

AMI MegaRAC OneTree Development Kit for the Nuvoton Arbel NPCM8mnx

The AMI MegaRAC OneTree Development Kit for the Nuvoton Arbel NPCM8mnx BMC features hardware, tutorials, and access to our AMI MegaRAC OneTree Community Edition™ (CE) BMC Firmware based on The Linux Foundation® OpenBMC™ firmware. This kit is designed to help developers and engineers gain experience with BMC firmware development concepts such as sensor porting, management technologies such as Serial over LAN (SOL) and UART, and virtual media (vMedia).

The kit allows customers to begin immediate development and training projects using AMI MegaRAC OneTree CE BMC firmware with the Arbel NPCM84MNA3BX BMC from Nuvoton to deliver projects faster, with experience and confidence.

AMI MegaRAC OneTree CE Firmware

AMI MegaRAC OneTree CE is a hardened, production BMC firmware based on The Linux Foundation® OpenBMC™ project. AMI MegaRAC OneTree CE can be enhanced with proprietary AMI IP packages based on a proven Service Processor firmware stack, trusted for years by leading OEMs and ODMs for its robust, secure remote server management. AMI MegaRAC OneTree CE features an intuitive, extensible open-architecture development framework.

Bundled Hardware

- Nuvoton Arbel NPCM8mnx Evaluation Board (EVB)
- AMI Series 997 Sensor Board
- Host System
- Fan

Included Tutorials

- AMI MegaRAC OneTree Community Edition BMC Firmware
- Sample BMC firmware development projects to help gain development experience

Key to its flexibility is a robust “common core” concept that delivers a highly managed source base with high ROI, and a complete service processor solution for wide product deployments. AMI MegaRAC OneTree CE includes dedicated support, code patches and security advisories that all AMI customers trust and expect.

AMI MegaRAC OneTree CE encompasses a family of blended firmware / software, tools, utilities and services that allow OEMs, ODMs, and CSPs to select the perfect blend of modularity, support and services to meet specific project timelines, budgets and objectives.

FW/SW Solutions	Services
Server Baseboard Management Controller (BMC)	Fee-based services for complete development and delivery of the product
Enclosure (Chassis or Rack Manager) BMC	Turnkey and Engineering (NRE) Services, including BMC feature design and customization
Essential licensable IP modules to provide complete manageability	Hardware Platform Porting
Full-featured AMI development environment, which offers distinct advantages and benefits for FW enhancement	Quality Assurance (QA) & Security Analysis Services

Materials Needed

- USB Driver (SD, USB flash for virtual media)
- Ethernet, Serial and/or Display Cable(s)



For more information please visit: ami.com/products/nuvoton-arbel-npcm8mnx-dev-kit

AMI MegaRAC OneTree firmware supports a number of Customer Reference Board (CRB) designs, with new platform support being added on a periodic basis.

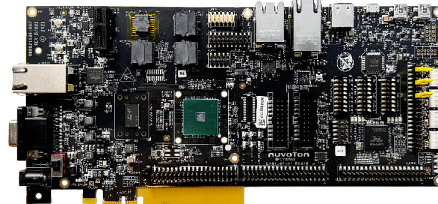
AMI Series 997 Sensor Board

The Series 997 Sensor Board is designed to mimic the sensors that are typically found on data center server platforms. This allows ODM and OEM customers to begin immediate development using AMI MegaRAC OneTree CE BMC firmware with the Arbel NPCM84MNA3BX. Firmware engineers gain hands-on experience with sensor porting, management via Serial Over LAN, management via UART and with vMedia.



- 2x Current/voltage sensors (INA219A) for 12V and 5V DC power monitoring
- 2x drive facing connectors for NVMe/SAS/ SATA (SFF-8639 U.2 Slot; U.3 compatible)
- 2x host facing connectors for U.2/U.3 NVMe (x4 OCulink)
- 2x host facing connectors for SATA/SAS (std 7-pin SATA)
- 1x Backplane Controller (AMI MG9100) UBM/ VPP/SGPIO host protocol for drive, LED
- 1x NVMe I²C management interface (accessible via pin header)
- 1x 2-channel I²C MUX with Interrupt (PCA9543A)
- 2x temperature sensors (TM75AID)
- 1x 16K bit EEPROM (24LC16B)

Evaluation Kit Components



Mg **AMI MegaRAC**
OneTree
Community Edition™

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- 1x 2-to-1 I²C master de-multiplexer with an arbiter function (PCA9641)
- 1x I²C repeater (PCA9617)
- 1x Parallel-in/serial-out (74LV165A) with 8
- 2x Serial-in/parallel-out (74LV595A) with 7 segment LED display
- 2x potentiometers for +12V, +5V voltage monitoring (to BMC ADC input)
- 1x 2-channel +12V DC FAN control (PWM)/
- monitoring (TACHO)
- Signals are available via pin headers for composing desired I²C topologies
- 4 GPIO controlled LEDs
- 4 digital inputs via 4 tactile switches

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