

E-LINK 1000Q AND 1000Q-ULL

DATASHEET

The E-Link 1000Q Gigabit Ethernet radio is the world's highest performance 70/80 GHz QPSK radio for Ethernet transport. Aviat Network's advanced millimeter technology combines outstanding transmit output power, superior receiver sensitivity and reliable data throughput to provide full duplex, Gigabit Ethernet speeds for high capacity mobile and public networking applications. Low latency 1000Q-ULL model is available for critical time-sensitive applications such as low latency networks.

The E-link 1000Q is the ideal platform for high capacity Ethernet over microwave transport for link distances over several kilometers range, addressing a variety of Ethernet-centric applications, such as 4G/LTE backhaul, small cell or pico cell interconnect, and private/public networking. The 1000Q, operating at QPSK modulation, has the highest available link budget in the market to deliver exceptionally reliable broadband services to mobile, government and businesses users.

Network operators will find the 1000Q attractive for the rollout of 4G/LTE Ethernet-centric applications because of its low latency performance for multimedia applications and light-licensing support to enable rapid deployment. This is particularly important to operators introducing greenfield network buildouts or looking to complement their current microwave network deployments.

The 1000Q delivers the smallest form factor, lightest weight and lowest power consumption in its class. It features a compact lightweight footprint for less visual impact in sensitive locations, and less wind loading for simplified installation on pole-mounts or bracket deployments. With its Power over Ethernet (PoE) connection for data and management, cables are reduced for simplified installation that can be completed in hours instead of days.

APPLICATIONS

- 4G/LTE backhaul
- Small cell/pico cell backhaul
- Local Area Network (LAN) backbone extension between buildings, campuses
- Metro Area Network (MAN) - Combine with fiber and microwave radios to form hybrid networks
- Redundant access/network diversity - Supports temporary and disaster recovery connection
- Fiber alternative - connect to fiber backbone for extension, backup, disaster recovery

LOW LATENCY OPTION - E-LINK 1000Q-ULL MODEL

Ultra low latency option is available for critical time-sensitive applications. This option is also available as an upgrade.

KEY FEATURES

- Long & Extended Range Links with spectrum efficient QPSK modulation
- Highest available E-Band Link Budget
- Proven transparent support of all Ethernet clock synchronization techniques including:
 - Synchronous Ethernet IEEE 1588
 - Adaptive Clock recovery
- Typical link distances exceeds 2mi/3km for 99.99% availability
- Low latency for multimedia applications (<5µs); Ultra low latency option available (<500ns)
- Handles multimedia jumbo packets transparently
- Lightweight, small footprint all outdoor design for ease of installation, maintenance and deployment
- Rapid field replaceable unit with direct slip-fit antenna
- Interference free operation
- Light Licensing
- Simple installation and maintenance using PC or PDA
- Supports Point-to-Point, Repeater and Mesh/Ring network architectures
- Smaller profile reduces wind loading and visual impact –may decrease opposition to “unsightly” wireless installs
- Increased ATPC range decreases interference affecting nearby systems, improves residual BER performance and alleviates up-fade problem
- Power over Ethernet (PoE) on management port, simplifying install to just two cables for data and power/management
- Field replaceable GigE interface eliminates need to open the radio enclosure when changing the interface

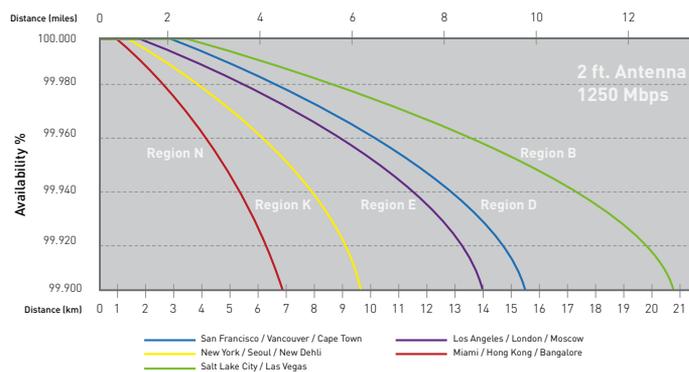
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SPECIFICATIONS

SYSTEM PARAMETERS		1000Q
Frequency Band		71 - 76 GHz / 81 - 86 GHz
RF Interface		FDD / frequency agile (tunable channels)
Modulation		QPSK
Transmit Power Output		+22 dBm
Channel Bandwidth		1000 MHz
ATPC Range		0-30db (1000Q); 0-15 dB (1000Q-ULL)
Low Signal Receiver Threshold (BER @ 1x10 ⁻⁴)		-66 dBm(1000Q); -60dBm/(+/- 2dBm) (1000Q-ULL)
Configurations		Non-Protected, Hot Standby, Repeater, Mesh
Latency		<5µs typical; <500 ns low latency (1000Q-ULL model)
Forward Error Correction		Reed Solomon
TRIBUTARY		
Data Rate		1.25 Gbps full duplex (Ethernet)
Standards Compliance		IEEE 802.3z, 802.3ab
Field Selectable Interface Options		1000BaseTX – Copper RJ-45 (100m) 1000BaseSX – MM Fiber LC connector (550m) 1000BaseLX – SM Fiber LC connector (5000m)
ELECTRICAL / ENVIRONMENTAL		
Input Voltage		-48 VDC / PoE
Power Dissipation		44 watts
Temperature Range		-45°C to +60°C / -49°F to +140°F
Altitude		15000 ft / 4500 m
Humidity		Outdoor Unit All Weather
MANAGEMENT		
Physical Interface		10/100BaseTX – Copper RJ-45 (100m)
Craft Interface		Embedded web based (HTML) server
EMS		SNMPv1, ProVision
PHYSICAL		
Weight		8.5 lbs (3.9 kg)
Dimensions		Diameter 9.9 in (25.4 cm) Height 3.12 in (7.9 cm)
Antenna		1 ft (0.3 m) / 45.0dBi gain or 2 ft (0.6 m) / 51.0dBi gain Fine adjust pole mount fitting 2.3 - 4.5 in. OD
REGULATORY		
US		FCC 1.1310 RF MPE limits; FCC Part 101; IEC 60950-1, IP67
Europe		EN 302 217-3

Availability by ITU-R Rain Region



E-Link 1000 has an integrated 1ft/0.3m or 2ft/0.6m antenna

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