

xMAP 802.11ax MULTIFUNCTION ACCESS POINT



The xMAP is foundational to Miltope's software-driven platform for wireless data transmission in the aircraft cabin. Whether it's streaming rich cached content, email, the automated transmission of cabin IoT or crew communications, our software-adaptable wireless infrastructure manages and optimizes data flow and cybersecurity throughout an aircraft and fleet.

xMAP is the 5th generation culmination of our experience designing and producing more than 20,000 airborne wireless access points over the last 20 years.

xMAP Highlights:

802.11ax: Exceptional performance for the dense aircraft cabin environment. Incorporates radios configurable in 2.4 GHz, 5 GHz and 6 GHz

Network Optimization: Mesh and Load Balancing with Automatic Roaming between access points for optimized wireless cabin communications.

Cybersecurity: Advanced cyber security intrusion detection protecting network communications. (Optional)

Hotspot 2.0: Automatic roaming across 802.11 wireless access point networks. (Optional)

Server: Embedded SSD (up to 8 TB) with server application software providing distributed content caching. Employs powerful processing for fast access across the cabin network and managing 50 plus simultaneous high bandwidth video streams. (Optional).

WPA3: The latest 802.11 wireless connectivity security protocol.

Multifunction: Server, Hotspot 2.0, Cybersecurity, Wireless Access Point, and more.

5G/LTE: Enabling 5G and LTE commercial cellular connectivity utilizing dual SIM cards (optional) for management of SATCOM and ATG broadband connectivity.

xMAP Features and Functions:

- IEEE 802.11ax Multi-User MIMO (MU-MIMO)
- Multiple 4x4 MIMO antenna arrays supporting 2.4GHz, 5 GHz, and 6 GHz frequencies.
- Optimized for dense aircraft cabin installations
- Advanced Cybersecurity for early intrusion detection and protection.
- Active Network Optimization
- Hotspot 2.0 roaming (PassPoint with Optional Captive Portal)
- WPA3 wireless connectivity security protocol
- Local Embedded Data Storage
- Integrated antenna assembly reduces cost, weight & size
- Automatic WiFi Power Control & Channel Allocation
- Auto Load Balancing & Interference Mitigation
- Automatic Failure Recovery
- Global Country Radio Certifications
- Up to 8 concurrent profiles & 32 VLANs (IEEE 802.1q) for separate user networks
- Quality of Service (QoS) monitoring and reporting. Guaranteed QoS per profile.

SPECIFICATIONS:

FEATURES:

- ARINC 763-3, 836, and 628a Part 1
- Loadable software
- Compact, waterproof design
- Proven reliability, No maintenance
- IP strap pin configuration allows physical control of the IP address of multiple xMAPs

STANDARD WIRED INTERFACES:

- ETHERNET: Dual 10/100/1000 GbE with PoE 802.3bt and Dual 10 GbE. xMAP Fail-Over Recovery.
- DISCRETES: PWR On and RF Enabled control inputs IP STRAPPING: Control IP address for up to 8 xMAPs

SECURITY/VPN:

- WPA3
- VPN: IPSec with IKEv1, IKEv2, NAT Traversal; SSLv23 Open VPN client and server, PPTP, L2TP;
- 5 VPN Tunnels
- ENCRYPTION: DES, 3DES and AES AUTHENTICATION: RADIUS, TACACS+, SCEP MAC Address Filtering; VLAN support; Ethernet Isolation Stateful inspection firewall with scripting

ROUTER/FIREWALL:

- NAT, NAPT, Ethernet bridging Routing: PPP, PPPoE, GRE, RIP, OSPF, SRI, BGP, iGMP (multicast) IP Failover: VRRP, VRRP+TM; RSTP DHCP, Dynamic DNS client

MANAGEMENT:

- HTTP, HTTPS SMTP, SNMP (v1/v2c/v3), SSH CLI, and REST, and SOAP (Optional)

PHYSICAL:

- Weight: Standard AP configuration: 5.0 lbs Expanded Server configuration: 7.0 lbs Dimensions: 2.90" (74 mm) H x 8.89" (226 mm) L x 6.39" (162mm) W Mounting plate 11.50" (292 mm) L x 6.97" (177 mm) W

DO-160G CERTIFICATION SUMMARY:

THERMAL:

DO160G, Section 4, Category A2

VIBRATION:

DO160G, Section 8, Category R, curve C/C1

POWER INPUT:

DO160G, Section 16, Category A (WF) for AC

RADIATED RF EMISSIONS:

DO160G, Section 21, Category M plus HF notch

SYSTEM SOFTWARE ARCHITECTURE:

Platform consisting of 'Trusted Execution' and 'User Domains':

- Provides Virtual Working Environments that separates and isolates application software.
- Files and Applications for intended users in their secure environments.
- Content and data within a single box.
- Distribution and control at the edge.
- Mesh and clustering distribution.
- Distributive certificates for application and software security.
- Software secure remote distribution and management.
- Isolation of systems with virtual applications.

Software Configuration Management:

- Field Loadable Software (Simple TFTP and ARINC 615A)
- Software part identification per ARINC 665
- Customer modifiable Default Configuration File
- Software functions enabled/disabled with Operation Program Code (OPC)

PRELIMINARY: Subject to change without notice