

# DATAKOM



## DM-AP 610

ACCESS POINT WIRELESS INDOOR WIFI6 AX1800

DATASHEET

# DM-AP 610

## AP Wireless Indoor WI-FI6 AX1800

### AX1800 GIGABIT INDOOR WIRELESS AP FOR ENTERPRISE APPLICATIONS

Aimed at the corporate market, DATACOM Access Points (AP) are an ideal wireless broadband access network solution for small, medium and large companies, schools, hotels, hospitals, rural communities, digital cities, among others. The solution allows the deployment of wireless networks with multiple Access Points, ensuring coverage of large areas, including multiple sites and high traffic and user density.

The DM-AP 610 has built-in Wi-Fi6 AX1800 technology, optimizes the user experience by maximizing Wi-Fi utilization and substantially reducing competition for transmission time between customers. It offers Orthogonal Frequency Division Multiple Access (OFDMA) and Multiple Inputs and Multiple Outputs for Multiple Users (MU-MIMO). With up to 4 spatial streams (4SS) and 80 MHz (HE80) channel width, the DM-AP 610 achieves a data rate of up to 1201 Mbps in the 5 GHz band and 574Mbps in 2.4 Ghz,

APs can be managed on-premises (FAT mode) or managed AP (FIT or Cloud mode) remotely through a platform with cloud access. This management platform has advanced functionalities for the deployment of large wireless networks, with high scalability. The platform allows you to manage thousands of APs, and each AP allows the simultaneous connection of up to 256 users.

The DM-AP 610 supports Wi-Fi Association (WFA) Hotspot 2.0 and automatic identity recognition, providing customers with a seamless transition from cellular to Wi-Fi.

Supports roaming between DM-APs via 802.11k/v/r standards, enabling users to have an uninterrupted connection experience when moving around corporate environments.

In addition to having advanced wireless technology, the DM-AP 610 has a 10/100/1000 Base-T Ethernet WAN (RJ45) port with PoE-in for receiving the internet signal and a console port for local configuration.

- Dual band WiFi 2.4GHz and 5.8GHz
- Rate up to 1775Mbps: - 574Mbps at 2.4GHz - 1201Mbps at 5.8GHz
- Band Steering
- 2x2 MU-MIMO and *Beamforming*
- 4 internal antennas
- Roaming
- OFDMA
- Long-range WiFi
- Multiple SSIDs
- WAN Gigabit Ethernet
- FIT/FAT mode
- IPv4/IPv6
- Web Management
- Cloud Controller (DmCloud)

# FEATURES

## WIRELESS (WI-FI)

| Item                  | Functionality   |
|-----------------------|---|
| Operating Frequencies | Radio 1, 802.11b/g/n/ax:<br>- 2.400 GHz to 2.4835 GHz, ISM  |
|                       | Radio 2, 802.11a/n/ac/ax:<br>- 5.150 GHz to 5.250 GHz, U-NII-1<br>- 5.250 GHz to 5.350 GHz, U-NII-2A<br>- 5.470 GHz to 5.725 GHz, U-NII-2C<br>- 5.725 GHz to 5.850 GHz, U-NII-3/ISM   |
| Radio Mode            | Radio 1: 2.4 GHz, two spatial streams, 2x2 MU-MIMO<br>Radio 2: 5 GHz, two spatial streams, 2x2 MU-MIMO  |
| Throughput            | Maximum Combined Data Rate: 1.775 Gbps<br>2.4Ghz Radio: 574Mbps<br>5Ghz Radio: 1201Mbps   |
| Data Rate             | The following data rates in Mbps, compatible with the 802.11 standard, are supported:<br><br>2.4 GHz Radio:<br>- 802.11b: 1, 2, 5.5, 11<br>- 802.11g: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54<br>- 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40)<br>- 802.11ax: 8.6 to 574 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE40)<br><br>5 GHz Radio:<br>- 802.11a: 6, 9, 12, 18, 24, 36, 48, 54<br>- 802.11n: 6.5 to 300 (MCS0 to MCS15, HT20 to HT40)<br>- 802.11ac: 6.5 to 867 (MCS0 to MCS9, NSS = 1 to 4, VHT20 to VHT80)<br>- 802.11ax: 8.6 to 1.201 (MCS0 to MCS11, NSS = 1 to 2, HE20 to HE80) |
| Transmit power        | 2.4 GHz radio: 26 dBm (23 dBm per channel)<br>5GHz radio: 26 dBm (23 dBm per channel)   |
| Radio technology      | 802.11b: Direct-Sequence Spread-Spectrum (DSSS)<br>802.11a/g/n/ac: Orthogonal Frequency-Division Multiplexing (OFDM)<br>802.11ax: Orthogonal Frequency Division Multiple Access (OFDMA)<br>A-MPDU and A-MSDU aggregation for 802.11n/ac/ax<br>Dynamic Frequency Selection (DFS)   |
| Types of modulation   | 802.11b: BPSK, QPSK, CCK<br>802.11a/g/n: BPSK, QPSK, 16-QAM, 64-QAM<br>802.11ac: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM<br>802.11ax: BPSK, QPSK, 16-QAM, 64-QAM, 256-QAM, 1024-QAM   |

