ZEBRA

Zebra SmartLens™ for Retail Sensors

A sensor for every area in your store

Zebra SmartLens for Retail is a multi-faceted solution that provides retailers with the ability to sense, analyze and take the right real-time actions to increase sales, enable successful omni-channel operations and reduce shrink and operational costs. The foundation of this ground-breaking solution is the family of sensors that automatically sense and record the location and movement of virtually everything in the retail store — from merchandise to associates and assets. The sensors use a multitude of different types of sensing technologies — RFID, video and micro-locationing* — and are designed for different areas of your store.

Sensing Network Appliance (SNAP) SmartLens Sensor

Transition Point SmartLens Sensor

Transition Point SmartLens Sensor
Track inventory as it moves through entry/exit points

When inventory moves through receiving and entry/exit points, you need to know which direction it is traveling to understand where it is headed. The Transition Point SmartLens sensor does just that. The industry-leading, advanced RFID technology in the sensor collects the data that SmartLens for Retail needs to easily identify whether items are entering or leaving an area. And with flexible options that enable you to install this sensor on a wall or suspend it from the ceiling, it's easy to deploy the Transition Point SmartLens sensor in virtually any retail environment.

Backroom SmartLens Sensor
Track inventory in the backroom from the moment it arrives

The Backroom SmartLens RFID sensor starts the tracking cycle by detecting and recording the movement of RFID-tagged inventory from the moment it enters your backroom to the moment it leaves. This high-performance advanced fixed RFID reader is designed to handle high tag volumes with increased accuracy and read rates. Power-over-Ethernet (PoE) eliminates the need to install power outlets – ideal for the typical complex backroom environments. And deployment is as simple as plugging in the Backroom SmartLens sensor.

Sensing Network Appliance (SNAP) SmartLens Sensor
*Track it all: inventory, associates, and mobile devices**

The SNAP SmartLens sensor is loaded with the technology you need to obtain unprecedented real-time visibility into what is happening on your sales floor. Track the movement of items with the integrated high-performance RFID reader. Want to follow the movement of associates. Add micro-location technology to track the mobile devices*. Want to deploy a wireless LAN (WLAN) or extend the reach of an existing network? Just add 802.11ac, the latest Wi-Fi technology. The modular design allows you to add the technologies you need, when you need them. And a single PoE connection can power it all — RFID, camera, micro-location and Wi-Fi.

Point of Sale (POS) Lane SmartLens Sensor
Track inventory in your POS lanes

This sensor logs items passing through your POS lanes. With a highly localized antenna technology, a POS Lane SmartLens sensor can be installed in every lane, without risking interference. Inventory accuracy and visibility into shrink improve. And your POS Lane and Transition Point SmartLens sensors work hand-in-hand to identify items exiting your store that have not traveled through a POS lane, alerting you to potential theft — before it happens.

**For more Information about Zebra Smartlens for Retail Sensors,
please visit www.zebra.com/Smartlens or access our
Global Contact Directory at www.zebra.com/Contact**

* Available in a future release.

Sensing Network Appliance (SNAP) SmartLens Sensor Specifications

PHYSICAL CHARACTERISTICS

Dimensions	21.0 in. x 21.0 in. x 8.2 in. 533 mm x 533 mm x 209 mm
Weight (SN5500)	15 lbs./6.8 kg

ENVIRONMENTAL CHARACTERISTICS

Operating Temperature	32º to 122º F/0º to 50º C
Storage Temperature	-40º to 158º F/-40º to 70º C
Humidity	85% RH, non-condensing at 70º C
ESD	± 8 kV air discharge; ± 6 kV contact discharge

RFID READER

Air Protocols	EPCglobal UHF Class 1 Gen2, ISO 18000-6C
Frequency	Global Reader: 902 MHz – 928 MHz (North America); 865 MHz – 868 MHz (EU) US (only) Reader: 902 MHz-928 MHz
Radiated Power	Up to 4W EIRP
Memory	Flash 512 MB; DRAM 256 MB
Management Protocols	RM 1.0.1 (with XML over HTTP/HTTPS and SNMP binding); RDMP
Network Services	DHCP, HTTPS, FTPS, SFPT, SSH, HTTP, FTP, SNMP and NTP
Network Stack	IPv4 and IPv6
Security	Transport Layer Security Ver 1.2, FIPS-140

CAMERA/VIDEO

Resolution	VGA; 5MP
View Modes	Regions of Interest and Electronic Pan, Tilt, Zoom (E-PTZ)
Lens	Fish Eye Lens Technology with Tamper detection
5 MP Sensitivity	2.0 lx (3.74 mm F2.0 lens)2.0 lx (2.5 mm F2.8 lens)
Dynamic	76 dB(NUC-50022)65 dB(NUC-50051)
Electronic	Auto, color, monochrome
Shutter Speed	Automatic Electronic Shutter (AES) Fixed (1/30[1/25] to 1/15000 for NUC-50022) Fixed (1/12 to 1/15000 for NUC-50051)
Video	5 Megapixels, 480p (NUC50051), VGA
Aspect Ratio	16:9 (NUC-50022)4:3(NUC-50051)
Video Compression	H.264 MP (Main Profile); M-JPEG
Max. Frame Rate	30 ips (NUC-50022) 12 ips (NUC-50051) (M-JPEG frame rate can vary depending on system loading)
Video Settings	Video watermarking, Alarm mode stamping, Image mirror, Image flip, Contrast, Saturation, Brightness, White balance, Sharpness level, Contrast enhancement, Backlight Compensation, Privacy Mask, Motion detection, Tamper alarm, Upright mode, Pixel counter
Internal RAM	10 s pre-alarm recording
Memory card slot	Supports up to 32 GB microSDHC/2 TB microSDXC card (an SD card of class 6 or higher is recommended for HD recording)
Recording	Continuous recording, ring recording. Alarms/Events/Schedule recording
Protocols	IPv4, IPv6, UDP, TCP, HTTP, HTTPS, RTP/RTCP, IGMP V2/V3, ICMP, ICMPv6, RTSP, FTP, Telnet, ARP, DHCP, SNTP, SNMP (V1, MIB II), 802.1x, DNS, DNSv6, DDNS, SMTP, iSCSI, UPnP (SSDP), DiffServ (QoS), LLDP, SOAP, Dropbox, CHAP, Digest Authentication
Encryption	TLS 1.0, SSL, DES, 3DES, AES

