DATACOM


# DM956 4GT 3000

## WIRELESS ROUTER WIFI6

DATASHEET

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# DM956 4GT 3000

## AX3000 Dual Band Wireless Gigabit WI-FI6 Router

### AX3000 GIGABIT WIRELESS ROUTER WITH 4 HIGH-PERFORMANCE ANTENNAS FOR LONG-RANGE WIFI

The DM956 features the latest generation of 802.11ax Wi-Fi technology, providing an extremely fast, reliable, and high-capacity network. In addition, it has backward compatibility with previous versions of Wi-Fi 802.11 a/b/g/n/ac.

On the Wi-Fi6 AX3000, the 2.4GHz band enables a rate of up to 574Mbps, while the 5GHz band using a 160Mhz wide channel offers throughput of up to 2400Mbps

Datacom's AX3000 wireless router has four external antennas that emit Wi-Fi signals to all end-customer environments. The DM956 eliminates shadow zones from the environment and keeps the user connected by enjoying fast Wi-Fi access, whether it's in the living room, kitchen, bedroom or any room in their home or office.

It uses 1024-QAM modulation, which allows each symbol to carry 10 bits instead of 8 bits. Therefore, it is possible to have a 25% increase in bandwidth compared to 802.11ac that uses 256-QAM modulation.

Making use of multi-antenna MU-MIMO and OFDMA technologies, the DM956 operates simultaneously with multiple devices. OFDMA can split a single spectrum into multiple units, allowing devices to share the transmission stream, increasing efficiency, reducing congestion and latency These features ensure that all connected devices gain access to data faster, making the user connectivity experience much more efficient than in traditional wireless networks.

It supports the mesh network solution through the *Easymesh* standard, extending the network coverage. In this solution, the DM956 4GT 3000 routers connect and distribute the signal forming a single network, providing a quality signal in places of low signal quality.

In addition to having advanced wireless technology, the DM956 has four Gigabit Ethernet ports, which can be configured as WAN or LAN, allowing the user to directly connect their wired devices and obtain maximum network performance.

The DM956 also has the remote management feature through the TR-069 protocol. With this feature, the ISP can manage all the routers installed on its subscribers through the cloud. Management by the TR-069 enables the ISP to perform diagnostics and tests remotely, reducing operational costs.

- Dual band WiFi 2.4GHz and 5GHz
- Rate up to 3000Mbps:
  - 600Mbps at 2.4GHz
  - 2400Mbps at 5GHz
- 4 external 5dBi antennas
- EasyMesh
- 2x2 MU-MIMO and *Beamforming*
- OFDMA
- Long-range WiFi
- Multiple SSIDs
- 1 Gigabit Ethernet WAN
- 3 Gigabit Ethernet LAN ports
- IPv4/IPv6
- Firewall
- DMZ
- Web Management
- Management by TR-069
- Preset Settings

# FEATURES

## WIRELESS (WI-FI)

| Item | Feature |
|---|---|
| Operating Frequencies | Dual band: 2.4GHz and 5GHz |
| Radio Mode | 2.4GHz – 2x2 MIMO (two external antennas)<br>5GHz – *2x2 MU-MIMO beamforming* (two external antennas)<br>OFDMA |
| Standards | 2.4GHz - IEEE 802.11 b/g/n/ax<br>5GHz - IEEE 802.11 a/n/ac/ax |
| Bandwidth | 2.4GHz - 20.40 MHz with 20/40 MHz coexistence<br>5GHz - 20, 40, 80, 160 MHz |
| Channels of Operation | 2.4GHz – 1 to 13 and Auto mode<br>5GHz – 36, 40, 44, 48, 52, 56, 60,64, 149, 153, 157, 161 and auto mode |
| Baud Rate | Up to 3000Mbps:<br>2.4GHz – up to 600 Mbps (802.11ax)<br>5GHz – up to 2400 Mbps (802.11ax) |
| Wi-Fi power | **For 2.4Ghz**<br>23dBm ~ 200mW (802.1b)<br>22dBm ~ 160mW (802.1g)<br>20dBm ~ 100mW (802.1n)<br>17dBm ~ 50mW (802.1ax)<br><br>**For 5Ghz**<br>22dBm ~ 160mW(A)<br>20dBm ~ 100mW(N)<br>18dBm ~ 64mW(ac)<br>17dBm ~ 50mW(ax) 80M<br>17dBm ~ 50mW(ax) 160M |
| Wi-Fi Sensitivity | **For 2.4Ghz**<br>11g 54M: -74dBm<br>11n HT20 MCS7: -72dBm<br>11n HT40 MCS7: -68dBm<br>11ax HESU40 MCS11: -60dBm<br><br>**For 5Ghz**<br>11to 54Mbps: -72dBm<br>11ac HT20 MCS7: -64dBm<br>11ac HT40 MCS7: -61dBm<br>11ac HT80 MCS9: -59dBm<br>11ax HESU80 MCS11: -56dBm<br>11ax HESU160 MCS11: -54dBm |
| Connected Devices | Up to 64 devices connected simultaneously (32 at 2.4Ghz and 32 at 5Ghz) |
| Safety | WPA-PSK/WPA2-PSK and WPA/WPA2<br>64/128-bit TKIP/AES<br>WPS - Wi-Fi Protected Setup |
| Access Control | MAC Allow/Block List |
| QoS | WMM - Wi-Fi Multimedia |
| Mode of Operation | Router |