## BLUETOOTH INTERFACE

| Item           | Functionality  |
|----------------|--|
| Type           | Bluetooth 5.1  |
| Antenna        | 1x onboard omnidirectional antenna with 2.4dBi gain                |
| Transmit power | 17 dBm (GFSK)<br>14 dBm ( $\pi/4$ -DQPSK, 8-DPSK)                  |
| Sensitivity    | -95.5 dBm (DH5)<br>-95 dBm ( $\pi/4$ -DQPSK)<br>-87.5 dBm (8-DPSK) |

## INTERFACES

| Item          | Functionality  |
|---------------|--|
| Interface WAN | 1x RJ45 10/100/1000Base-T Ethernet port with auto-negotiation<br>- Compliance with IEEE 802.3af (PoE) standard<br>- MDI/MDIX automatic crossover<br>- PoE-PD: 54 V DC (nominal) 802.3af/at/bt (Class 3 or higher)<br>- 802.3az EEA |
| Console       | 1x RJ45 console port   |
| Status Led    | 1 x Multi-color System Status LED.   |
| Buttons       | 1x Reset Button  |

## WLAN

| Item                    | Functionality   |
|-------------------------|---|
| Connected Devices (STA) | Up to 256 devices (128 per radio)   |
| BSSIDs                  | Up to 32 (16 per radio)   |
| STA Management          | SSID hiding<br>Band steering<br>Each SSID can be configured with authentication mode, encryption mechanism, and VLAN attributes.<br>Intelligent Remote Sensing Technology (RIPT)<br>Intelligent customer identification technology<br>Intelligent load balancing based on the amount of STA or traffic. |
| STA Limitation          | SSID-based STA throttling<br>Radio-based STA limitation   |
| Bandwidth Throttling    | STA/SSID/AP-based rate limiting   |
| Wireless Roaming        | L2 and L3 Roaming   |

## SAFETY

| Item                          | Functionality   |
|-------------------------------|---|
| Authentication and Encryption | Remote Authentication Dial-In User Service (RADIUS)<br>PSK, PPSK, web, 802.1X, MSCHAPv2, PEAP, EAP-SIM, EAP-AKA, EAP-PEAP, EAP-TLS, EAP-TTLS,<br>WPA, WPA2, and WPA3 authentication<br>Data encryption: WEP (64/128-bit), WPA-TKIP, WPA-PSK, WPA2-AES, WPA3<br>Captive Portal |
| Data frame filtering          | Allowlist, static blocklist, and dynamic blocklist  |
| WIDS                          | WIDS (Wireless Intrusion Detection System)<br>User isolation<br>Detection and Containment of Rogue Access Points  |
| ACL                           | Dynamic Access Control List (ACL) Assignment:<br>- Time-interval-based ACL assignment<br>- Full entry (ACL) assignment based on MAC addresses<br>- Execution of pr-configured ACLs (input index) based on MAC addresses   |
| CPP                           | Supported   |
| NFPP                          | Supported   |

## ROUTING AND SWITCHING

| Item        | Functionality   |
|-------------|---|
| IP Services | Static IPv4 address and DHCP-assigned IPv4 address<br>DHCP Snooping, Option 82, Option 43, DHCP Server, DHCP Client<br>Dual Stack IPv4/IPv6 |
| Multicast   | Multicast-to-unicast conversion   |
| IPv6        | IPv6 addressing, Neighbor Discovery (ND), ICMPv6, IPv6 Ping<br>IPv6 DHCP Client   |
| IP Routing  | IPv4/IPv6 static routing  |
| VPN         | PPPoE Client<br>IPsec VPN, up to five IPsec tunnels   |
| QoS         | Fair schedule<br>Rate LimitSmart Rate Control<br>STA Fair<br>DSCP<br>WLAN QoS   |

## MANAGEMENT

| Item   | Functionality   |
|--|---|
| Network Management                           | SNMP v1/v2c/v3<br>Syslog<br>Debugging<br>CAPWAP   |
| User Access Control                          | Console, SSH, and Telnet-based management, FTP Client e TFTP Client   |
| Switchover between Fat, Fit, and cloud modes | When the AP is in Fit mode, it can be switched to Fat mode via an AC controller.<br>When the AP is in Fat mode, it can be switched to Fit mode via the console port or Telnet mode.<br>When the AP is in cloud mode, it can be managed through DmCloud. |

