

Pigeon Point[®] BMR-P1AFS-AMCc-SKA Starter Kit Add-on Board Management Starter Kit Add-on for AdvancedMC[™] Carrier IPM Controllers

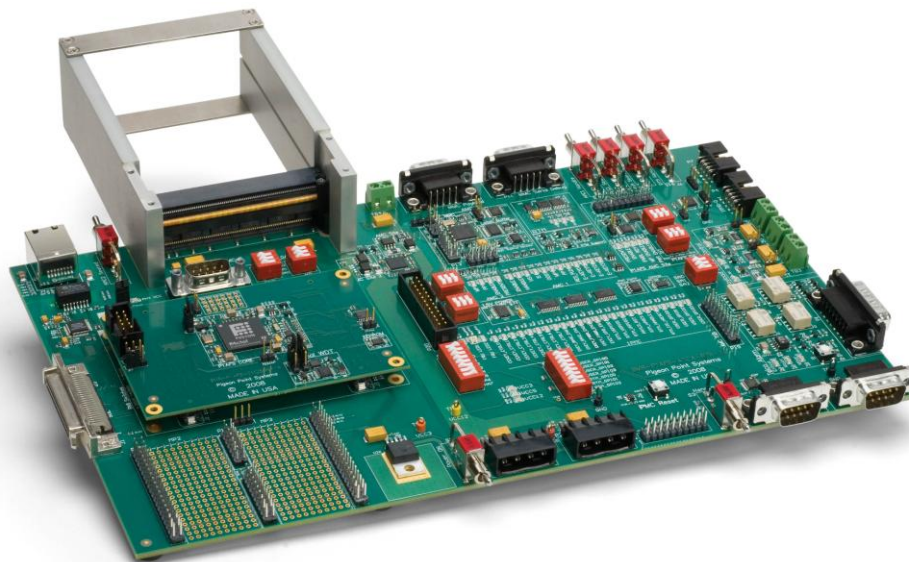
This Pigeon Point Board Management Starter Kit Add-on provides everything you need to quickly and cost-effectively develop compliant and interoperable Carrier IPM Controllers (IPMCs) for AdvancedMC (AMC) carriers based on Microsemi Fusion mixed-signal FPGAs. This kit is an add-on to the BMR-P1AFS-ATCA-SK Starter Kit for ATCA IPM Controllers and includes:

- An augmented FPGA design that provides the Carrier IPMC additions, ready to be adapted for your AMC carrier.
- Augmented schematics covering Carrier IPMC hardware, ready for integration/adaptation into the schematics of your ATCA-based AMC carrier board.
- Corresponding Carrier IPMC firmware, delivered in source form—ready for simple and quick adaptation to the specific requirements of your product.
- Bench top Shelf Manager and Carrier IPMC hardware (from the separately purchased BMR-P1AFS-ATCA Starter Kit), which allows you to ramp up on IPMI-based management without waiting for your custom hardware.
- One-stop support from Pigeon Point Systems for the schematics, firmware and software used in developing and delivering your Pigeon Point BMR-based Carrier IPMC, with complementary support from Microsemi for the FPGA design.

Supported Fusion mixed-signal FPGAs include the P1AFS600 with the FG484 package and the P1AFS1500 with FG256 and FG484 packages. Please refer to Microsemi documentation for details of the differences in capabilities among these devices and see the separate *Pigeon Point BMR-P1AFS-AMCc Product Brief* for more details.

Bench Top Carrier IPMC with one MMC and one AMC slot for physical AMCs

- Cables together with a bench top Pigeon Point Shelf Manager to form a four-node bench top ATCA/AMC IPMI management network (three nodes when no AMC is installed in the bench top board's AMC slot)
- Bench top boards provide a rich collection of headers, switches and connectors for experimentation in the lab with IPM Controller hardware and firmware operation.
- FPGA prototyping area on bench top board facilitates experimentation with custom extensions to the FPGA design.



Software, FPGA designs, schematics and documentation delivered via secure partner page

- Provides specific materials for your company
- Allows instant access to any updated materials that become available



World-Class Management Components
FOCUSED. DEPENDABLE. PROVEN.

PARTNER PAGE

Pigeon Point BMR-P1AFS-AMCC Release Page

Documentation

- [bmr-p1afs-amcc-rn.pdf](#)
- [bmr-p1afs-amcc-ug.pdf](#)
- [bmr-p1afs-amcc-sa-ts.pdf](#)
- [bmr-p1afs-amcc-ha-ts.pdf](#)
- [bmr-p1afs-amcc-atcater-report.tar.gz](#)
- [bmr-p1afs-amcc-amctester-report.tar.gz](#)

Release Notes
User Guide
Software Architecture
Hardware Architecture
Polaris Networks ATCA Tester results
Polaris Networks AMC Tester results

Hardware Design Materials

- [BMR-P1AFS-AMCC-HW-3.0.zip](#)
- [BMR-P1AFS1500-AMCC-FPGA.pdb](#)
- [BMR-P1AFS1500-AMCC-FPGA.zip](#)

BMR-P1AFS-AMCC hardware reference design revision 3.0 (schematics and BOM)
Pre-Built Image: Combined FPGA and firmware image suitable for programming into the supplied bench top board
FPGA design for the P1AFS1500-2FGG484 FPGA as implemented on the supplied bench top P1AFS-based IPMC (Microsemi Libero Project)

Sources

- [bmr-p1afs-amcc-fw.tar.gz](#)
- [bmr-p1afs-amcc-fw-sc.zip](#)
- [ipmitool-pps.tar.gz](#)

BMR-P1AFS-AMCC firmware sources for Linux
BMR-P1AFS-AMCC firmware sources for SoftConsole
The IPMI communication utility (ipmitool) source code (HPM.1)

