



COMPEX SYSTEMS

AP148 AKRONITE REFERENCE BOARD

Qualcomm Atheros IPQ8064 Reference Design
Board available with Compex Systems

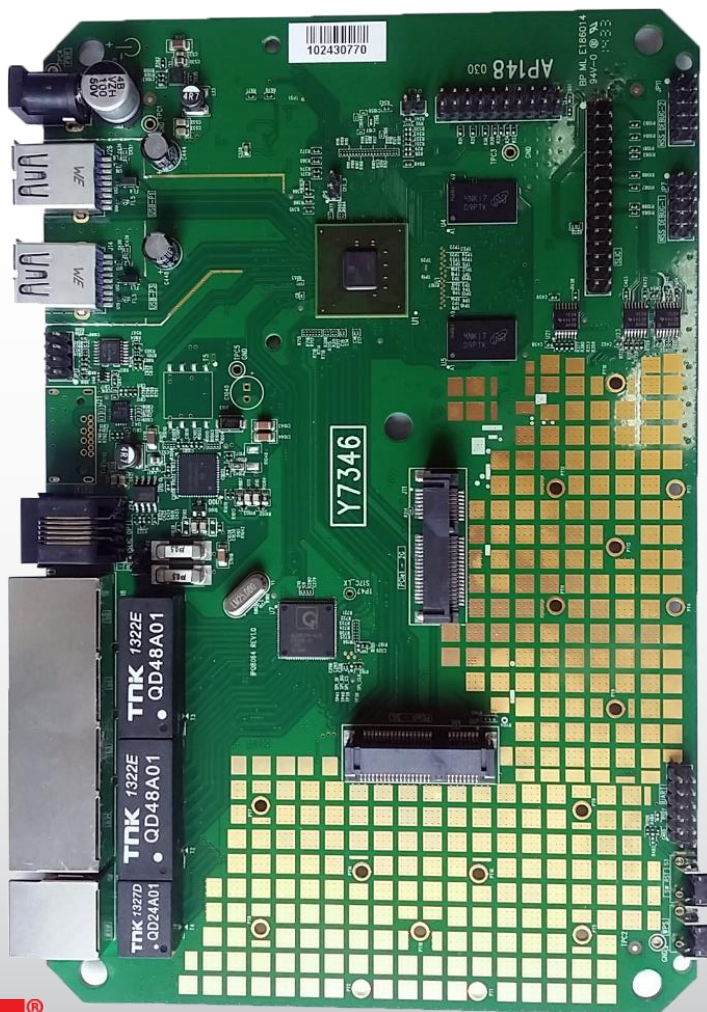


OVERVIEW

- AP148, a Qualcomm Atheros reference design, is based on Akronite series.
 - It comprised of IPQ8064, which is based on Dual-Core Snapdragon-based Krait CPU, with an ARM-v7-compliant instruction set.
 - Each Krait CPU includes a 128-bit SIMD DSP, referred to as Venum. It is a “Stripped-Down” Snapdragon, Qualcomm 's very popular and powerful CPU for mobile handsets.
- It is Qualcomm's answer to support high bandwidth radios, like the Beeline 4x4 11ac radios, as well as many 11ac radios all on the same board.
- It can support a number of 3rd party applications to make the device more useful for home, such as **Streamboost** and **Alljoyn** protocol.



AP148 FEATURE SET



Uses IPQ8064, Dual-Core Snapdragon-based Krait CPU @ 1.4 GHz

- ARM-v7-Compliant
- RAM : 512 MBytes (32-bit DDR3/1066)
- NOR Flash: 32 MByte
- NAND Flash: 256 Mbyte
- 5 x Gigabit Ports
- 2 x PCIe 2.0 (RC) supports 2 x WLE1200 Beeliner 4x4 802.11ac
- Concurrent 11ac.
- 2 x USB 3.0 (Host Mode Only)
- 1 x SATA 3.0 Port
- PCM/SLIC interface
- I2C interface
- UART Debug interface
- JTAG Debug interface
- Hardware Crypto Engine (for offload IPsec)



