team2tech

Technical data sheet

MLX100 LTE / WiFi / Satcom Router

MLX100 LTE / WiFi / Satcom Router

Airbone 5G/4G/WiFi/LAN/Satcom MultiWAN Router with GNSS Receiver & SSD

The MLX100 Router is a multipurpose cell-network gateway and MultiWAN Router with integrated WLAN access point for inflight-connectivity applications in helicopters and fixed-wing aircraft.

The MLX100 is available in configurations with integrated cell modems to work as router or gateway as all-in-one cabin-communication device.

The MLX100 works as a stand-alone airborne router/gateway/hotspot. This enables pilots and passengers to connect their wireless handheld devices to the internet.

Featured Multi-WAN interface technology enables integration into installations with SATCOM-systems to enable robust, fast and cost-effective connectivity where cell network infrastructure is temporarily available in mission execution.

The LRU is certified with all product variants, to be operated in-flight and on-ground in harsh aircraft environments.

It is the industry's first fully integrated airborne solution in a light-weight single box. The state-of-the-art CPU architecture provides lowest-possible power consumption and cold operation without cooling requirements. As the system is fully designed by team2technologies for rugged airborne applications we are a valued partner for full integration support and expert-based lifetime assistance.

The MLX100 is a future-proof, smart, secure, reliable and longtime available investment.

The world's most cost-effective all-in-one connectivity solution certified for aircraft installations!

The MLX100 system enables all types of airborne applications for cockpit-, avionics-, cabin- and mission system communications. Typical applications are EFB connectivity, mission system connectivity, emergency medical transport services (EMS/HEMS/telemedicine), passenger connectivity and inflight entertainment (IFEC). In addition, aircraft tracking, asset management or automated aircraft data storage and transmission applications are enabled with our integrated IoTand cloud connector interfaces. Another use case is unattended wireless Inflight entertainment content ontransfer from and to airliner applications.

Features

- **Super agile cell network routing & operation**
- **Multi-WAN technology**
- **SATCOM routing integrated**
- **IT-Security certified**
- **4G cell engines (2G fallback) / 5G optional**
- **Diversity or channel aggregation operation**
  - Cat-12 for 600/150Mpbs down/uplink
- **Worldwide band coverage**
  - RF regulatory certifications
  - US carrier certifications
  - Dual SIM-card support
- **Dual band WiFi radio acc. 802.11ac/b/g/n**
- **World coverage GNSS Receiver (GPS/GLONASS/GALILEO/BEIDOU)**
- **Integrated solid state disc (SSD): up to 256GB cap.**
- **ARINC763-3 discrete I/O Interfaces, software programmable**
- **RTCA DO160G certified (for inflight operation)**

Accessories

- **Installation kit**
- **Antenna kits (certified airborne antennas) with (1x1, 2x2, 4x4 MIMO antennas available)**
- **SIM-card services with data packages**
- **Video capture-, transport and management solutions**
- **VPN- and connectivity services**

MLX100 LTE / WiFi / Satcom Router

Technical data

Available variants:

MLX100 Hotspot 1xLTE/1xWiFi	1x LTE engine integrated; 1x dual band WiFi, 2x2 MIMO, 802.11ac/b/g/n
MLX100 Gateway 1xLTE	1x LTE engine integrated; w/o WiFi
MLX100 Gateway 2xLTE	2x LTE engine integrated; w/o WiFi
MLX100 WAP 2xWiFi	2x dual band WiFi radio integrated, 2x2 MIMO, 802.11ac/b/g/n, remote antenna support, w/o WiFi
MLX100 CELL/WiFi/Satcom Router	**2x LTE engine integrated; 1x dual band WiFi, 2x2 MIMO, 802.11ac/b/g/n;**

General data:

Supply voltage & power demand	115VAC/400Hz OR 28VDC, 200ms hold-up, < 14W typical
Cooling	Natural convection
Dimensions	202 x 270 x 52 mm (W x L x H)
Weight	2,000 g to 2,200 g (depending on configuration)
Connectors	ARINC 809/EN4165 (SIM series II connector, 2 cavities); 7 x TNC female antenna jacks
Maintenance / Reliability	On condition / MTBF > 5,000hours

Interfaces:

LAN/WAN ports	1x 100/1000MBit/s Ethernet (EN4165 insert)
I/O ports	2x Discrete OUT acc. ARINC763-3, (LRU STATUS/CONNECTIVITY STATUS)
	2x Discrete IN acc. ARINC763-3, (LRU POWER/CONNECTIVITY)
OS interfaces	1x RS232, console port
Wireless I/O	4x TNC plug cell interface, 4G LTE advanced CAT12 with 2G fallback; up to 2x 600/150 Mbps down/uplink 2x TNC plug WiFI interface acc. IEEE 802.11b/g/n/ac; up to 866Mbps
GNSS receiver	1x TNC plug GNSS interface with GPS/GALILEO/GLONASS/BEIDU coverage active- or passive antenna support (software configurable)
Internal storage	Up to 256GB solid state disc integrated, customizable capacity (default: 128GB cap., 126GB usable)

Services:

Communications	Network gateway link, wired, wireless or cellular based (4G/2G); LAN/WAN bridging to cell networks; Multi-WAN interface routing, WiFi Access Point; WiFi telephony (VoIP); PPP & Multilink PPP protocol (MLPPP); PPPoE dial-up, Dial-in, Dial-out, callback; DHCP server & client, DNS relay, dynDNS-support
Security	openVPN (Client & Server), IPsec, Wireguard, AES encryption; Stateful firewall, Full NAT (port forwarding), Dial-in-authentication; Dial-out-filter; WPA2; rogue detection; WWW-Filter (Black- Whitelist support) *
GUI user interfaces	Configuration, status interface; Link quality and status monitoring web services; GNSS tracking solution with optional Iridium network radio*, Wireless or wired Inflight Entertainment System for customer owned media content (movies & audio media); firmware upload via GUI and cell service (IoT cloud enabled)

Environmental qualification:

Category code acc. RTCA DO-160G:	[B1B1XB1XX]BAB[U2(F/F1)]XXXXXXA[A(WF)XZZXZXX]A[R(WF)B][ZWX][TT]M[A3C3XX][XXXX]XAC

team2technologies

team2applications is a supplier of electronics & system solutions for aerospace and transport applications. The product range covers solutions in the field of connectivity & in-flight entertainment, data communication, data interfaces, onboard computing and IoT edge computing, airborne antenna designs, control-head, as well as heat control systems in various applications. team2 acquired major IPR from a predecessor company with operations in aerospace and transport markets since 1992.

team2 is cooperation partner of EASA Subpart 21J design organizations with EASA Subpart 21G manufacturing and EASA/ FAA Subpart 145 maintenance capabilities for the complete product range.

team2applications GmbH
Bernauerstr. 13b · 94356 Kirchroth · Germany
Phone+49 9428 59490-00 · info@team2tech.de