

OoliteBox V2.0_SPEC_EN

Specification Version V1.0.1

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| Revision | Date | Contents of Revision Change | Remark |
|----------|------------|------------------------------|--------|
| 1.0.0 | 2016-03-28 | First release specifications | |
| 1.0.1 | 2018-06-21 | Revision | James |

INTRODUCTION

OoliteBox-V2.0 is dedicated to long distance wireless network solutions, it features 17dBi. high gain antenna dual polarization with high output power and high RX sensitivity can significantly extend the transmission range up to deliver a more stable wireless connection and reduce the expense of equipment. It's designed to deliver high reliability under harsh outdoor environment. Built-in advanced multi-functions provide flexibility in constructing scalable WiFi networks for all possible applications.

OoliteBox-V2.0 offers bandwidth up to 300Mbps to accommodate heavy traffic services such as multimedia streaming. Establishing backbone network using 802.11n ensures stability and reduces interference since 802.11b/g infrastructure run rampant till now.

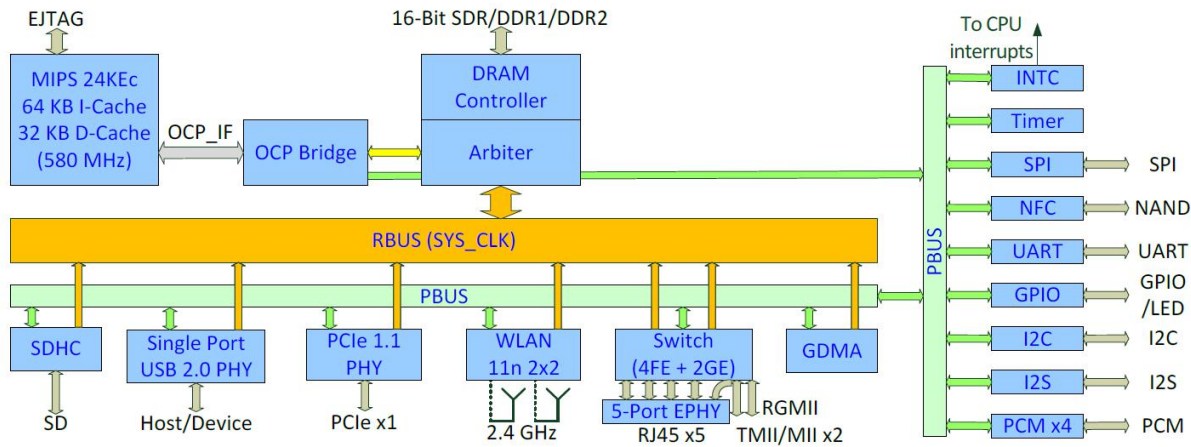
OoliteBox-V2.0 provides five operation modes for multiple users to access internet: AP/Gateway/Bridge/Repeater/Client Mode. Featuring passive power over Ethernet function is easy to deploy. To protect wireless connectivity, encrypt wireless transmissions through 64/128-bit WEP data encryption and also supports WPA/WPA2. The MAC address filter makes you select exactly which stations should have access to your network. In addition, the User Isolation function can protect the private network between client and users.

FEATURES:

- CPU: MT7620A with 580MHz MIPS 24KEc
- RAM: DDR2 64Mbyte(128Mbyte/256Mbyte optional)
- Flash: 16MBytes SPI NOR Flash ROM(8MB/16MB/32MB/64MB optional)
- WiFi: 2T2R 2.4 GHz With 300Mbps 802.11 b/g/n
- USB: 2 x USB 2.0 master interface, support USB hub extension
- Ethernet Port : 5-port 10/100 FE PHY
- Button:1 x Reset to factory setting
- TF/SD : 1 x TF Card
- Mini-Pcie: 1×Mini-PCIE interface/1 x 4G LTE Module
- SIM Card: 1 xStandard Sim Card
- Antenna: 2 × IPEX external to rod antenna
- UART(Debug): serial debugging interface has lead out.
- Power supply voltage: 12V/1.5A
- Size: 170mm x 90mm x 28mm

