

PRODUCT BRIEF

Pigeon Point BMR-STM32-ATCA Starter Kit

Board Management for IPMCs

Within AdvancedTCA® and Custom Derivative Architectures

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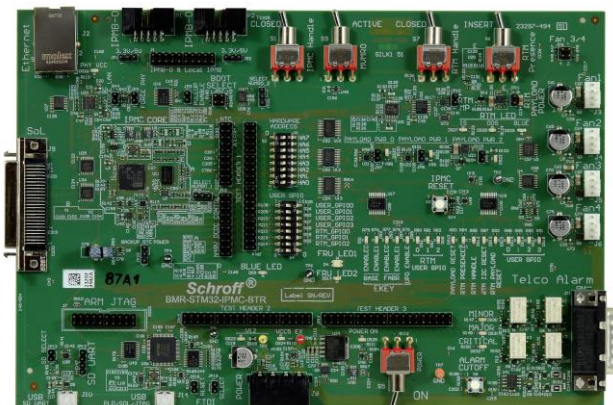


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This Pigeon Point Board Management Starter Kit provides everything you need to quickly and cost-effectively develop compliant and interoperable IPM Controllers (IPMCs) for AdvancedTCA and custom derivative architectures, based on the STM32F407 32-bit microcontroller from STMicroelectronics.

The kit includes:

- An STM32F407 microcontroller design that implements the core of an IPMC, working with the ARM Cortex-M4 processor and supporting peripherals. This design is ready to be adapted for your board or other intelligent Field Replaceable Unit (FRU)
- Schematics for a corresponding IPMC subsystem, ready for integration/adaptation into the schematic for your board
- Firmware for that subsystem, delivered in source form and with development tools—ready for simple and quick adaptation to your requirements
- Bench top Shelf Manager and IPMC hardware so that you can immediately begin the ramp up process on the IPMI-based management framework, without waiting for your custom hardware
- One-stop support from nVent SCHROFF experts for schematics, firmware and software used in developing and delivering your Pigeon Point BMR-based IPMC



Bench top IPMC

- Can be cabled together with the bench top Pigeon Point Shelf Manager to form a two-node bench top IPMI management network
- Bench top boards provide rich collection of headers, switches and connectors for experimentation in the lab with IPMC hardware and firmware operation

Software, schematics and documentation delivered via secure partner page

- Provides specific materials for your company
- Allows instant access to any updated materials that become available
- Example hardware design materials section of release page (below) shows just one of provided variants for those materials



World-Class Management Components
FOCUSED. DEPENDABLE. PROVEN.

PARTNER PAGE

Documentation

[bmr-stm32-atca-rn.pdf](#)
[bmr-stm32-atca-ug.pdf](#)
[bmr-stm32-atca-sa-ts.pdf](#)

[bmr-stm32-ipmc-ha-ts.pdf](#)

Release Notes
User Guide
Software Architecture
Specification
Hardware Architecture
Specification

Hardware Design Materials

[bmr-stm32-ipmc-hwdesign.zip](#)

BMR-STM32-ATCA hardware
reference design (schematics
and BOM)

Sources

[bmr-stm32-acta-firmware.tar.gz](#)

[ipmitool-pps.tgz](#)

BMR-STM32-ATCA firmware
sources
The IPMI communication utility
(ipmitool) source code (HPM.1)

Technical specifications and User Guide

- Pigeon Point BMR-STM32-IPMC Hardware Architecture Technical Specification
- Pigeon Point BMR-STM32-ATCA Software Architecture Technical Specification
- Pigeon Point Board Management Starter Kit User Guide: BMR-STM32-ATCA Edition

BMR-STM32 IPMC schematics and bill of materials

- Schematics provided in PDF form
- Bill of materials includes components for both the core reference design and additional parts used on the bench top reference implementation

Readily adaptable firmware in source code form

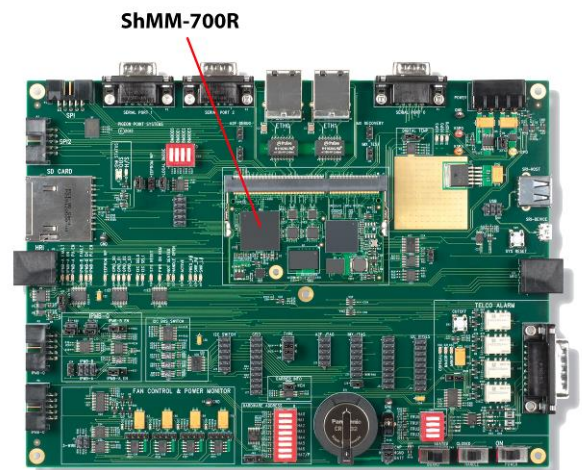
- All mandatory and many optional IPMI/ATCA commands supported over IPMB-0
- Numerous extension commands, primarily used over the payload and debug serial interfaces
- Sophisticated support for firmware upgrades in the field
- Simple—but highly flexible—configuration of firmware features

Comprehensive Cortex-M4 development environment

- Linux- or Windows-based cross GNU C compiler and binary utilities for Cortex-M4 processor (available for download from a third-party web site)
- GNU MCU Eclipse support
- JTAG-based firmware download using ST-LINK JTAG programmer from STMicroelectronics

Bench top Shelf Manager

- Includes Pigeon Point ShMM-700R Shelf Management Mezzanine with Pigeon Point Shelf Manager pre-installed in Flash (see separate product brief for details)
- BTC-700R can be cabled together with the included bench top IPMC to form a 2-node bench top IPMI network



Pigeon Point Linux for ShMM-700

- i.MX287 edition of Pigeon Point Linux; Shelf Manager application is based on Linux 2.6.x kernel port

Ordering Information:

BMR-STM32-ATCA-SK Part #: 21991- 167	Stand-alone Board Management Starter Kit for ATCA boards and intelligent FRUs
BMR-STM32-IPMC-BTR-ATCA Part #: 21991-164	Bench top implementation of BMR-STM32-ATCA reference design