

# SmartSight S1100w-MT

## MULTIBAND WIRELESS VIDEO TRANSMITTER WITH MOTION TRACKING CAPABILITY



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

### PRODUCT OVERVIEW

The SmartSight® S1100w-MT wireless video transmitter provides highly accurate, cost-effective wireless outdoor motion tracking capabilities. The S1100w-MT uses adaptive digital processing technology to achieve highly sensitive detection in a wide range of operating environments with very low false alarm rates.

The S1100w-MT provides digital video transmission over multiple license-free wireless bands (2.4/5.3-5.8 GHz), delivering high quality MPEG-4-based video at 30 frames per second (fps). The S1100w-MT leverages SmartSight SPCF™ polling protocol, which resolves the "hidden node," quality of service, range, and security problems often present when using 802.11 wireless networking products. For compatibility with existing wireless infrastructure, the S1100w-MT can also be configured for standard 802.11a operation.

When used with the S3100 wireless-to-Ethernet bridge/repeater, the S1100w-MT can extend your analog CCTV system using the enterprise LAN/WAN, without adding costly cables. Several S1100w-MT transmitters and S3100 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. The S1100w-MT is built on open standards to provide long-term investment protection.

### KEY FEATURES

- ✓ Highly accurate wireless outdoor motion tracking
- ✓ Adapts rapidly to changes in light and weather
- ✓ Adjusts automatically to different types of cameras, including PTZ cameras with preset dwell positions
- ✓ End-to-end secure wireless link using AES encryption
- ✓ Access control via SSL-based authentication for unit and wireless network configuration and control
- ✓ MPEG-4-based video encoding at 30 fps for high-quality video at low bandwidth
- ✓ Autosensing RS-232/422/485 serial port for transparent connectivity to motorized domes, PTZ cameras, and other asynchronous serial devices
- ✓ Simple connectivity to PIR detectors and other sensors/alarms
- ✓ All firmware upgradeable via the network (including the video codec)
- ✓ Optional bidirectional audio interface
- ✓ Video loss alarm
- ✓ Resolves "hidden node," quality of service, and security problems often present when using conventional 802.11 wireless networking products
- ✓ Compatible with standard 802.11 access points
- ✓ Compatible with SmartSight S1500e series Ethernet video servers, nDVR, and Loronix Video Manager software
- ✓ User-friendly system management features using nDVR, Loronix Video Manager, or SConfigurator software

WIRELESS.  
DISTRIBUTED.  
NETWORKED.



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### NETWORK

RF interface	SmartSight SPCF
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, HTTP 1.1 (Web server)
Security	SSL-based authentication

### VIDEO

Input	1 composite, 1 Vpp into 75 ohms (NTSC/PAL)
Compression	MPEG-4-based (480 lines resolution)
Frame rate	1-30 fps programmable (up to 60 fields per second)

### MOTION TRACK

	Probability of deduction greater than 96% ** Nuisance alarm rate **
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### ALARM AND AUDIO

Alarm	Input: 2 dry contacts (1 mA max.) Output: 1 relay contact (up to 48V at 100 mA)
Bidirectional audio	Input: 0 dBm into 600 ohms Output: -8 dBm into 600 ohms

### SERIAL PORT

Electrical levels	Autolevel sensing RS-232 or RS-422/485
Operating mode	Transparent (supports any asynchronous PTZ serial protocol)

### POWER

Input voltage	24V AC +/- 10% (optional 12V DC +/- 10%)
Consumption	12W (970 mA at 12V DC) 28 VA at 24V AC

### PHYSICAL

Enclosure	NEMA 4X / IP 66 powder coat painted die-cast aluminum with wall-mount brackets
Size	9.0L x 3.9W x 3.8H in. (230L x 100W x 96H mm)
Weight	3.6 lbs (1.65 kg)
Environmental	-22°F to 122°F (-30°C to 50°C)
Humidity	100% at 122°F (50°C)

### MANAGEMENT

Configuration *	Remote: via nDVR, Loronix Video Manager, SConfigurator, or Telnet Local: via the serial port using any ASCII terminal
Firmware upgrade	Flash memory for upgrade of video codec and application firmware over the network

### CERTIFICATION AND REGULATION

Canada	Industry Canada RSS-210, RSS-139, and ICES-003
USA	FCC CFR47 part 15 (15.247, subparts B and E)

### WARRANTY

	2-year limited warranty, covering parts and labor
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### ORDERING

Part number	S1100w-MT-24VAC-24
Description	Multiband 24V AC wireless transmitter with 8.5 dBi gain, 2.40-2.4835 GHz antenna
Part number	S1100w-MT-12VDC-24
Description	Multiband 12V DC wireless transmitter with 8.5 dBi gain, 2.40-2.4835 GHz antenna
Part number	S1100w-MT-24VAC-5x
Description	Multiband 24V AC wireless transmitter with 13 dBi gain, 5.25-5.85 GHz antenna
Part number	S1100w-MT-12VDC-5x
Description	Multiband 12V DC wireless transmitter with 13 dBi gain, 5.25-5.85 GHz antenna

Note: All transmitters come with 9-pin cables for video, data, and power; wall-mount and pole-mount brackets. Communicates with the S3100.

### OPTIONAL ANTENNAS

Part number	ANT-WP16-24x/S
Description	16 dBi gain, 27° beamwidth, patch 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
Note:	Other antennas also available

### OPTIONAL ACCESSORIES

Part number	JBOX
Description	Outdoor junction box with wall-mount and pole-mount brackets
Part number	PS12 <i>(Not for outdoor use)</i>
Description	110V AC to 12V DC at 1A power supply
Part number	PS2440 <i>(Not for outdoor use)</i>
Description	110V AC to 24V AC at 40 VA power supply
Part number	CAB8P
Description	10-foot (3-meter) cable assembly for audio and alarms

\* Product capabilities are enabled through software.

\*\* Tested against a tape library made of 12 SVSH tapes (available from Sandia National Laboratories) depicting various outdoor conditions, targets, and ranges in a variety of environments.