| Items | Contents |
|-----------------------|--|
| Interface | 5 10/100Mbps WAN/LAN Port |
| | 2 USB2.0 Port |
| | 1 Button |
| | 9 LED |
| | 1 internal Mini-PCle slot |
| Wireless Standards | IEEE 802.11n, IEEE 802.11g, IEEE 802.11b |
| Antenna Type | 2 SMA |
| Frequency | 2.412 - 2.472GHz |
| Signal Rate | 11n: Up to 150Mbps(dynamic) |
| | 11g: Up to 54Mbps(dynamic) |
| | 11b: Up to 11Mbps(dynamic) |
| Frequency Error | <10.0 ppm |
| Reception Sensitivity | MCS7(HT40):-59dBm@10%PER |
| | MCS7(HT20):-61dBm@10%PER |
| | OFDM 54M:-63dBm@10%PER |
| | CCK 11M:-85dBm@10%PER |
| Wireless Modes | AP Mode, Router Mode ,Client Mode, Repeater Mode, Bridge Mode |
| Wireless Security | 64/128/152-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK |
| WAN Type | Dynamic IP, Static IP, PPPoE, PPTP, L2TP |
| DHCP | Server, Client, DHCP Client List, Address Reservation |
| Port Forwarding | Virtual Server, Port Triggering, UPnP, DMZ |
| VPN Pass-Through | IPSec, OpenVPN, PPTP, L2TP, GRE |
| Access Control | Local Management Control, Host List, Access Schedule, Rule Management |
| Firewall Security | DoS, SPI Firewall IP Address Filter/MAC Address Filter/Domain Filter IP and MAC Address Binding |
| Management | Access Control Local Management |
| Certification | CE, FCC |
| Package Contents | Power Adapter |
| System Requirements | Microsoft® Windows® 98SE, NT, 2000, XP, Vista™ or Windows 7, MAC® OS, NetWare®, UNIX® or Linux |

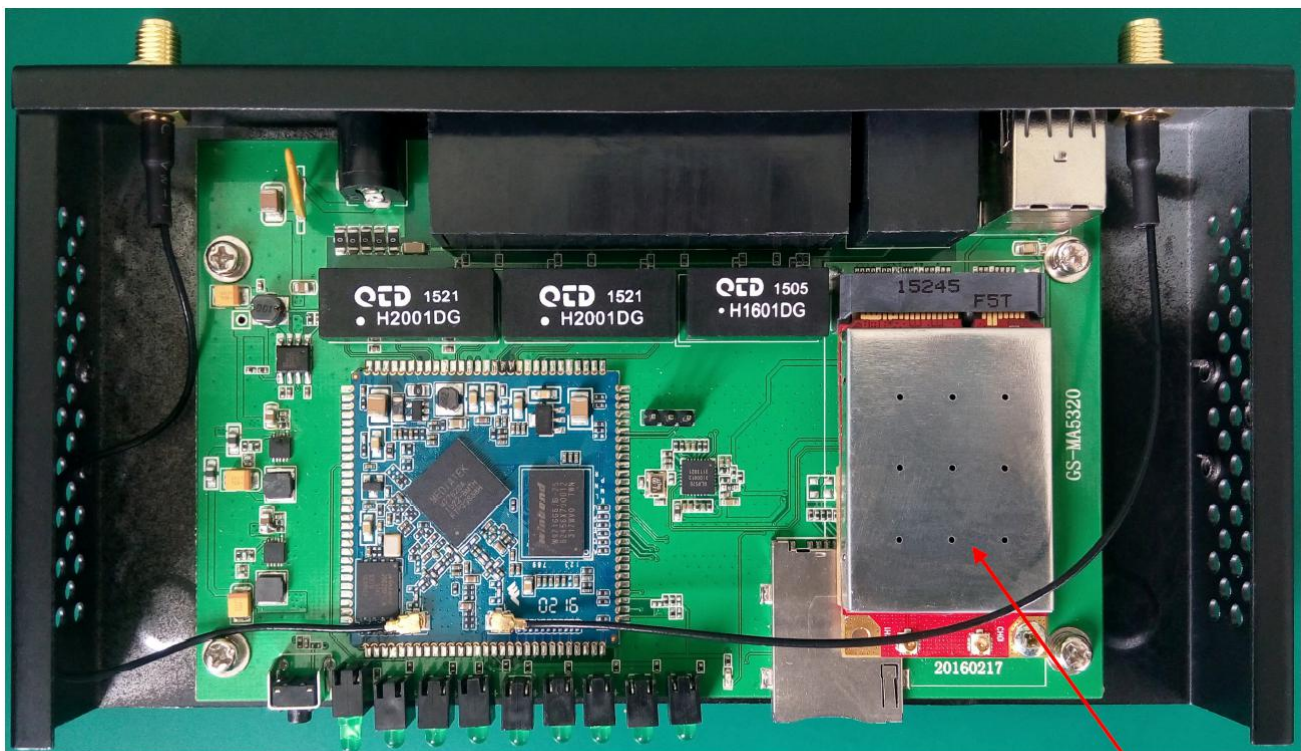
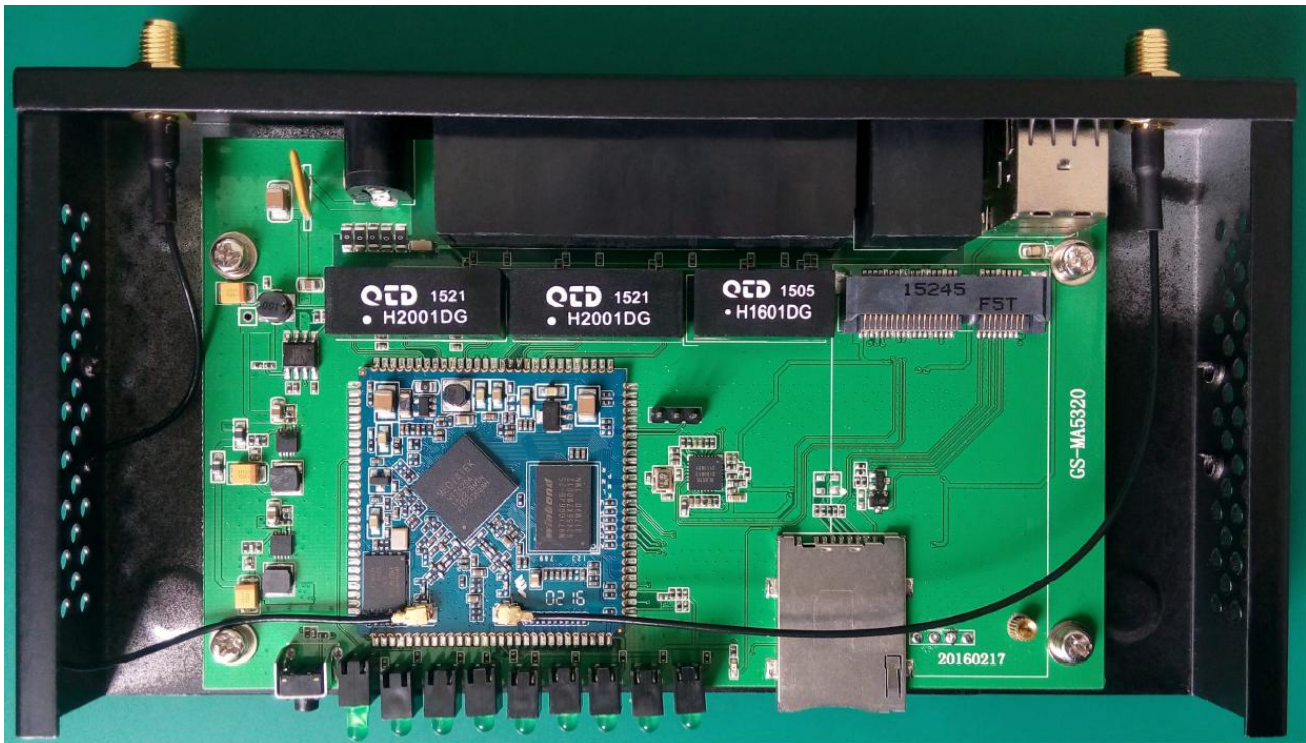
FUNCTIONAL BLOCK DIAGRAM



