

Product External Specification

For

AX6000 Wi-Fi 6 SOHO Router

Model Number: DBR-560

H/W Ver.: A1



Revision: 1.07

Revision History

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Rev.	Date	Author	Reason for Changes
1.00	2024/06/20	Jeff Ko	1 st official version
1.01	2024/06/25	Jeff Ko	1. Add Radius support for wireless enterprise authentication 2. SSID support VLAN bridge and band steering
1.02	2024/06/25	Jeff Ko	1. Change default IP to 192.168.10.1 2. Remove cellular module from block diagram
1.03	2024/07/25	Sammy Chiu	1. Modify Mesh feature to support DBE/DBM-560 2. Add WireGuard VPN supported
1.04	2024/08/13	Sammy Chiu	1. Change Model Name to DBR-560 2. Removed Radius and SSID VLAN bridge, InterVLAN
1.05	2024/09/13	Sammy Chiu	1. Add USB 3.1 Gen 1 Interface
1.06	2024/10/7	Tony Tseng	1. Add server/client wording on VPN 2. Add USB feature 3. Modify flash size
1.07	2024/11/27	Tony Tseng	1. Update description 2. Update Wifi frequency

1. Introduction

DBR-560 is a high-performance Wi-Fi AX6000 VPN Router for SOHO market. It is particularly designed for High-speed internet, Wi-Fi 6 and VPN etc. This device supports 1x 2.5GbE WAN and 4x 1GbE LANs and wireless 4x4 AX6000 technology. Users can take advantage of the device management by user-friendly web-based UI.

2.Features

■ Function supports

- WAN connection types for fixed line broadband.
- Hardware NAT
- WPS 2.0
- QoS
- Port Forwarding
- Dynamic DNS
- Guest Zone
- Scheduling
- Time Zone Location Selection
- Support D-Link mesh compatible with DBR-560
- Parental Control
- USB 3.1Gen 1 type C

■ SPI Firewall and Advanced Networking Function

- NAT firewall
- Internet access control, such as URL blocking, MAC filtering
- Multiple sessions IPsec, L2TP and PPTP VPN pass-through
- VPN server & client: IPsec/L2TP/PPTP/OpenVPN/WireGuard
- Virtual server, ALG, DMZ and UPnP

■ Installation & Management

- Web-based UI management
- Backup/restore device settings.
- Firmware upgrade via web-based UI

3. Specification

LED Indicator

Category : LED (Single)			
Indicator	Color	Status	Description
Power/ Status	White	Solid	➤ System is ready for Internet Access and Wi-Fi
		Blinking	➤ Device is processing WPS
	Amber	Blinking	➤ Device is under recovery mode
	White/Amber	Interleaving	➤ Device is under FW upgrade process
	Red	Solid	System error
		Blinking	➤ During power on process. ➤ Device is undergoing factory reset process. ➤ Device is undergoing reboot process when triggered with power button or reboot the device function of User Interface.
	Off		Device no power/power off
Ether-WAN	Orange	Solid	Ethernet cable is connected and stay in 2.5Gbps mode
		Blinking	Internet traffic is transmitting on 2.5Gbps mode
	Green	Solid	Ethernet cable is connected and stay in 10/100/1000Mbps mode
		Blinking	Internet traffic is transmitting on 10/100/1000Mbps mode
	Off		No ethernet cable connected, or interface is off
Ether-LAN	Orange	Solid	Ethernet cable is connected and stay in 1Gbps mode
		Blinking	Internet traffic is transmitting on 1Gbps mode
	Green	Solid	Ethernet cable is connected and stay in 10/100Mbps mode
		Blinking	Internet traffic is transmitting on 10/100Mbps mode
	Off		No ethernet cable connected, or interface is off

