![SensorTec Canada logo]

ST-GB Series

1 GBPS FULL-DUPLEX 70/80 GHZ UNLICENSED PTP LINK

Product Summary

Sensortec ST-GB series millimeter wave radio links represent a new class of feature-rich backbone links for carrier, government and enterprise users.

The ST-GB Series features a full-gigabit, full-duplex throughput with fiber interface using robust BPSK modulation for preserving maximum link budget.

ST-GB Series offers two additional features -(1) adaptive rate adjustment allows rate fallback to 100mbps in cases of adverse RF conditions, using a much smaller channel size and improved Rx sensitivity and (2) AES Encryption for secure transmission of data at line speed and with little latency.

ST-GB-60 Series, shown with 10" integrated antenna

ST-GB series systems are available with either 1FT low profile antennas or 2FT antennas for extended distance coverage.
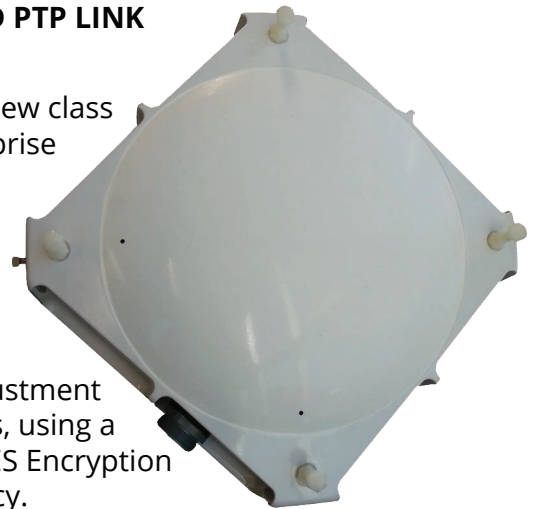
Features and Advantages

- Full-Duplex Gigabit Ethernet - 1Gbps data rate
- Up to 99.999% carrier-grade availability
- Highly secure narrow-beam antenna
- Gigabit Fiber interface (1000base-SX with LC connectors)
- High density deployment without co-location problem
- All-in-one outdoor, compact design-no IDU required
- IP66 Outdoor Rate Enclosure
- Easy antenna alignment using voltmeter RSSI test points
- Secure HTTPS managemnet access
- RADIUS authentication support
- Adaptive Rate Adjustment (ST-GB-A Models only)
- 256-bit AES Encryption (ST-GB-A Models only)

Note: Maximum link distances depend on antenna sizes and your region of deployment. Please consult SensorTec sales and support for guidance on correct choices of equipment.

Applications

- Mobile Backhaul - large capacity backhaul for 4G LTE networks
- Network operator - Gigabit Ethernet backbone
- Government - Video surveillance, traffic monitoring, public safety network backhaul
- Enterprise - Server centralization, remote data storage and backup, lease line replacement
- Education - high capacity campus network for Wi-Fi and security video

TECHNICAL SPECIFICATIONS

	ST-GB-80 Series	ST-GB-80-A Series
Base Rate ACM operation	1000 Mbps	1000 Mbps 100 Mbps
Latency	Less than 40 µsec (GE Mode)	Less than 40 µsec (GE Mode) Less than 220 µsec (FE Mode)
Link Budget GE Mode (1FT / 2 FT) FE Mode (1FT / 2FT)	172 / 186 dB @ 10-12 BER 174 / 188 dB @ 10-6 BER	172 / 186 dB @ 10-12 BER 174 / 188 dB @ 10-6 BER 183 / 197 dB @ 10-12 BER 185 / 199 dB @ 10-6 BER
Frequency Band	72.5 / 82.5 GHz, Full Duplex (FDD)	
Modulation	BPSK with Forward Error Correction RS (204, 188)	
Bandwidth	1.4 GHz	1.4 GHz (GE Mode), 280 MHz (FE Mode)
Min. Distance	328 ft (100m) with 1 FT ant; 1,312 ft (400m) with 2 FT ant	
Ethernet Interface	1000Base-SX with LC connectors, up to 270m with 62.5/125µm MMF, 500m with 50/125µm MMF 10/100Base-TX w/ RJ-45 connector (w/ integrated surge suppressor), up to 100m CAT5 cable Maximum Ethernet frame size — 1632 bytes	
Management	Web-based (HTM) embedded management agent with HTTPS Secure Management Access SNMP Support: MIB II and enterprise MIB Syslog (RFC 3164, RFC 3195) event support RADIUS Authentication Voltmeter test points, receive Signal Level and Link Quality	
Power	-48 VDC input on the radio, AC/DC power supply (100-240 VAC to –48VDC) included Max cable length: 650 ft (200m) with 12AWG, 400 ft (125m) with 14AWG	
Antenna	External 1 FT Cassegrain (V/H), 40 dBi, 0.9º beam	External 2 FT Cassegrain (V/H), 46 dBi, 0.4º beam
Pole Mount	2" - 4.5" diameter pole, wall mount kit included	3.5" - 4.5" diameter pole
Size (h x w x d)	11.5 x 11.5 x 4 in (radio), 20 x 14 x 10 in (1FT Ant), 24 x 24 x 20 in (2FT Ant)	
Weight	8lbs (3.6 kg) for radio, 14 lbs (6.4 kg) for 1FT Ant, 30.5 lbs (13.9 kg) for 2FT Ant	
Wind loading	46 lbs force @ 125 MPH (1FT Ant), 202 lbs force @ 125 MPH (2FT Ant)	
Environmental	-33 to 55 ºC, 100% humidity all weather operation	
Regulatory	US FCC Part 101, EN 302 217-3 V1 3.1, CE Mark EN60950, EN 301 489, EN 62311	
Installation Kit	Voltmeter test cable, power connectors, AC/DC power supply	