## INTERFACES WAN

| Item | Feature |
|---|---|
| Quantity | 1 |
| Pattern | 10/100/1000 Base-T via RJ-45 connector |
| IPv4 Connections | DHCP Client, PPPoE Client, Static IP, DHCP Server, Static IPv4 |
| IPv6 Connections | DHCPv6 Server, SLAAC+Stateless DHCP, PPPoE Client, and IPv6 Static |

## INTERFACES LAN

| Item | Feature |
|---|---|
| Quantity | 3 |
| Pattern | 10/100/1000 Base-T via RJ-45 connector |
| IPv4 Connections | DHCP Client, PPPoE Client, Static IP, DHCP Server, Static IPv4 |
| IPv6 Connections | DHCPv6 Server, SLAAC+Stateless DHCP, PPPoE Client, and IPv6 Static |
| DNS | DNS Proxy |

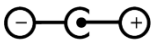
## SOFTWARE

| Item | Feature |
|---|---|
| Safety | Port Forwarding<br>MAC Filtering<br>URL Filtering<br>IP Filtering<br>DMZ |
| Mesh | EasyMesh standard support (Controller and Agent Mode)<br>Supports up to 2 synchronized agents<br>EasyMesh backhaul over Wi-Fi and/or Cable (hybrid mode)<br>EasyMesh Routers Compatible Agents: DM956 4GT 3000<br>Compatible EasyMesh Controller Devices: DM956 4GT 3000 |
| Management | IPv4 management via WEB interface (HTTP)<br>Remote Management by TR-069<br>Two levels of access to the web interface<br>Backup/Load Configuration<br>Factory Reset<br>Preset Settings<br>NTP<br>Syslog |
| Troubleshooting | Ping IPv4/IPv6<br>Traceroute IPv4/IPv6<br>Nslookup<br>Loopback Detection |
| Routing | NAT |

# STANDARDS

| Group | Standards |
|---|---|
| IEEE | IEEE 802.11a: Wi-Fi standard for 5 GHz frequency with a capacity of up to 54 Mbps.<br>IEEE 802.11b: Wi-Fi standard for 2.4 GHz frequency with a capacity of up to 11 Mbps.<br>IEEE 802.11g: Wi-Fi standard for 2.4 GHz frequency with capacity up to 54 Mbps<br>IEEE 802.11n: Wi-Fi standard for 2.4 GHz and/or 5 GHz frequency capability up to 150 to 600 Mbps<br>IEEE 802.11ac: Wi-Fi standard for 5 GHz frequency capacity up to 1300 Mpbs<br>IEEE 802.11ax: Wi-Fi standard for 2.4Ghz frequency and 5 GHz capacity up to 3000 Mpbs<br>IEEE 802.11i: 802.11 Protocol Security Standard – WEP/WPA/WPA2 (TKIP/AES)<br>IEEE 802.1D MAC bridges<br>IEEE 802.3i 10BASE-T 10Mbit/s (1.25 MB/s) over twisted pair<br>IEEE 802.3u 100BASE-TX Fast Ethernet at 100 Mbit/s (12.5 MB/s) w/auto negotiation<br>IEEE 802.3ab 1000BASE-T Gbit/s Ethernet over twisted pair at 1 Gbit/s (125 MB/s) |
| IETF | RFC2131 – Dynamic Host Configuration Protocol<br>RFC3315 – Dynamic Host Configuration Protocol for IPv6 (DHCPv6)<br>RFC 2516 – A Method for Transmitting PPP Over Ethernet (PPPoE)<br>RFC 5072 – IP Version 6 over PPP<br>RFC 4862 – IPv6 Stateless Address Autoconfiguration<br>RFC 3633 – IPv6 Prefix Options for Dynamic Host Configuration Protocol (DHCP) version 6<br>RFC2030 – Simple Network Time Protocol (SNTP) Version 4 for IPv4, IPv6 and OSI<br>RFC2929 – Domain Name System (DNS) IANA Considerations<br>RFC3022 – Traditional IP Network Address Translator (Traditional NAT)<br>RFC6296 – IPv6-to-IPv6 Network Prefix Translation<br>RFC6970 - Universal Plug and Play (UPnP) |
| Broadband Forum | TR-069: CPE WAN Management Protocol v1.1<br>TR-098: Internet Gateway Device version 1 |
| ANATEL | ANATEL – Act 1120 - Technical Requirements for Electromagnetic Compatibility for the Evaluation of Telecommunication Product Conformity<br>ANATEL – Act 950 - Requirements for the Evaluation of the Conformity of Telecommunications Equipment with respect to the Aspects of Electrical Safety |

# PHYSICAL CHARACTERISTICS

| Hardware | | DM956 4GT 3000 |
|---|---|---|
| Dimensions | Height | 28 mm |
| | Width | 220 mm |
| | Depth | 145 mm |
| Operating Conditions | Temperature range | $0^{o}$C to $40^{o}$C |
| | Relative humidity | 10% to 95%, non-condensing |
| Power Supply | Entry | 100 Vac to 240 Vac, 50 to 60Hz |
| | Output | 12 Vdc, 1000mA |
| | Average consumption | < 12 W |
| | Polarity |  |
| | LAN / WAN | 4 x 10/100/1000 Base-T ports |
| | Antennas | 2 x 2.4GHz antennas and 2 x 5GHz antennas, with 5dBi gain |

# ORDERING INFORMATION

| Model | Description | Photo |
|---|---|---|
| DM956 4GT 3000<br>*825029.xx* | DM956 4GT 3000 - AX3000 dual band 2.4GHz and 5GHz WiFi router in plastic enclosure for residential use, with 1 Gigabit Ethernet WAN interface and 3 Gigabit Ethernet LAN interfaces. A 100-240Vac power supply and a network cable are included. |  |

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