



NAVIGATOR ST Single Transceiver All-Outdoor Licensed Microwave Gigabit Radio

NAVIGATOR ST is a single-transceiver all outdoor, IP radio system operating from 6GHz to 42GHz, modulations to 4096QAM, and ultra-wide bandwidth operation to 112MHz ETSI and 160MHz ANSI.

NAVIGATOR ST can achieve capacities up to 1.6Gbps per radio and even higher capacities with compression enabled or when operating in High Capacity Mode.

NAVIGATOR ST can operate with either a single carrier or dual stacked sub-carriers to efficiently increase capacity without requiring any additional equipment. Built-in Radio Link Aggregation (RLA) seamlessly combines traffic from multiple stacked sub-carriers to simplify customer networking.

NAVIGATOR ST is easily and inexpensively field convertible to different sub-bands via user friendly customer replaceable diplexers. Radio sparing only needs to include the base radio resulting in no longer a need to spare radios in specific sub-bands.

NAVIGATOR ST is an ideal, highly integrated all-outdoor radio for the most demanding applications.

NAVIGATOR ST

Performance

- Up to 1.6Gbps per radio using stacked dual sub-carriers (higher capacity available with compression enabled or when operating in High Capacity Mode)
- Single carrier or dual stacked sub-carrier operation to efficiently increase capacity without adding more equipment
- QPSK to 4096QAM
- Ultra wide bandwidth operation to 160MHz ANSI and 112MHz ETSI
- 1+0, 1+1 HSB, and 2+0 operation
- Space Diversity and Frequency Diversity available
- Built-in Radio Link Aggregation (RLA) seamlessly combines radio traffic across multiple stacked sub-carriers
- Built-in Advanced Digital Pre-Distortion to drive higher transmission performance
- Customer replaceable diplexers to ease operational logistics and improve system flexibility
- Adaptable antenna interface option supports third party antennas to ease migration and upgrade
- Header and payload compression to further increase capacity
- SyncE and IEEE1588v2
- No-touch WiFi maintenance interface (optional)
- Time based feature license available

Applications

Whatever your business or the goals for your network infrastructure, EtherFlex Navigator can play a critical role in backhaul performance, reliability, and security.

- 4G/5G backhaul
- Fiber extension
- Fiber backup
- Leased line replacement
- Small cell backhaul
- Campus connectivity
- Disaster recovery

NAVIGATOR ST SINGLE TRANSCEIVER



Features	
Data Throughput Rate	Up to 1.6Gbps per radio (higher capacity available in High Capacity Mode or with compression enabled)
Configurations	1+0, 2+0, 1+1 HSB, 1+0 SD, 1+0 FD
Radio Link Aggregation	Dual Stacked Sub-Carriers (per Radio)
Frequency Range	6-42GHz
Modulation	QPSK to 4096QAM
Air Interface	Full Duplex FDD
Channel Bandwidths per Carrier	10-160MHz ANSI and 14-112MHz ETSI per Carrier and 10-80MHz ANSI and 14-112MHz ETSI per Stacked Sub-Carrier (x2)
Diplexer	Customer replaceable
Tx Power (diplexer output)	Up to 27dBm with Built-In Advanced Digital Pre-Distortion
Interfaces	
Ethernet	1 x 1G RJ45 (POE), 1 x 1G SFP or 1 x 1G RJ45 (POE), 2 x 1/2.5G SFP
Console	<ul style="list-style-type: none"> • USB serial port • WiFi for no-touch maintenance (optional)
Ethernet	
Max Packet Size	16000 bytes (Jumbo Frame)
Ethernet Timing and Synchronization	SyncE (G.8261), IEEE 1588V2 Transparent, Boundary, and Ordinary Clock support
Ethernet Features	<ul style="list-style-type: none"> • IPv6, IPv4 • L2-16K MAC Addresses • 4096 VLAN (IEEE 802.1Q) with 1024 VLANs supported concurrently • VLAN tag translation on ingress or egress • Provider Bridging (IEEE 802.1ad, Q-in-Q) • RSTP/MSTP
Ethernet Compression	IFG and Pre-Amble Suppression, Header Compression, Payload Compression
QoS Packet Classification	<ul style="list-style-type: none"> • DiffServ (RFC 2475) • VLAN PRI (IEEE 802.1Q-2003) • MAC PRI • Port Priority • Port Number, Protocol • MPLS PRI
QoS Packet Scheduling	<ul style="list-style-type: none"> • Port – Weighted Round Robin (WRR) • Logic Port (cluster) – Weighted Fair Queuing (WFQ) or Strict Priority (SP) • Priority Queue – WFQ, Strict Priority • 8 priority queues per logical port/queue
QoS Congestion Avoidance	Two-rate/three color marking, WRED, Policing, Flow-Control (PAUSE packets, back-pressure)
QoS Traffic Shaping	Configurable
Ethernet Protection	ITU-T G.8032 Ring
OAM	ITU-T Y.1731, IEEE 802.1ag, 802.3ah, Radius, Syslog
MEF Compliance	MEF9 Services Test Suite, MEF14 Traffic Management Test Suite
Mechanical and Environmental	
Input Power Requirements	Direct DC (±36 to 60 VDC) or POE (±44 to 57 VDC or 100 to 240VAC)
Weight	6.1kg (13.4lbs)
Size	22.6 cm x 22.1 cm x 11.6 cm (8.92" x 8.72" x 4.55")
Operating Temperature	-33°C to +55°C (-27°F to +131°F) per ETS 300 019-2-4 Class 4M5
Humidity	5%-100%
Weather	IP67 / All Weather
Safety	IEC/EN 62368-1, IEC/EN 60950-22
Regulatory	US FCC Part 101, FCC Part 15B; ETSI EN 302 217

Note: Navigator ST First Release will use Navigator DT housing. Specifications are typical and subject to change.

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