UNMANAGED AND MANAGED REFERENCE DESIGNS

F E A T U R E S

- **BCM953115R5G**
  - Unmanaged Gigabit Ethernet (GbE) switches
  - LoopDTech™ and CableChecker™ – LoopDTech on/off switch and buzzer warning sound
  - Discrete magnetics for low cost designs
  - EEPROM for configuration—jumbo frame and LoopDTech pre-enabled
  - Small form factor for low cost design

- **BCM953115R5GM switch for residential/SOHO gateway**
  - Reference platform targeted to the residential/SOHO gateways
  - L2-managed
  - Onboard BCM5836 MIPS® CPU, 64-MB SDRAM, 16-MB Flash
  - Broadcom® software—RSTP, IGMP/MLD snooping, 802.1x, SNMP, 802.1p, 802.1Q, access control list (ACL), and more
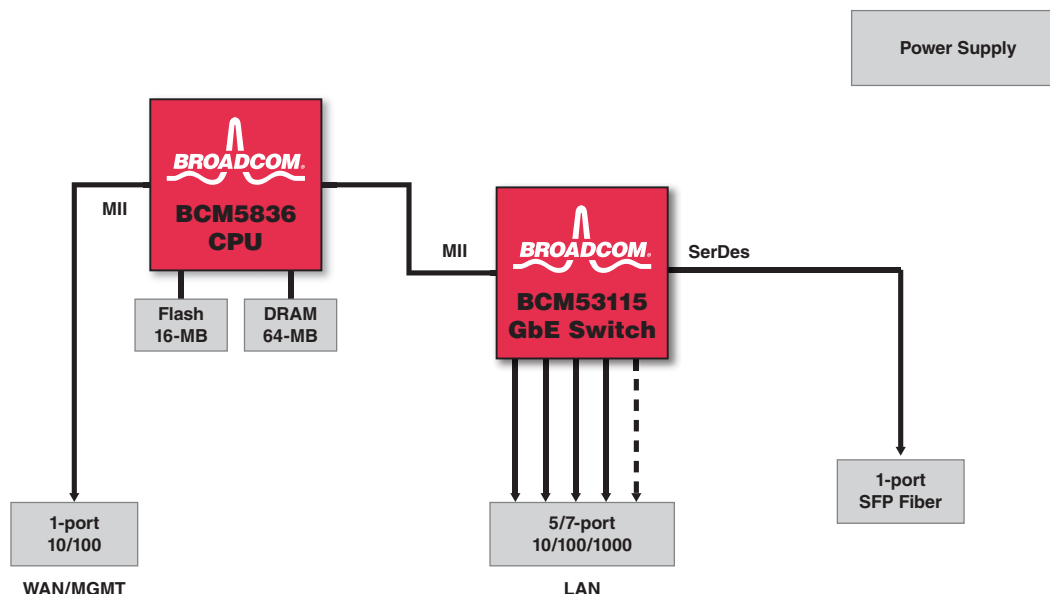 - Latest SDK/API
  - WAN port RJ-45 connection

S U M M A R Y   O F   B E N E F I T S

- **Industry-first 7-port GbE switch with TCAM-based ACL for packet classification and filtering**

- **Second-generation Broadcom switch with Ethernet AV function**
  - Guaranteed latency
  - Guaranteed BW
  - Synchronous timing

- **Lowest power consumption in the industry**

- **Two-layer board for unmanaged; EEPROM for low cost configuration (unmanaged); low cost components for the most cost-effective designs**

- **Line rate port switching performance, including jumbo frames**

- **Sixth-generation Broadcom API source code and device driver**

- **Access to complete switch registers and an advanced debug environment provided by the Broadcom CLI**

- **SDK supports VxWorks® (shipped with board) and Linux®**

- **No additional CPU daughtercard required; single and complete reference board for residential gateway designs**

- **Dual IMP ports enable generic router design with one CPU and multiple WAN interface types**

BCM953115R5G and BCM953115R5GM (Front and Rear Views)

BROADCOM®

Power Supply

BCM5836 CPU — Flash 16-MB — DRAM 64-MB

BCM53115 GbE Switch

MII — SerDes

1-port 10/100 — WAN/MGMT

5/7-port 10/100/1000 — LAN

1-port SFP Fiber

BCM953115R5GM Reference Board Block Diagram

Developing Your Switch

The BCM953115R5GM is the most integrated and lowest cost solution for 7-GbE port unmanaged residential/SOHO gateway switches. In addition, the reference designs provide high-quality and industry-proven software for residential/SOHO gateway applications and enables the accelerated development of the following types of switches:

- Small form factor unmanaged designs
- Residential/SOHO gateway switches with support for rapid spanning tree, IGMP/MLD snooping, 802.1x, 802.1p/Q, SNMP, and more

Documentation and Software

Documentation for the BCM53115 device, reference design, and SDK 5.5.0 are available online through docSAFE.

The documents available include:

- Schematics, Allegro®, Gerber layout, EMI test reports
- Reference design user manual
- SDK software API source code and documentation
- BCM53115 data sheet, programmer's reference guide
- Application notes, including Ethernet AV introduction and usage

Ordering Information

- BCM953115R5G—5-port GbE, unmanaged
- BCM953115R5GM—7-port GbE with BCM5836 CPU and WAN port, residential/SOHO gateway

For additional ordering information for the BCM953115R5G_BCM953115R5GM reference designs, contact your local sales representative.

Connecting
everything®

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