available under the Open Source GNU General Public License (GPLv2) and commercial licensing. *coreIPM* project has full ownership of the source and can provide alternative licensing. Commercial licensees get a commercially supported product without a requirement that their *coreIPM*-based software be open sourced.

For further information:
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