Technical Specifications and User Guide

- Pigeon Point BMR-P1AFS-AMCC Hardware Architecture Technical Specification
- Pigeon Point BMR-P1AFS-AMCC Software Architecture Technical Specification
- Pigeon Point Board Management Starter Kit User Guide: BMR-P1AFS-AMCC Edition

BMR-P1AFS-AMCC FPGA design

- FPGA design provided as a Libero IDE project (for use with Microsemi's Libero IDE FPGA development software, acquired separately)
- FPGA programming database file (PDB) provided for loading the default FPGA design into a P1AFS Fusion device using the Microsemi FlashPro utility (acquired separately)

BMR-P1AFS-AMCC Schematics and Bill of Materials

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

Readily adaptable firmware in source code form

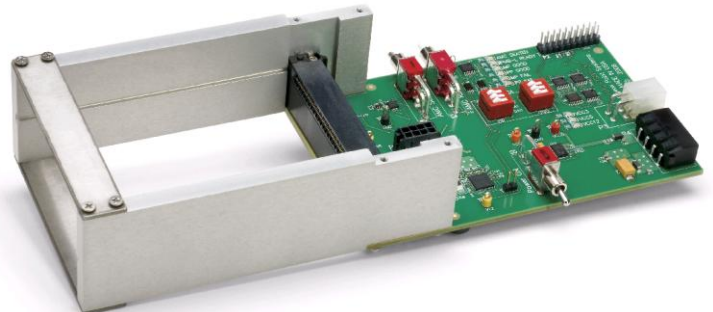
- All mandatory and many optional IPMI/ATCA/AMC commands supported over IPMB-0 and IPMB-L
- Numerous PPS extension commands, primarily used over the payload and debug serial interfaces
- Simple—but highly flexible—configuration of firmware features

Comprehensive Cortex-M1 development environment

- Cross GNU C compiler and binary utilities for H8S architecture
- Linux-based development environment included with BMR-P1AFS-ATCA Starter Kit and downloadable from CodeSourcery
- Windows-based development environment (the Microsemi SoftConsole Integrated Development Environment) available for downloading from Microsemi
- JTAG-based debugging and firmware download using Microsemi FlashPro3 JTAG programmer (purchased separately)

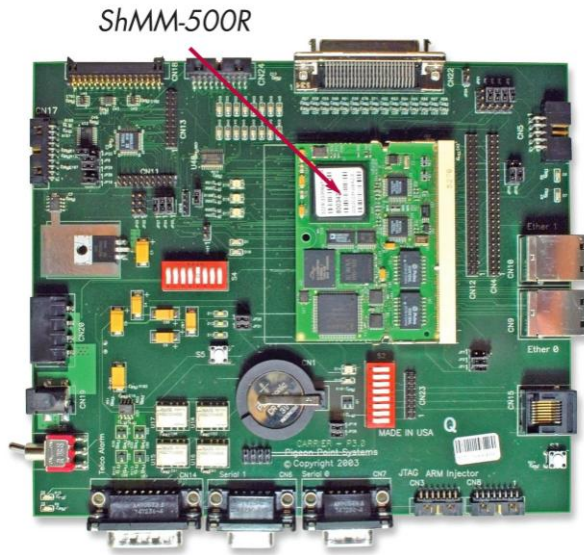
Complementary AMC Test Site Board

- Can be cabled to the BMR-P1AFS-ATCA bench top board to allow connecting a second physical AMC
- Management and payload power for the attached AMC are drawn from an ATX +12V feed, not from the BMR-P1AFS-ATCA bench top board
- Not included in Starter Kit; available for separate purchase



Bench top Shelf Manager

- Pigeon Point ShMM-500R Shelf Management Mezzanine with Pigeon Point Shelf Manager pre-installed in Flash (see separate product brief for details)
- BTC-100R Bench Top Carrier provides a socket for the ShMM-500 and on-carrier resources similar to an actual in-shelf ShMM-500R carrier
- BTC-100R can be cabled together with a bench top Carrier IPMC and two MMCs to form a four-node bench top ATCA/AMC IPMB-0 and IPMB-L network



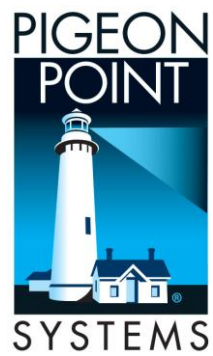
Monterey Linux for ShMM-500

- Au1550 Edition of Monterey Linux; key features for Shelf Manager application include:
 - Based on Linux 2.4.x kernel port
 - Special support for the AMD Au1550 processor and peripherals
- See www.pigeonpoint.com/Library.html#userdocs for a User Guide to the Au1550 Edition of Monterey Linux.

NOTE: No additional bench top hardware is needed or supplied with BMR-P1AFS-AMCc Starter Kit Add-on. This Starter Kit Add-on requires separate purchase of the BMR-P1AFS-ATCA Starter Kit, which includes a bench top Shelf Manager and a bench top P1AFS-based IPM Controller. That P1AFS bench top board already supports Carrier IPMC functionality, including two AMC sites, one logical and one physical.

Ordering Information

BMR-P1AFS-AMCc-SKA	Board Management Starter Kit Add-on for ATCA-based AMC carriers (requires separately purchased BMR-P1AFS-ATCA-SK Board Management Starter Kit)
BMR-P1AFS-ATCA-BTR	Bench top implementation of BMR-AVR-AMCm and BMR-P1AFS-AMCc reference designs (which also implements the BMR-P1AFS-ATCA reference design)
AMC-TSBR	AdvancedMC Test Site Board that can be cabled to a BMR Carrier IPMC bench top board so that an additional physical AMC can be attached



For more information, visit our website at <http://www.pigeonpoint.com>

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