## PHYSICAL CHARACTERISTICS

| Item                 | Functionality   | Specification                             |
|----------------------|---|---|
| Dimensions           | Height  | 49 mm                                     |
|                      | Width   | 220 mm                                    |
|                      | Depth   | 220 mm                                    |
|                      | Weight  | Device: 0.6kg<br>Mounting bracket: 0.07kg |
| Mounting             | Wall or Ceiling (A mounting kit is shipped along with the device)   |   |
| Operating Conditions | Temperature range   | -10°C to 50°C                             |
|                      | Relative humidity   | 5% to 95%, non-condensing                 |
| Power Input          | <p>The AP supports the following two power supply modes:</p> <ul style="list-style-type: none"> <li>- 48V DC/0.6A power input via DC connector: The DC connector accepts a 2.1mm/5.5mm center-positive circular plug. A DC power adapter needs to be purchased separately.</li> <li>- PoE input via PoE-in port: The power source equipment (PSE) complies with the IEEE 802.3af/at/bt standard (PoE/PoE+/PoE++).</li> </ul> <p>Observation:</p> <ul style="list-style-type: none"> <li>- If both DC power and PoE are available, DC power is preferred.</li> </ul> |   |
| Power Consumption    | Maximum power consumption: 12.95 W  |   |

|                   |  |  |
|-------------------|--|--|
|                   | <ul style="list-style-type: none"> <li>- DC powered: 12.95W</li> <li>- Powered by PoE (802.3af): 12.95W</li> <li>- Powered by PoE+ (802.3at): 12.95W</li> <li>- Powered by PoE++ (802.3bt): 12.95W</li> <li>- Standby mode: 6 W</li> </ul> |  |
| <b>MTBF</b>       | 200,000 hours (22 years) at an operating temperature of 25°C.  |  |
| <b>Interfaces</b> | WAN  | 1x 10/100/1000 Base-T port   |
|                   | Antennas   | 2 x 2.4GHz antennas with 2.8dBi gain and<br>2 x 5GHz antennas with 3.6dBi gain |



# STANDARDS

| Group  | Standards  |
|--|--|
| IEEE   | IEEE 802.11a: Wi-Fi standard for 5 GHz frequency with a capacity of up to 54 Mbps.               |
|  | IEEE 802.11b: Wi-Fi standard for 2.4 GHz frequency with a capacity of up to 11 Mbps.             |
|  | IEEE 802.11g: Wi-Fi standard for 2.4 GHz frequency with capacity up to 54 Mbps                   |
|  | IEEE 802.11n: Wi-Fi standard for 2.4 GHz and/or 5 GHz frequency capability up to 150 to 600 Mbps |
|  | IEEE 802.11ac: Wi-Fi standard for 5 GHz frequency capacity up to 1300 Mbps                       |
|  | IEEE 802.11ax: Wi-Fi standard for 2.4GHz frequency and 5 GHz capacity up to 1800 Mbps            |
|  | IEEE 802.11i: 802.11 Protocol Security Standard – WEP/WPA/WPA2 (TKIP/AES)                        |
|  | IEEE 802.1D MAC bridges  |
|  | IEEE 802.3i 10BASE-T 10Mbit/s (1.25 MB/s) over twisted pair                                      |
|  | IEEE 802.3u 100BASE-TX Fast Ethernet at 100 Mbit/s (12.5 MB/s) w/auto negotiation                |
| IEEE 802.3ab 1000BASE-T Gbit/s Ethernet over twisted pair at 1 Gbit/s (125 MB/s) |  |
| IEC  | EN 55032   |
|  | EN 55035   |
|  | EN 61000-3-3   |
|  | EN IEC 61000-3-2   |
|  | EN 301 489-1   |
|  | EN 301 489-3   |
|  | EN 301 489-17  |
|  | EN 300 328   |
|  | EN 301 893   |
|  | EN 300 440   |
|  | FCC Part 15  |
|  | EN IEC 62311   |
|  | IEC 62368-1  |
|  | EN 62368-1   |
| Compliant  | Wi-Fi Alliance:  |
|  | - 2.4 GHz, 5 GHz Spectrum Capabilities   |
|  | - Wi-Fi CERTIFIED a, b, g, n, ac, ax (6)   |
|  | - WPA2-Enterprise™ 2018-04   |
|  | - WPA2-Personal™ 2021-01   |

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- WPA3-Enterprise™ 2020-02
  - WPA3-Personal™ 2020-12
  - WPA-Enterprise™
  - WPA-Personal™
  - WMM®, Wi-Fi Agile Multiband™
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**ANATEL**

ANATEL – Act 1120 - Technical Requirements for Electromagnetic Compatibility for the Evaluation of Telecommunication Product Conformity


ANATEL – Act 950 - Requirements for the Evaluation of the Conformity of Telecommunications Equipment with respect to the Aspects of Electrical Safety

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For information on the approved product, visit the website: <https://sistemas.anatel.gov.br/sch>



# ORDERING INFORMATION

| Model                                  | Description   | Photo   |
|--|---|---|
| <b>DM-AP 610</b><br><i>825,8037.xx</i> | DM-AP 610 – AX1800 dual-band Wi-Fi 6 (802.11ax) indoor wireless AP with up to four spatial streams. Up to 1.775 Gbps data rate, 1x 10/100/1000Base-T uplink port, supports PoE and DC power. The PoE injector is sold separately and can be purchased from Datacom. The DC power adapter must be purchased separately from a third-party vendor (if necessary). |  |

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