



TeraLink 5400 Gen2

4.9 GHz to 6.0 GHz 867 Mbps High Power
2x2 MU-MIMO (Wave-2) Outdoor
PTP & PTMP Radio

OVERVIEW

The TeraLink 5400 Gen2 is a high power 2 x 2 MU-MIMO (Wave-2) Outdoor Point-to-Point and Point-to-Multi-Point Radio that provides signaling rates up to 867 Mbps. It is designed specifically to cater high power, high bandwidth requirements and deliver similar stability, reliability and efficiency of EION's legacy Point-to-point radio StarPlus 5300.

The TeraLink 5400 Gen2 supports public safety frequency band 4.9GHz, at the same time a broader frequency range from 4.9 Ghz to 6.0 GHz. Some of the unique features are: 5 and 10MHz channels, fiber optic port and support for high gain antennas. It offers an option to choose either 2 x Gigabit Ethernet ports or 1 x Gigabit Ethernet & 1 x Fiber optic port to give flexibility to the operators.

TeraLink 5400 Gen2 can support an integrated 2x2 MIMO 24dBi antenna option or high gain external antennas. It not only supports channels 5 & 10 MHz but also 20, 40 and 80 MHz.

The TeraLink 5400 Gen2 has significantly higher capacity and increased coverage capabilities over conventional point to point radios due to the MU-MIMO diversity advantage; increased output power and sensitive receive capability. TeraLink is built on more than a decade of OFDM experience. The 2 x 2 MU-MIMO capable radio delivers superior throughput for bandwidth hungry 4G and 5G ready customers.

The TeraLink 5400 Gen2 base radio is packaged in an IP67 ruggedized enclosure and suitable for all weather conditions. The specialized design of the finned enclosure allows for stable operation in high heat environments while the integrated vent plug protects electronics in high humidity conditions. The thick all-metal enclosure provides high EMI immunity for stable operation and secures communications in hostile environments.

PRODUCT FEATURES

- Outdoor PTP & PTMP Radio
- 2 x 2 MU-MIMO Technology, up to 867 Mbps
- IEEE 802.11ac Wave-2 compliant and Backward compatible with 802.11a/n
- Frequency Range: 4.940 – 6.0 GHz
- Option for 2 x Gigabit Ethernet Ports or 1 x Gigabit Ethernet (POE) & 1 x Fiber Port
- Supports 5, 10, 20, 40 and 80 MHz Channel Sizes
- Output Power: Up to 27 dBm per chain or aggregated 30dBm
- Antenna: Integrated 2 x 2 MIMO 24 dBi or supports high gain 2 x 2 External Antenna system
- LED Indicators: Power, Signal and LAN
- External Reset Button
- Supports Dynamic Frequency Selection (DFS); NLOS Urban Coverage with OFDM Technology
- SNMPv3 and Enterprise MIB for Advanced Network Management
- High Spectral Efficiency and Robust RF Network Performance
- Rugged Construction for All Weather Conditions.

ORDERING INFORMATION

5400-58-ER-G2	TeraLink 5400 4.9 to 6.0 GHz Gen2, ER, Outdoor IP67 Rugged, PTP/PTMP Radio
5400-58-24i-G2	TeraLink 5400 4.9 to 6.0 GHz Gen2, 24 dBi Integrated RD, Outdoor IP67 Rugged, PTP/PTMP Radio

RADIO SPECIFICATION

Topology	Point-to-Point; Point-to-Multi-Point				
Frequency*	4.940 – 6.0 GHz				
Channel Size*	5, 10, 20, 40 and 80 MHz				
Modulation	OFDM: BPSK, QPSK, 16-QAM 64-QAM and 256-QAM				
Signaling Rate	Up to 867 Mbps				
RF Connectors	2 x N-type female antenna connector OR Integrated 24dBi Antenna Option				
Output Power	Up to + 27 dBm per chain or aggregated 30dBm				
Receiver Sensitivity	Operation Mode	Data Rate	Sensitivity	Data Rate	Sensitivity
	802.11a	6 Mbps	-96dBm	54 Mbps	-78dBm
	802.11n HT20	MCS0, MCS8	-92dBm	MCS7, MCS15	-73dBm
	802.11n HT40	MCS0, MCS8	-90dBm	MCS7, MCS15	-70dBm
	802.11AC HT40	MCS0, MCS10, MCS20	-90dBm	MCS9, MCS19, MCS29	-67dBm
802.11AC HT80	MCS0, MCS10, MCS20	-88dBm	MCS9, MCS19, MCS29	-62dBm	
Radio TX Specifications	Operation Mode	Data Rate	Power: 1 Chain, 2 Chains	Data Rate	Power: 1 Chain, 2 Chains
	802.11a	6 Mbps	27dBm, 30dbm	54 Mbps	23dBm, 26dbm
	802.11n HT20	MCS0, MCS8	26dBm, 29dbm	MCS7, MCS15	22dBm, 25dbm
	802.11n HT40	MCS0, MCS8	25dBm, 28dbm	MCS7, MCS15	21dBm, 24dbm
	802.11ac	MCS0, MCS10, MCS20	25dBm, 28dbm	MCS9, MCS19, MCS29	19dBm, 22dbm
Duplexing Format	Dynamic Time Division Duplex (TDD), Half-Duplex				
Medium Access Control	IEEE 802.11ac (Wave-2)				
Data Rate Selection	Dynamic Adaptive Modulation per Link				

