

StarPlus 5300-24

300 Mbps MIMO Outdoor Base Radio



Overview

The StarPlus 5300-24 is a high capacity base radio system that offers a competitive alternative to leased lines, wired and optical systems. StarPlus 5300-24 uses advanced OFDM and MIMO technologies to deliver breakthrough performance in the unlicensed band.

The StarPlus 5300-24 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 5300-24 can operate in multipoint mode and communicate with StarPlus CPEs. The flexible StarPlus 5300-24 is the ideal wireless platform to meet the needs of today's bandwidth hungry users.

The StarPlus 5300-24 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
- 2.4 GHz extended frequency range and support for 2.4 GHz applications
- +29 dBm aggregate output power
- 2 x 2 MIMO with software key
- 4G/LTE Backhaul Ready
- Long Range Broadband Capability
- 300 & 150 Mbps signaling Rates
- 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
- Support 512 Subscribers
- SNMP v2c and Enterprise MIB for Advanced Network Management
- High Spectral Efficiency and Robust RF Network Performance
- Auto Output Power Management (Optional)
- Rugged Construction for All Weather Conditions
- Built-in Lightning, Power Surge POE Protection, High EMI Immunity

STARPLUS 5300-24

| Radio | | | | | | |
|--|--|-------------------|--------------|---------------|---------------|---------------|
| 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* | 2.400 to 2.480 GHz (StarPlus 5300-24) 4.900 to 5.000 GHz (StarPlus 5300-49) | | | | | |
| 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) , 256 QAM (Optional) | | | | | |
| 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-QAM5/6 | -81 dBm | -78 dBm | -75 dBm | -74 dBm |
| | MCS6/14 | 256-QAM3/4 | -74 dBm | -71 dBm | -66 dBm | -76 dBm |
| MCS7/15 | 256-QAM5/6 | -81 dBm | -69 dBm | -64 dBm | -74 dBm | |
| Duplexing Format | TDD, Half-Duplex (Configurable TDD Split) | | | | | |
| 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 duplex 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 - Manual / Auto | | | | | |
| Data Rate Selection | Yes | | | | | |
| Security | | | | | | |
| Management Access | Username & 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) , SSH | | | | | |
| 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.