USAGE / DEVELOPMENT

AP148 can be used for many applications

- Dual Band Dual Concurrent (both 11ac) WLAN reference design
- High-Performance 5 Gigabit Ethernet port Home Gateway / Smart Router / Media Server
- SATA3.0 interface, can connect to external Solid State Disk (SSD) to do "fog computing"
- Dual USB 3.0 connectors which operates in the host mode supporting super speed.
- Supports NAND Flash, thus have larger capacity to support a lot of applications.
- **Supports Open-WRT (12.09 Attitude Adjustment)**

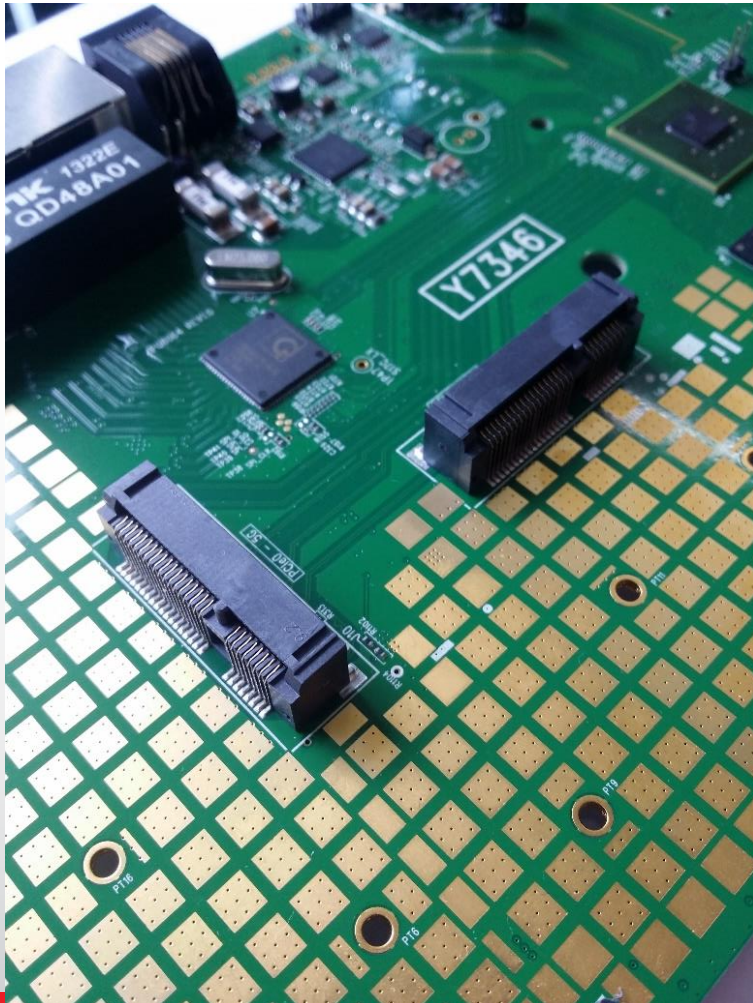


AP148 NOTABLE FEATURES

- Network Subsystem (NSS)
 - Accelerating the process of network packets
 - Consists of 2 multithreaded, network-accelerator cores at 733MHz
 - Each network-accelerator engines supports 12 threads of execution, operating in parallel. NSS functions include L2/L3 routing/bridging, Samba acceleration, LRO/TSO offload, connectivity acceleration, as well as traffic management.
 - *Crypto Engines (AES, 3DES, SHA) available, for IPSec Hardware Encryption, reducing load on CPU.*
- NAND Flash (EBI2) Interface
 - The EBI2 interface supports NAND flash for boot memory or storage.
 - 8-bit NAND Flash
- GMAC supports IEEE 1588-2 Time Synchronization
- IPQ8064's PCM interface enable telephone connectivity.



AP148 REFERENCE KIT



The AP148 Reference Kit include:

- AP148 Reference Board
- Serial Converter
- 12V, 4A power adapter

CONTACT US

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