3.2 Hardware Specification

Hardware Component Set	
Features	Spec Description
CPU	MediaTek MT7986A
Flash and Memory	SPI NAND FLASH 256 MB (2Gb) RAM: DDR4 1 GB (8Gb)
RF chip	MT7976G+ MT7976A
Switch	WAN: GPY211 (for 2.5GbE), LAN: MT7531A (for 1GbE)
Hardware IO-Port Set	
Feature	Spec. description
RJ-45 Ports	(5) x RJ45 (2.5GbE WAN x 1 + 1 GbE LAN x 4)
USB	USB 3.1 Gen1 Type C (Power deliver at least 5V/3A)
Button	(1) x Reset Button (Reset setting to factory default) (1) x WPS Button (For PBC mode) (1) x Power Button
Power IO	(1) x DC Jack
Power	
Feature	Spec description
Power adapter	(12V/4A) switching power
Button Definition	
Feature	Spec description
Reset	Press and hold this Reset button until LED blinks red
WPS	Press to perform WPS. Support PBC mode
Power ON/Off	When device is on, press this button to OFF, then device is shutdown. When device is shutdown, press this button to ON, then device is on.
WLAN	

Solution	MT7976G (for 2.4GHz) + MT7976A (for 5GHz)
Standard	IEEE 802.11 b/g/n/ac/ax & k/v Standard and MU-MIMO
Output Power	Typical RF Output Power at each RF chain, Data Rate and at room Temperature of 25℃ (tolerance ± 1.5dB)
Sensitivity	Typical Sensitivity at Which Frame (1000-byte PDUs) Error Rate < 10% at room temperature 25 ℃
Data Rate	4804 Mbps (max) in IEEE 802.11ax mode for 5GHz Wi-Fi 1148 Mbps (max) in IEEE 802.11ax mode for 2.4GHz Wi-Fi 1733 Mbps (max) in IEEE 802.11ac mode From MCS-0 to MCS-23, with additional (256QAM) in IEEE 802.11n mode 6/9/12/18/24/36/48/54Mbps in IEEE 802.11g mode 1/2/5.5/11Mbps in IEEE 802.11b mode
Frequency	Wi-Fi 2.4G ■ 2400MHz~2483MHz Wi-Fi 5G ■ B1 : 5150MHz ~ 5250MHz (EU/NA) ■ B2: 5250MHz ~ 5350MHz (EU/NA) ■ B3: 5470MHz ~ 5725MHz (EU/NA) ■ B4: 5725MHz ~ 5850MHz (NA)
Access Mode	CSMA/CA
Wi-Fi Antenna	(8) x Internal WLAN Antenna (2.4GHz x 4, 5GHz x 4)

3.3 Performance Specification

Firewall	
Features	Spec Description
NAT Throughput	2.0Gbps
Firewall Throughput	2.0Gbps
Maximum Concurrent Session	100,000

3.4 Software Specification

Management		
Feature		Brief description
Web Management		Default is English, support 14L (EN/CHT/CHS/KR/FR/IT/SP/GE/RU/PT/PL/HU/CZ/SL)
		Protocol: Https with TLS 1.2/1.3
		Default IP: 192.168.10.1
		Remote Management
WAN		
Feature		Brief description
Ethernet WAN	IPv4	Static IP / Dynamic IP / PPPoE / PPTP / L2TP
	IPv6	Static IP/ Dynamic IP/ PPPoE/6rd
Always on		Auto Reconnect
DNS over Https		Google / Cloudflare
Dynamic DNS		
Feature		Brief description
Dynamic DNS		Support No-IP DDNS and Dyn DDNS
VLAN		
Feature		Brief description
Triple-play VLAN		Support Internet/IPTV/VoIP VLAN setting
TR VLAN WAN		ACS default route on TR VLAN WAN
VLAN		Tag and Untag support for LAN interface
Network		

