

Trinity-316S

Provides robust, high-speed links to far away locations

Operating in the 5 GHz unlicensed band at a data rate up to 245 Mbps aggregated throughput, the Trinity-316S is designed to reliably transport your data, voice and video communications in virtually any environment – high-interference and long-range line-of-sight paths, over water and open terrain, even in extreme weather conditions.

TDD based software

Trinity-316S uses TDD technology to emulate full duplex traffic over a half duplex communication link. The radio link operates symmetric or asymmetric and optimizes the link for low latency. The proprietary TDD-based protocol greatly reduces the impact of long distances compared with other technologies. By using TDD based technology we enhance and strengthen the link against interference.

TDD Synchronization

Using the Repeatit SyncMaster-300, radio synchronization with GPS can be done with superb performance. Both together or separate between units at one or several Point to Point and Multipoint sites, also possible.

TDD Multipoint support

Trinity-316S can be configured to run multipoint with up to 16 clients. In multipoint mode 16 timeslots are allocated and each client can be assigned 1-8 slots. For example using four clients, the clients can be assigned 8-4-2-2 timeslots getting 50/25/12.5/12.5% of the capacity.

High interference resistance

Trinity-316S uses advanced interference resistance techniques to assure excellent operation in harsh conditions in licensed or unlicensed bands. Combined with OFDM, Trinity-316S uses MIMO 2x2 and antenna diversity technology to achieve wireline speeds over radio. The built in antenna is dual polarised to achieve either higher throughput with dual streams or better link budget with single stream.

Configurable QoS

Trinity-316S uses four transmit queues to prioritize traffic, the classification is based on DiffServ and/ 802.1p. The classification is configurable to give the user full freedom of how the traffic should be prioritized.



Product Highlights

- 245 Mbps aggregated throughput
- Up to 80/20 asymmetrical traffic
- 5.150–5.845 GHz
- 16 dBi Dual Polarized antenna
- TDD Synchronization
- TDD Multipoint support (up to 16 units)
- Variety of channel widths: 5/10/20/40 MHz
- Build-in RF ESD/Surge protection
- Easy alignment with LED
- Advanced spectrum analyser
- QoS: Four traffic classes prioritise traffic
- Free Network Management

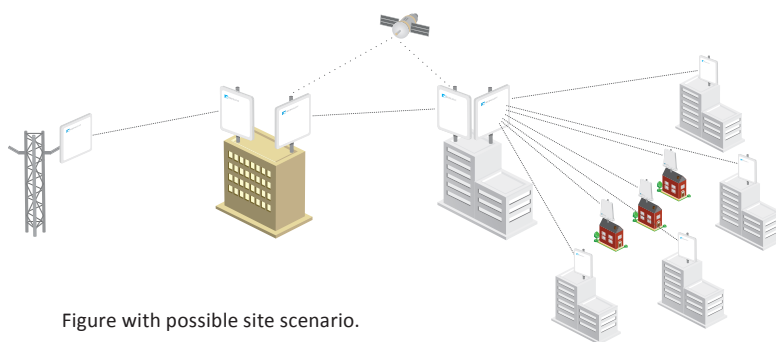


Figure with possible site scenario.



Trinity-316S

Radio

Frequency Bands 5.150 – 5.845 GHz
 Channel widths supported 5/10/20/40 MHz
 Capacity 245 Mbps

Duplex Technique TDD
 Modulation OFDM, BPSK, QPSK, 16QAM, 64QAM
 Max Tx power 23 dBm
 Max Rx sensitivity -97 dBm
 Error Correction FEC; k=1/2, 2/3, 3/4, 5/6
 Encryption 128 bit AES & MAC level Authentication
 Surge Protection 15kV
 DFS Yes
 QoS Four Access Categories (AC) Voice, Video, Best Effort, and Background. Traffic classification according to WMM

Inbuilt Antenna

Gain, typ. 16 dBi
 3 dB-Beam-Width, H-Plane, typ. 30°
 3 dB-Beam-Width, E-Plane, typ. 17°
 Polarization Dual, Vertical and Horizontal
 F/B Ratio -30 dB
 Cross Polarization, max. -28 dB
 Port to Port Isolation -30 dB

Ethernet Interface

Type 10/100/1000 BaseT Interface with Auto-negotiation (IEEE 802.3), Manual
 Number of Ethernet Ports 1
 Framing/Coding IEEE 802.3u
 Traffic Handling MAC layer bridging, self-learning 802.1q transparent
 Data Latency 2-4ms (3ms typical)
 Packets/second > 40 000
 VLAN ID for Management Supported
 Power over Ethernet 48V DC, 802.3af, <6W typical
 Connector RJ-45

Certifications

Radio FCC Part 15.247
 ETSI: EN 301 893 V1.5.1
 ETSI EN 302 502 V1.2.1
 EMC FCC part 15 class B,
 EN 55022:2010 Class B
 EN 55024:2010
 ETSI EN 301 489-1 V1.9.2
 ETSI EN 301 489-17 V2.1.1
 Safety IEC 60950-1
 EN 60950-1
 Health EN 62311:2008

Management

Link Management Web interface
 Protocol SNMP
 NMS Application Repeatit Cloud Network
 RCS Management Service
 Tools in web interface Spectrum Analyser, Speed Test

Environment

IP Code IP63
 Temperature -40° / +55° C
 Size 250 x 210 x 80 mm
 Weight per unit 1.1 Kg

Distance	Trinity-316S
< 1 km	245 Mbit
2 km	243 Mbit
3 km	170 Mbit
4 km	130 Mbit
5 km	85 Mbit
6 km	84 Mbit
7 km	64 Mbit
8 km	64 Mbit

Throughput UDP, 30dB max ETSI EIRP, 6dB margin

Radiations Patterns

