SmartSight S3100

MULTIBAND OUTDOOR WIRELESS BRIDGE

Integrated Multiband Solution
License-Free 2.4/5.3–5.8 GHz U-NII Bands

PRODUCT OVERVIEW

The SmartSight® S3100 wireless bridge leverages the SmartSight SPCF™ protocol, which resolves "hidden node," quality of service, range, and security problems often present when using 802.11 wireless networking products.

The S3100 wirelessly links the S1100w wireless video transmitters, or S1500e series and S1600e video servers in remote locations, to an Ethernet Local Area Network (LAN). Several bridges can be used to create multiple video links covering a large geographical area, such as for citywide monitoring. Configuration and management are made easy with nDVR®, Loronix Video Manager™, or SConfigurator™ software.

Two or more units can be combined to form multi-branch repeaters to circumvent natural or man-made obstacles, in point-to-point or point-to-multipoint applications. The S3100 is available with Power-over-Ethernet injection, simplifying installation by reducing the number of cables that need to be run. The S3100 is built on open standards to provide long-term investment protection.

KEY FEATURES

✔ Enables the deployment of CCTV or video monitoring systems throughout parking lots, parks, ports, airports, railway facilities, multi-building complexes, cities, streets, highway intersections, and other critical locations

✔ Supports up to sixty high-quality video links at any given site; this number can grow with proper RF site planning

✔ Flexible wireless digital repeater functions for circumventing RF path obstructions or increasing system range and coverage with no degradation in video signal quality

✔ Supports remote configuration and firmware upgrade from any node on the network

✔ End-to-end secure wireless link using AES encryption with rotating 128-bit key

✔ The SmartSight SPCF polling protocol for resolving "hidden node," quality of service, and security problems often present when using conventional 802.11 wireless networking products

✔ Access control via SSL-based authentication for unit and wireless network configuration and control

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NETWORK

RF Interface	SmartSight SDCF™ for backbone applications SmartSight SPCF for point-to-point applications
Frequency	2.40-2.4835 Ghz (ISM) 5.250-5.350 GHz (U-NII-2) 5.725-5.825 GHz (U-NII-3 / ISM)
Modulation	OFDM
Output power	17 dBm
System gain	2.40-2.4835 GHz with 8.5 dBi gain antenna: 118 dB 2.40-2.4835 GHz with 16 dBi gain antenna: 133 dB
	5.250-5.350 GHz with 13 dBi gain antenna: 132 dB 5.725-5.825 GHz with 13 dBi gain antenna: 129 dB 5.725-5.825 GHz with 18 dBi gain antenna: 139 dB
Range (RF line of sight)	2.40-2.4835 GHz (8.5 dBi): up to 1.9 miles (3.1 km) 2.40-2.4835 GHz (16 dBi): up to 8.7 miles (14 km)
	5.250-5.350 GHz (13 dBi): up to 4.4 miles (7.1 km) 5.725-5.825 GHz (13 dBi): up to 2.85 miles (4.6 km) 5.725-5.825 GHz (18 dBi): up to 7.15 miles (11.5 km)
Data rate (max.burst rate)	6, 9, 12, 18, 24, and 36 Mbps
Channel	2.4 GHz: 11, 3 non-interfering 5.3 GHz: 4, non-interfering 5.8 GHz: 5, non-interfering
Encryption	128-bit AES with auto key rotation
Protocols	RTP/IP, UDP/IP, TCP/IP, or multicast IP DNS and DHCP client
Security	SSL-based authentication
LED indicator	Status, wireless activity, LAN activity
Power connector	Weatherproof circular
Antenna connector	SMA female
Ethernet connector	Weatherproof 10/100Base-T (RJ-45)

POWER

Input voltage	48V DC Power-over-Ethernet (PoE) or 24V AC direct (for the repeater)
Consumption	12W (250 mA at 48V DC) 25 VA at 24V AC

PHYSICAL

Enclosure	NEMA 4X / IP 66 powder coat painted die-cast aluminum with wall-mount brackets
Size	8.1L x 5.5W x 4.1H in. (205L x 140W x 105H mm)
Weight	2.0 lbs (0.90 kg)
Environment	-22ºF to 122ºF (-30ºC to 50ºC)
Humidity	95% non condensing at 122ºF (50ºC)

MANAGEMENT

Configuration *	Local or remote: via SConfigurator or Telnet
Firmware upgrade	Flash memory for upgrade over the network

CERTIFICATION AND REGULATION

Canada	Industry Canada RSS-210 and ICES-003
USA	FCC CFR47 part 15 (15.247, subparts B, C, and E)

WARRANTY

	2-year limited warranty, covering parts and labor

ORDERING

Part Number	S3100
Description	Multiband outdoor wireless Ethernet bridge (48V DC input) with Power-over-Ethernet injector, 82-foot (25-meter) outdoor Ethernet cable, wall-mount and pole-mount brackets
Part Number	S3100-RP (repeater application)
Description	Two 24V AC multiband outdoor wireless bridges with 3-foot (1-meter) outdoor Ethernet cable, wall-mount and pole-mount brackets

OPTIONAL ANTENNAS

Part Number	ANT-WP8-24/S
Description	8.5 dBi gain, 2.4 GHz band, 65° beamwidth, patch antenna with 3-foot (1-meter) SMA-SMA cable
Part Number	ANT-WP16-24/S
Description	16 dBi gain, 2.4 GHz band, 27° beamwidth, patch antenna with 3-foot (1-meter) SMA-N cable
Part Number	ANT-WP13-5x/S
Description	13 dBi gain, 5.25-5.85 GHz band, 58° beamwidth, patch antenna with 3-foot (1-meter) SMA-N cable
Part Number	ANT-WS16-5x/S
Description	16 dBi gain, 5.25-5.85 GHz band, 90° beamwidth, sector panel antenna with 3-foot (1-meter) SMA-N cable
Part Number	ANT-WP18-5x/S
Description	18 dBi gain, 5.25-5.85 GHz band, 18° beamwidth, patch antenna with 3-foot (1-meter) SMA-N cable
Part Number	ANT-WP24-5x/S
Description	24 dBi gain, 5.25-5.85 GHz band, 9° beamwidth, patch antenna with 3-foot (1-meter) SMA-N cable

OPTIONAL ACCESSORY

Part Number	ECAB-50
Description	164-foot (50-meter) outdoor Ethernet replacement cable

* Product capabilities are enabled through software.