Feature		Brief description
DHCP Server		IP Pool range by sequence
		Lease Time
		Domain Name
DNS server		DNS Server / DNS Relay
UPNP		Support
Wireless		
Feature		Brief description
Wi-Fi Configuration	Bandwidth	20Mhz / Auto 20/40Mhz / Auto 20/40/80Mhz / 20/40/60/160Mhz
	Wi-Fi Chanel	Manual / Auto Channel Selection
	SSID visibility	Visible / Invisible
	Scheduling	Support
	DFS	Support
Security Mode		Open / WPA2 / WPA+WPA2 / WPA3 / WAP2+WPA3
Authentication Method		PSK / SAE
Encryption		AES / TKIP
Radio mode		B/G/N/AC/AX Mode
Multiple SSID		Max. support 8 SSID per Radio
Guest Zone		Enable / Disable, Isolation
Wi-Fi Mesh		Support D-Link mesh compatible with Lite AP DEA series
VLAN		SSID support VLAN bridge
Band Sterring		Support
NAT		
Feature		Brief description
Port Forwarding		Support
DMZ Host		Support one DMZ host.
Firewall		
Feature		Brief description
Firewall Rule		LAN to WAN IPv4 and IPv6 rule
SPI Firewall		IPv4 SPI firewall
Access Control		Packet Filter, URL Blocking, MAC Filter
IPv6 security		Simply security / Ingress Filtering
Passthrough / ALG		PPTP/L2TP/IPsec Passthrough, SIP / RTSP ALG
Routing		
Feature		Brief description
Static Route		IPv4 / IPv6 static route
VPN (server & clients)		
Feature		Brief description
IPsec	IKE version	IKEv1 / IKE v2
	IPSec Mode	Tunnel mode / Transport mode
	IKE Protocol	ESP / AH
	Encryption Method	DES / 3DES / AES128 / AES 192 / AES 256
	Authentication Algorithm	MD5 / SHA-1 / SHA-2 / SHA256 / SHA512
	DH Group	Group 1, 2, 5, 14, 15, 16, 17, 18
	Authentication Method	Pre-Share Key
	IPsec NAT-T	Support
L2TP	Support mode	Server / Client
	Working Mode	Route / NAT mode
	Authentication Protocol	PAP / CHAP / MS-CHAP / MS-CHAPv2
	User Authentication	Local database

	Encryption	MPPE 40 bit / 128 bit
	L2TP over IPsec	IKE v1 / IKE v2
PPTP	Support Mode	Server / Client
	Working Mode	Route / NAT mode
	Authentication Protocol	PAP / CHAP / MS-CHAP / MS-CHAPv2
	User Authentication	Local database
	Encryption	MPPE 40 bit / 128 bit
OpenVPN	Support Mode	Server / Client
	Duplicate CN	Support
	Tunnel Type	Full / Split tunnel
	Authentication Algorithm	AES 128 / 192/ 256
	Hash Method	SHA 1 / SHA 256 /SHA 512
	Authentication type	Certification / Username and Password
	Authentication Server	Local User database
	User .opvn file	Support user .opvn file download
WireGuard	Support Mode	Server / Client
System Log		
Feature		Brief description
Device logging		Download system log
Syslog server		External syslog server support
Email Notification		Support
USB		
Feature		Brief description
File access		SAMBA, FTP, Web file sharing
Mobile dongle		D501, DWM-222W
User Authentication		
Feature		Brief description
Local User Database		Support Max. 20 entry
Administration		
Feature		Brief description
Reset to Default		Press the reset button for 5 second, it will be reset to default
Configuration		Backup / Restore device configuration
Reboot		Manual Reboot / Auto Schedule Reboot
NTP Server		Manual / Google NTP Server
System time		Get Date and Time by Internet Time server
Firmware Upgrade		Local Firmware Upgrade

3.4 Electrical Characteristic

Item		Specification	Remark
Power Input		DC 12V/4A +/- 5%	

4.Environmental Requirement

Item		Specification	Remark
Operating Temp.		Temperature: 0 °C ~ 40 °C, Humidity: 10%~90% non-condensing	
Storage Temp.		Temperature: -20 °C ~ 65°C, Humidity: 5~95% non-condensing	

RoHS	RoHS Compliant	
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5. ID/Mechanical

Item	Specification	Remark
Dimension	137 x 146 x 205 mm	
Weight	660 g	

6. Package

Item	Specification	Remark
Device	1 x DBR-560	
Power Adapter	1 x 12V/4A Power adaptor	
Ethernet Cable	1 x one-meter CAT5e ethernet cable	
QSG	Quick Setup Guide	

7. Certifications

Item	Specification	Remark
Certifications	➤ CE ➤ FCC	