



ST-EB Plus

**2.5 / 5 GBPS FULL-DUPLEX
70/80 GHZ PTP LINK**

Product Summary

SensorTec's break-through improvement of ST-EB Series wireless systems provide the ultimate Gigabit backbone capacity for most bandwidth hungry applications for carriers and enterprises. The products operate in 70/80 GHz licensed bands and have different antenna options for various link distance requirements.

EB Plus links now can carry 2.5 Gbps of Full-Duplex traffic each direction for a total of 5 Gbps, highest link capacity offered by any wireless PTP link to date at any frequency band. Through the use of an OMT coupler, one EB PLUS link can carry 5 Gbps full duplex (10 Gbps aggregate) for ultra high-capacity backbone applications.

The huge data carrying capacity of EB Plus links allows transparent CPRI traffic transport up to 2.4576 Gbps as well as OBSAI traffic up to 1.536 Gbps. This allows carriers to carry large capacity LTE traffic within the framework of CPRI / OBSAI protocol environment.

As a true Layer 1 link, the link operates like a fiber optic link with lowest latency possible. At ~50 nanoseconds, the latency through the link is negligibly small compared even with fiber optic cable and is perfectly suited for applications that demand instant transfer of packets such as financial transactions.

Features and Advantages

- Full-Duplex Gigabit Ethernet — 2.5 Gbps
- Aggregate link capacity of 5 Gbps.
- Highly secure, “pencil-beam” antennas—less than 1 deg
- Interference free operation
- High density deployment without co-location problem
- Extremely low latency — 50 nanosecond
- All-in-one outdoor, compact design—no IDU required
- Extreme reliability—up to 99.999%
- IP66 Outdoor Rate Enclosure
- Easy antenna alignment using voltmeter RSSI test points.



**Long Range Version with
2ft Antenna**

Applications

- Enterprise LAN Extension between sites.
- Carrier LTE Fronthaul — seamless transfer of CPRI / OBSAI traffic.
- Low latency links for financial transaction and electronic trading.



**Short Range Version
with 1ft Antenna**

Data Throughput

- 1+0 Single Radio Link

2.5 Gbps, Full Duplex

5 Gbps, Aggregate

- 2+0 Dual Radio Link w/ OMT coupler

5 Gbps, Full Duplex

10 Gbps, Aggregate

Technical Specification

ST-EB PLUS 2.5 Gbps FD — 70 / 80 GHz Licensed Band

System	ST-EB-PLUS-SR	ST-EB-PLUS-LR
Data Rate	2.5 Gbps Full-Duplex (5.0 Gbps, Aggregate) with single radio 1+0 configuration 5 Gbps Full Duplex (10 Gbps Aggregate) with dual radio 2+0 configuration, using OMT coupler	
Output Power	23 dBm (200mW), Typical	
Freq. Range	71.25 — 75.75 / 81.25 — 88.75 GHz	
Bandwidth	2 x 4,500 MHz	
Center Freq.	73.5 GHz / 83.5 GHz	
Noise Figure	9 dB, Typical	
Sensitivity	-51 dBm @ BER = 1E-12	
Modulation	OOK	
Latency	50 nanoseconds	
Management	Local Serial / USB Port	
Interface	10 Gbps Fiber Optic SFT, CPRI / OBSAI	
Antenna gain	43 dBi (1 ft dia)	51 dBi (2 ft dia)
Ant. Beamwidth	0.9 deg	0.5 deg

Technical Specification

Link Distance(1)	99.9%: 2.2 km	99.9%: 3.3 km
Drizzle	99.99%: 1.2 km	99.99%: 1.8 km
Heavy rain	99.999%: 0.7 km	99.999%: 1.1 km
Torrential		
Minimum Link Distance	70m	200m
Operating Temp	-40 to 70°C	
Size: Radio Only	18 x 18 x 10 (cm)	
Size w/ Antenna	33 x 33 x 27 (cm)	62 x 62 x 39 (cm)
Weight	13.2 lbs	37.5 lbs

Note: 1. Please contact SensorTec Sales for finding out appropriate link ranges in your region.



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