| Features | MT7620N | MT7620A |
|-------------------------|--|---|
| CPU | MIPS24KEc (600/580 MHz) | MIPS24KEc (580 MHz) |
| Total DMIPs | 580 x 1.6 DMIPs | 580 x 1.6 DMIPs |
| I-Cache, D-Cache | 64 KB, 32 KB | 64 KB, 32 KB |
| L2 Cache | n/a | n/a |
| HNAT/HQoS | HNAT | HNAT 2 Gbps forwarding |
| Memory | | |
| DRAM Controller | 16 b | 16 b |
| SDRAM | 512 Mb, 120 MHz | n/a |
| DDR1 | 512 Mb, 193 MHz | n/a |
| DDR2 | 512 Mb, 193 MHz | 2 Gb, 193 MHz |
| NAND | n/a | Small page 512Byte (max 512M bit) Large page 2Kbyte (max 8G bit) |
| SPI Flash | 3B addr mode (max 128Mbit) 4B addr mode (max 512Mbit) | 3B addr mode (max 128Mbit) 4B addr mode (max 512Mbit) |
| SD | n/a | SD-XC (class 10) |
| RF | 2T2R 802.11n 2.4 GHz | 2T2R 802.11n 2.4 GHz |
| PCIe | n/a | 1 |
| USB 2.0 | 1 | 1 |
| Switch | 5p FE SW | 5p FE SW + RGMII(1) 4p FE SW + RGMII(2) |
| I2S | n/a | 1 |
| PCM | n/a | 1 |
| I2C | 1 | 1 |
| UART | 1 (Lite) | 2 (Lite/Full) |
| JTAG | 1 | 1 |
| Package | DRQFN148- 12 mm x 12 mm | TFBGA265- 11 mm x 11 mm |

PICTURES





Pcie module

MECHANICAL

| Length | Width | Height (without shield) |
|-----------------------------|----------------------------|----------------------------|
| 170mm (Tolerance:±0.2mm) | 90mm (Tolerance:±0.2mm) | 28mm (Tolerance:±0.2mm) |



ENVIRONAMENT

| | |
|-----------------------|---|
| Power Supply | 12V/1.5A |
| Operating Temperature | -20°C ~ 55°C |
| Operating Humidity | <60% non-condensing |
| Storage Temperature | 0°C ~ 50°C |
| Storage Humidity | Storage Humidity: <90% non-condensing in sealed |