

The AimOS Development Kit R2 is a Broadcom© Avenger Board with several interface types.

AimValley has specifically designed this evaluation board to help you with the development of your own switch, based on the Avenger. By using the R2 Development Kit, you can start your software development in parallel with your hardware development. It can also shorten your hardware development by re-using the evaluation board design.

It enables you to demonstrate your switch early in the process.

Purposes

- Easy evaluation with the Broadcom© Avenger switch silicon
- Easy evaluation of AimOS-Robo
- Easy evaluation of AimOS-Ethernet*
- Training platform for AimOS Development

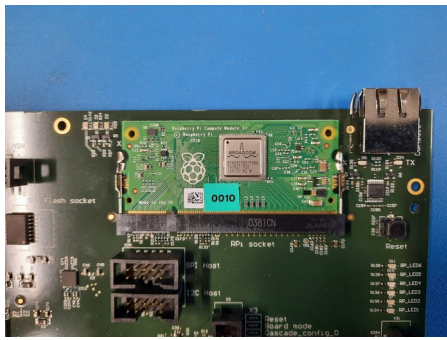
Applications

- Unmanaged and web-managed SMB support
- Industrial Automation, Robotics, Industrial Appliances
- Enterprise port-extender and security appliances
- Home-Gateways and MDUs for broadband access

Benefits

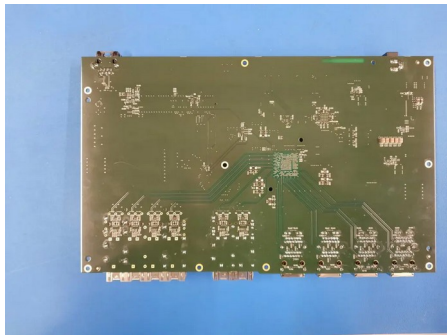
- Both AimOS-Robo and AimOS-Ethernet are supported.
- Short time-to-market for software and hardware development based on the Avenger.
- Unbox and run within 5 minutes

CPU



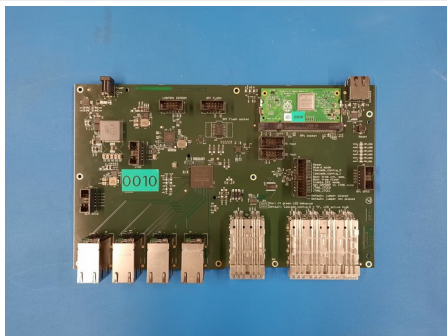
- Broadcom BCM53162 XMB1 embedded processor (ARM Cortex-M7)
- Raspberry Pi Compute Module 3+ (CM3+) as optional external processor.

Interfaces



- 8x 10/100/1000Base-T electrical RJ45 port
- 4x 1GE/2.5GE SFP+ ports
- 2x 10G SFP+ ports
- UART console port
- Reset Button
- MDIO
- SPI

Supported Software



AimOS-Robo

Hardened version of RoboOS, for simple web management. More info [AimOS-Robo](#).

AimOS-Ethernet*

For advanced features like L3 routing and complete management including CLI and SNMP. More info on [AimOS-Ethernet](#).

*future release

Feature List – Switching

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|---|---|--|
| <ul style="list-style-type: none">■ Switch Silicon: Broadcom® RoboSwitch™-2 BCM53162■ 16K entry MAC address table■ 1K multicast group support■ 1MB packet buffer■ srTCM and trTCM meters (support color-aware and color-blind modes)■ Jumbo frame support: up to 10K bytes■ 1K packets and bytes counters■ 8x CoS queues per port with priority flow control | <ul style="list-style-type: none">■ IEEE 802.1p, MAC and DSCP packet classification■ Per-queue and per port shaper■ 4K VLANs (IEEE 802.1Q) with Virtual Switching Instance (VSI) support■ 1K CFP rules support (up to 192b key)■ Mirroring and sFlow sampling■ Loop detection■ AVB and Time-Sensitive Networking (TSN) (802.1Qbv, 802.1Qav, 802.1ASrev)■ IEEE 1588 and SyncE support | <ul style="list-style-type: none">■ 16x LAG trunks (32x supported across cascaded switches)■ VLAN mapping and translation■ Protection and security mechanisms: port authentication (802.1x), isolation groups, BUM flood prevention, traffic metering, DOS filtering■ IEEE802.3az Energy Efficient Ethernet (EEE)■ 802.1BR standards-based port extender |
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Why AimValley?

AimValley helps you with product development based on the AimOS family. This collection of software assets and tools can also be used for other Broadcom® switches, enabling us to help you with any 'Broadcom-based' design.

Services range from consultancy during your architecture phase, porting the AimOS to your own hardware, designing your hardware up to full system development including production, up until maintenance & support. We take care of every step in your development process, either based on our spec set of as a joint development project.

- Reliable partnership
- Design flexibility
- Extensive experience in developing telecom and datacom systems.
- Strong track record in delivering as planned and within budget
- Evaluation of jump-start product development
- AimOS supports various hardware platforms
- Key software and hardware expertise available for the StrataConnect and StrataXGS.

Re-use of IP and proven developed switch experience improves your development cycle and reduces costs considerably.

Register for a free demo!

Our experienced engineering team with expertise in systems engineering, software, electronic and FPGA design can support you with all steps in your product development process. The Broadcom® experience of our teams is well known in the industry. Register for a free demo today aimos-demo@aimvalley.com or contact our sales team sales@aimvalley.com.

Our Expertise

Systems Engineering: if you only have a rough idea or high level feature list, AimValley supports you to define the system architecture and details the requirements to secure that our solution will support your business objectives.

Software: using state-of-the-art development tools, the team is geared up to engineer software for extremely reliable systems. Our team of 30 experts has experience in real-time embedded systems, low level drivers, operating interfaces and networking applications.
Re-usability of IP and proven developed switch experience, improves our development cycle and reduces costs considerably.

Electronics Design: the team covers the entire range of skills and expertise to realize electronic products. With experience in high-speed analog and digital circuits, back-plane design and environmental testing (EMC, temperature, shock & vibration, etc.). All our designs have a proven, negligible field return rate. AimValley designs enclosures for electronic systems. We translate functional system requirements into reproducible and cost-effective solutions that include demands for ergonomics, safety, EMI, regulatory requirements and robustness.

ASIC and FPGA: through partnership programs with major FPGA vendors, AimValley takes full advantage of technology and tooling, creating cost effective designs in both ASICs and FPGAs. Our team specializes in real-time processing and FPGA-Acceleration.

System Verification: seen from an end-user's perspective, meticulous attention is given to quality indicators as performance, reliability and stability.

Your Needs

Joint Development: achieving your goals requires you to constantly adapt to new technologies. Based on your requirements, we design solutions and ways to jointly implement them.

Tailor-Made Solutions: we collaborate with you to deliver the desired solution (complete product, or only part of the development).

Fast Track Development: taking advantage of re-usable designs and IP enables us to develop your solution on a fast track.

Innovative Solutions: AimValley is continuously looking for alternative and optimized ways of designing high-tech products, underpinned by an extensive patent library.

Phased Approach: our design process is structured to successfully take your product from concept to production and flexible enough to allow you to leverage any of our services on a stand-alone basis.

Certification: AimValley is experienced in certifying product and systems, such as EMC/ESD, CB and CE.

Life Cycle Management: we offer life cycle management for the design or product. This includes maintenance and component obsolescence management.

We take care of every step in your development process, either based on your requirements or as joint development project.