Advanced Platform Managment Link (APML) Library

Release Notes v3.5.0

Generated by Doxygen 1.8.14

Contents

1 Advanced Platform Management Link (APML) Library

Thank you for using AMD APML Library (formerly known as EPYC™ System Management Interface (E-SMI) Out-of-band Library).

1.1 Changes Notes

1.1.1 Highlights of Minor Release v3.5.0

- Add support for family 1Ah and model 10h - 1Fh
- Add new API to add support for
  - DIMM spd register data (0x70)
  - DIMM spd serial number
- Formatting in tool

1.1.2 Highlights of Minor Release v3.3.0

- Add support for the new APML features on family 19h amd model 90h - 9Fh
  - New SBRMI mailbox messages including
    - GetCurrentXGMIPState (0x85)
    - MaxOperatingTemperature (0xA2)
    - GetSlowdownTemperature (0xA3)
    - HBMDeviceInformation (0xB7)
    - GetPCIeStats (0XBA)
  - Update in API definition 0xA4 to ret controller, driver status
- Add support for the new APML features on family 1Ah amd model 00h - 0Fh
  - Support for RTC timer (0x21)
  - Upadte in API definition of mailbox message 0x61(BMC_RAS_RUNTIME_ERR_VALIDITY_CHECK)
- Add Platform supported property to Mailbox APIs
- Change visibility of mailbox messages from NDA to Public, this will update the header file of the APIs
  - 0x16 (Read CCLK Frequency Limit)
  - 0x17 (Read Socket C0 Residency)
  - 0x1F (Read PPIN fuse)
  - 0x5B (BMC_RAS_DBG_LOG_VALIDITY_CHECK)
  - 0x5C (BMC_RAS_DBG_LOG_DUMP)
- Tool changes:
  - Update help section to return messages supported as per platform
  - New tool options to read/write RMI & TSI registers
  - Fix the TSI regsisters summary, in case the RMI module is not installed
  - Formatting in tool
- Updated EULA doc

1.1.3 Highlights of Major Release v3.0.0

- Add support for the new APML features on family 1Ah amd model 00h - 0Fh
  - New SBRMI mailbox messages including, [61h to 67h]
    - BMC Runtime error validity support (61h - 65h)
    - Post Package Repair Support (66h, 67h)
      - NOTE: Definition may change as E2E validation pending
  - Library will now look for the apml dev nodes with sbrmi# and sbrmi-<client-addr> These changes will help multiple sockets based on client address.
  - Update alertmask and alert status to support all the threads
  - Formatting fix in tool
  - update tool

1.1.4 Highlights of Minor Release v2.8.2

- Update header file path in esmi_oob/ header files
- Cosmetic changes in tool print for SBTSI summary

1.1.5 Highlights of Major Release v2.8.0

- Add support for the new APML features on family 19h amd model 90h - 9Fh
  - New SBRMI mailbox messages including, [80h and later]
    - GPU Telemetry
    - HBM Telemetry
    - BIST result on basis of DIE-IDs
    - Number of sockets in system/node
  - New SBTSI Registers
    - HBM cofiguration
    - HBM Temperature High and Low Threshold
  - APML tool, new improved TSI summary
  - Using revision instead of cpuid for messages 8h and 9h

1.1.6 Highlights of Minor Release v2.6.0

- Add support for the following features on family 19h and model 10 - 1Fh
  - BMC RAS DELAY RESET ON SYNCFLOOD OVERRIDE [0x6Ah]
  - Read Post Code [0x20h]
  - Clear SBRMI RAS status register [0x4c]

1.1.7 Highlights of Minor Release v2.4

- Add support for the following features on family 19h and model 10h - 1Fh
  - Software workaround for the Erratum:1444
  - Support for warm reset after syncflood in mailbox
  - Validate thread as input by user for CPUID and MCA MSR reg read

1.1.8 Highlights of Minor Release v2.2

- Add support for the following features on family 19h and model 10h - 1Fh
  - Read microcode revision
- Following NDA only features
  - Read CCLK Frequency Limit
  - Read socket C0 residency
  - Read PPIN fuse
  - BMC RAS DF Error validity check
  - BMC RAS DF Error Dump

1.1.9 Highlights of Minor Release v2.1

- Update library/tool based on APML spec from PPR for AMD Family 19h Model 11h B1
- Introduced a module in apml_tool to provide cpuid information
- Bug fix (display temperature)

1.1.10 Highlights of Major Release v2.0

- Rename ESMI_OOB library to APML Library
- Rework the library to use APML modules (apml_sbrmi and apml_sbtsi)
  - This helps us acheive better locking across the protocols
  - APML modules takes care of the probing the APML devices and provding interfaces
- Add features supported on Family 19h Model 10h-1Fh
  - Support APML over I2C and APML over I3C
  - Handle thread count $>$127 per socket
  - CPUID and MSR read over I3C

1.1.11 Highlights of Minor Release v1.1

- Single command to create Doxygen based PDF document
- Improved the esmi tool

1.1.12 Highlights of major release v1.0

APIs to monitor and control the following features:

- Power
  - Get current power consumed
  - Get and set cap/limit
  - Get max power cap/limit
- Performance
  - Get/Set boostlimit
  - Get DDR bandwidth
  - Set DRAM throttle
- Temeprature
  - Get CPU temperature
  - Set High/Low temperature threshold
  - Set Temp offset
  - Set alert threshold sample & alert config
  - Set readorder

1.2 Supported Processors

- Family 17h model 31h
- Family 19h model 0h∼0Fh & 10h∼1Fh

1.3 Supported BMCs

Compile this library for any BMC running Linux. Use the APML Library/tool Support to provide your feedback.

1.4 Supported Operating Systems

APML Library is tested on OpenBMC for Aspeed AST2600 and RPI-3b based BMCs with the following "System requirements"

1.5 System Requirements

1.5.1 Hardware requirements

BMC with I2C/I3C controller as master, I2C/I3C master adapter channel (SCL and SDA lines) connected to the "Supported Processors"

1.5.2 Software requirements

To build the APML library, the following components are required.

Note: *The listed software versions are being used in development,earlier versions are not guaranteed to work.*

1.5.2.1 Compilation requirements

- CMake (v3.5.0)
- APML library upto v1.1 depends on libi2c-dev
- Doxygen (1.8.13)
- LaTeX (pdfTeX 3.14159265-2.6-1.40.18)

1.6 Dependencies

APML library upto v1.1 depends on libi2c-dev. The later versions of library depends on the `apml_modules`

1.7 Support

To provide your feedback, bug reports, support and feature requests, refer to `APML Library Support`.