WIRELESS ACCESS POINT

Radio	2.4/5 GHz Band Locked 3x3:3 Radio
Wireless Medium	Direct Sequence Spread Spectrum (DSSS), Orthognal Frequency Division Multiplexing (OFDM) and Spatial multiplexing (MIMO)
Network standards	IEEE 802.11 a/b/g/n/ac, 802.11d and 802.11i WPA2, WMM and WMM-UAPSD
Data Rates Supported	**802.11b/g:** 1,2,5.5,11,6,9,12,18,24,36,48, and 54 Mbps **802.11a:** 6,9,12,18,24,36,48, and 54 Mbps **802.11n:** MCS 0-23 up to 450 Mbps **802.11ac:** MCS 0-9 up to 1.3 Gbps
Operating channels	2.4GHz band: channel 1 through channel 13 5.2 GHz band: channel 36 through channel 165 * channel availability depends on local regulatory restriction
Antenna Configuration	3x3 MIMO (transmit/receive on all three antennas) and green mode (dynamical antenna selection)
Transmit Power Adjustment	1 dB increment from 0 dBm to +18 dBm max
Operating Frequency	2412 to 2472 MHz, 5180 to 5825 MHz
Advanced Forward Error Correction Coding	STBC, LDPC
Layer 2 and Layer 3	Layer 3 routing, 802.1q, DynDNS, DHCP server/client, BOOTP client, PPP0E, and LLDP
Security	Statefull Firewall, IP filtering, NAT, 802.1x, 802.11i, WPA2, WPA Triple-Methodology, Rogue Detection: 24x7 dual-band WIPS sensing, MU-assisted, on-board IDS and secure guest access (hotspot)
Quality of Service	WMM, WMM-UAPSD, 802.1p, DiffServ and TOS

MICRO-LOCATIONING*

Supported Devices	Smartphones, tablets and mobile computers from Zebra and third parties
Accuracy	Sub 3.2 ft./1 m.

ETHERNET PORTS

Input	Single 10/100/1000 Mbps auto sensing/negotiation 802.3at POH compliant port for SNAP communication and power supply
External Slot	Two 10/100/1000 Mbps auto sensing/negotiation 802.3at PoE ports for external peripheral use. **802.3at Power Sourcing Equipment (PSE) total available power:** 12.5 W Max. for External ports and Internal Slot combined. *Assumes fully loaded SNAP **Non WLAN Version:** 802.3at Power Sourcing Equipment (PSE) total available power: 29.5 W Max. for External ports and Internal Slot combined.
Internal Slot	One 10/100/1000 Mbps auto sensing/negotiation 802.3at PoE port for internal expansion. **802.3at Power Sourcing Equipment (PSE) total available power:** 12.5 W Max. for External ports and Internal Slot combined. *Assumes fully loaded SNAP **Non WLAN Version:** 802.3at Power Sourcing Equipment (PSE) total available power: 29.5 W Max. for External ports and Internal Slot combined. Complies with IEEE802.3, IEEE802.3u, IEEE802.3z/ab, IEEE802.3x

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* Available in a future release.

Transition Point SmartLens Sensor Specifications

PHYSICAL CHARACTERISTICS	
Dimensions (ST5500)	47.0 in. x 22.0 in. x 9.0 in. 1194 mm x 559 mm x 229 mm
Weight (ST5500)	23 lbs./10.4 kg
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	-4º to 131º F/-20º to 55º C
Storage Temperature	-40º to 158º F/-40º to 70º C
Humidity	95% RH non-condensing
ESD	± 15 kV air discharge; ± 8 kV direct discharge; ± 8 kV indirect discharge
POWER REQUIREMENTS	
Input Power	18W max (37-55 VDC POE)

Point of Sale (POS) Lane SmartLens Sensor Specifications

PHYSICAL CHARACTERISTICS	
Dimensions (SP5502)	8.3 in. x 8.8 in. x 3.4 in. 211 mm x 224 mm x 86 mm
Weight (SP5502)	3.0 lbs./1.4 kg
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	-4º to 131º F/-20º to 55º C
Storage Temperature	-40º to 158º F/-40º to 70º C
Humidity	95% RH non-condensing
ESD	± 15 kV air discharge; ± 8 kV direct discharge; ± 8 kV indirect discharge
POWER REQUIREMENTS	
Input Power	13W max (37-55 VDC POE)

Backroom SmartLens Sensor Specifications

PHYSICAL CHARACTERISTICS	
Dimensions (SR5502)	17.0 in. x 10.2 in. x 7.0 in. 432 mm x 260 mm x 178 mm
Weight (SR5502)	5.5 lbs./2.5 kg
ENVIRONMENTAL CHARACTERISTICS	
Operating Temperature	-4º to 131º F/-20º to 55º C
Storage Temperature	-40º to 158º F/-40º to 70º C
Humidity	95% RH non-condensing
ESD	± 15 kV air discharge; ± 8 kV direct discharge; ± 8 kV indirect discharge
POWER REQUIREMENTS	
Input Power	18W max (37-55 VDC POE)

* Available in a future release.

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