NETWORK SPECIFICATIONS

Network Connection	2 x Gigabit Ethernet ports; Auto MDI-X RJ45 10/100/1000 Mbps Ethernet or 1 x Gigabit Ethernet & 1 x Fiber port
Operational Mode	Transparent Bridging (per OSI Layer2), Multicast
Traffic Management	Advanced QoS per user (Hotspot Mode), Standard WMM
MAC Filtering and Firewall	Filtering through Standard MAC address, Firewalls - Zones
VLAN	Data Tagging/Untagging, 802.1q transparency, VLAN Management; SSID to VLAN Mapping
NAT	1:N NAT configurable through CPE GUI
DHCP	DHCP Client, DHCP server for LAN devices when in NAT mode, PPPoE, L2TP
IPv6	IPv6 pass through in bridge mode
Routes	Add static Routes

SECURITY

Management Access	Username and Password Compatible with all modern web browsers and Windows 7+ OS
Encryption	WEP (64, 128, 154), WPA1 (TKIP), WPA2 (CCMP - AES 128, CBC-MAC for headers). Encryption is available in factory firmware and firmware upgrades

MANAGEMENT

Management Access	Over the Air & Wired over prioritized ports
Remote Monitoring	HTML Web-GUI, SNMP v3c (Set, Get and Traps with proprietary MIB) MIB files are available on request
Installation Management	Wireless Link Monitor and Diagnostic Tool. <ul style="list-style-type: none"> • Provides noise and RSSI signal levels as well as other statistical information • Real-time view of available over the air bandwidth • Real-Time Link Quality Metrics • Visual LED Antenna Alignment • Built-in Spectrum Analyzer
LED Indicators	Power, Signal and LAN
Backup Configuration	Save Radio Configuration to local PC
Software Upgrade	Over the Air or local, Web-based upgrade
Services	Auto Reboot, Ping Watchdog

PHYSICAL, ELECTRICAL & ENVIRONMENTAL

Power Consumption	Typ. < 10 Watts
Power Supply	100-240V, 50/60 Hz AC; UL/CSA approved 48 Volt POE system; DC power options available. The included power supply includes one standard Gigabit Ethernet port for connection to LAN or local PC, and one PoE port for connection to the TeraLink equipment. Power supply is 10/100/1000 BaseT IEEE802.3af/at compliant with data rates up to 1 Gbps full duplex on both ports
Reset Button	Yes
Temperature Range	Operating: -20° C to +70° C Storage: -40° C to +90° C
Relative Humidity	Operating: 0% to 100% (condensing); Storage: Max. 90% (non-condensing)
Mounting Bracket	Pole mounting hardware included
Enclosure	Single Unit, Die Cast Metal NEMA 4x; IP67, Finned for heat dissipation
Weight	2.2 kg (External Antenna) 4.06 kg (Integrated Antenna – 24i option)
Dimensions	230 mm × 230 mm × 65 mm (External Antenna) 386 mm x 386 mm x 116 mm (Integrated Antenna – 24i option)
Lightning Protection	Integrated, Telcordia GR-1089 compliant (Meets IEC 61000-4-2/ 4-4)

STANDARDS COMPLIANCE

Weatherproofing	IP67 when properly installed
Compliance	RoHS/WEEE FCC Part 15 Industry Canada Spectrum Management and Telecommunications Radio Standards Adheres to RSS-210 Issue 8 License-exempt Radio Apparatus (all frequency bands): Category 1 Equipment

INTEGRATED ANTENNA

The specifications below apply to the optional integrated antenna that is included with the TeraLink Radios. The unit can be purchased with 2x N-Type antenna connectors for use with an external antenna.

Gain	24 dBi
Radiation	Directional
Frequency Range	4.9 -5.9 GHz
Polarization	Dual – Polarization
Azimuth-3dB Beam Width	Horizontal (Port 1): 8 degrees Vertical (Port 2): 8 degrees
Elevation-3dB Beam Width	Horizontal (Port 1): 8 degrees Vertical (Port 2): 8 degrees
Isolation	-40dB (Max)
Front-to-Back Ratio	-40dB (Max)
VSWR	Horizontal (Port 1): <1: 1.5 Vertical (Port 2): <1: 1.5
Cross Polarization Isolation	-30 dB (Max)
Side Lobe	< -12dB

INTEGRATED ANTENNA POLAR PLOTS 24 dBi
VERTICAL POLARIZATION

HORIZONTAL POLARIZATION

RF Patterns
Vertical Cut,
Typ.

RF Patterns
Horizontal
Cut, Typ.

RF Patterns
Vertical Cut,
Typ.

RF Patterns
Horizontal
Cut, Typ

