StarPlus 5300

300 Mbps MIMO Outdoor Base Radio

OVERVIEW

The StarPlus 5300 is a high capacity base radio system that offers a competitive alternative to leased lines, wired and optical systems. StarPlus 5300 uses advanced OFDM and MIMO technologies to deliver breakthrough performance in the unlicensed band.

The StarPlus 5300 radio is ready to handle the extreme backhaul loads that originate from today's data-heavy 4G/LTE based networks.

With the application of a multiple association license key, the StarPlus 5300 can operate in multipoint mode and communicate with StarPlus CPEs. The flexible StarPlus 5300 is the ideal wireless platform to meet the needs of today's bandwith hungry users.

StarPlus can operate in a legacy mode which is backwards compatible with LibraPlus 5860 series CPEs.

The StarPlus 5300 base radio is packaged in a rugged enclosure which is suitable for all weather conditions. The all-metal enclosure provides high EMI immunity for stable operation in interference prone environments.

TRUSTLINK ADVANTAGE

TrustLink™ technology ensures equitable distribution of traffic to all subscriber stations and uses intelligence to determine the number of polling cycles every user gets depending on the level of its activity. This way the network resources are not wasted during the polling of inactive users due to no user data transmission. TrustLink can be employed in both point-to-point and point-to-multipoint networks and dramatically reduces the effects of unwanted interference on the wireless link.

PRODUCT FEATURES

- Point-to-Point and Point-to Multipoint Topologies
- 5.x GHz extended frequency range from 4.920 to 6.100 GHz
- +29 dBm aggregate output power
- 2 x 2 MIMO with software key
- 4G/LTE Backhaul Ready
- Long Range Broadband Capability
- 40 & 20 MHz Channel Sizes
- 5 & 10 MHz Narrow Bandwidth Channel Sizes
- NLOS Urban Coverage with OFDM Technology
- EION TrustLink™ Technology
- User Friendly Web-Based GUI
- SNMP v2c and Enterprise MIB for Advanced Network Management
- High Spectral Efficiency and Robust RF Network Performance
- Rugged Construction for All Weather Conditions
- Built-in Lightning, Power Surge POE Protection, High EMI Immunity

Product Name	Product Description	Product Code
StarPlus 5300-58	5 GHz StarPlus Radio, OFDM 2x N-Type Connector	5300-58-00-00
StarPlus Multiple Association License Key	StarPlus Multiple Association License Key - Upgrade StarPlus 5300 to allow multiple associations	7300-58-00-10
StarPlus MIMO Upgrade Key	StarPlus Upgrade Speed Key to Two Streams - Upgrade StarPlus 5300 base radio to two streams MIMO	9530-00-00-10

FC RoHS

DATASHEET

STARPLUS 5300

Radio	StarPlus 5300-58
Topology	Point-to-Point (Default) Point-to Multipoint Access Point (Requires Upgrade Key)
Diversity	1 × 1 SISO (Default) 2 × 2 MIMO (Requires Upgrade Key)
Frequency*	4.920 to 6.100 GHz
Channel Size*	Quarter: 5 MHz; Half: 10 MHz; Normal: 20 MHz; Turbo: 40 MHz
Channel Spacing	5 MHz × channel number for CF
Modulation	MCS 0 to 15 (6.5 to 300 Mbps); BPSK, QPSK, 16-QAM and 64-QAM for LibraPlus mode (6Mbps - 54Mbps)
Antenna	2 × N-type female
Output Power†	+29 dBm aggregate; 2 × 26 dBm per stream (configurable from 9 dBm up to license key limit in 1 dB steps)

Receiver Sensitivity (BER = 10^{-6}) +/- 2dB

	Modulation	5 MHz	10 MHz	20 MHz	40 MHz
MCS0/8	BPSK	-101 dBm	-98 dBm	-95 dBm	-92 dBm
MCS1/9	QPSK1/2	-99 dBm	-96 dBm	-93 dBm	-90 dBm
MCS2/10	QPSK3/4	-96 dBm	-93 dBm	-90 dBm	-87 dBm
MCS3/11	16-QAM1/2	-95 dBm	-92 dBm	-89 dBm	-84 dBm
MCS4/12	16-QAM2/3	-91 dBm	-88 dBm	-85 dBm	-81 dBm
MCS5/13	64-QAM2/3	-87 dBm	-84 dBm	-81 dBm	-77 dBm
MCS6/14	64-QAM3/4	-85 dBm	-82 dBm	-79 dBm	-76 dBm
MCS7/15	64-QAM5/6	-81 dBm	-78 dBm	-75 dBm	-74 dBm

Duplexing Format	TDD, Half-Duplex
Radio Feature Support	Dynamic Frequency Selection (DFS)
Spectral Efficiency	6.5 bits per Hertz
Network Support	
Medium Access Control	Proprietary MAC, TrustLink™
Network Connection	MDI-X RJ45 10/100/1000 Mbps Ethernet; Auto-negotiation or configurable for full/half dulplex at 10/100 Mbps
Operational Mode	Transparent Bridging, Multicast
Traffic Management	Advanced QoS with multiple service flows and classifier priorities - VLAN ID (802.1q), VLAN Priority (802.1p) and DSCP/ToS
Fast Frame Aggregation	Yes
Sector Locking	Yes, configurable black or white Access Control Lists
VLAN	Data Tagging/Untagging, 802.1q transparency, VLAN Management, QinQ
Intra-sector Bridging	Yes
UL/DL Capacity Adjustment	Manual UL/DL capacity ratio definition for BE service flows
IPv6	IPv6 pass through enabled
Wireless Networking	
Output Power Management	Yes
Data Rate Selection	Yes
Security	
Management Access	Username and Password
Encryption	WEP (64, 128, 154), WPA1 (TKIP), WPA2 (CCMP - AES 128, CBC-MAC for headers)
Management	
Remote Management	Web-GUI, SNMP v2c (Set, Get and Traps with proprietary MIB)
Management IP	Static IP
Installation Management	RSSI Indicator in GUI, Wireless Link Monitoring, Audible Antenna Alignment Beeper, Built-in Spectrum Analyzer
Backup Configuration	Save Radio Configuration to local PC
Software Upgrade	Over the Air, local, Web-based upgrade, Dual bank to allow rollback
Ease of Use	Single management view of all deployed products in EION Constellation centralized management system
Physical, Electrical & Environmental	
Power Consumption	< 10 W
Input Voltage	100-240V, 50/60 Hz AC with 48V PoE 802.3af; DC power option available
Temperature Range	Operating: -30° C to +70° C
Relative Humidity	Operating: 0 to 100%, condensing
Mounting Bracket	Yes, 2-Axis pole/wall
Enclosure	Single Unit, Die Cast NEMA 4x; IP67
Weight	2.0 kg
Dimensions	230 mm × 230 mm × 65 mm
Certifications	FCC, IC, WPC, RoHS and WEEE
Lightning Protection	Integrated, Telcordia GR-1089 compliant (Meets IEC 61000-4-2/ 4-4)

† Maximum power output is set by country specific licensing key. The operator of this product must ensure compliance when selecting external antennas with the limits specified by local regulation prior to deployment.
* Frequency bands that are available to the operator are determined by country specific licensing key.