



ZEBRA

Zebra SmartSense™ for Retail Sensors

A SENSOR FOR EVERY AREA IN YOUR STORE

Zebra SmartSense 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 and associates to shoppers 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) SmartSensor

Transition Point SmartSensor

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. SmartSense does just that. Zebra's industry-leading, advanced RFID technology collects the data SmartSense 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 SmartSensor in virtually any retail environment.



Transition Point SmartSensor

Backroom SmartSensor

Track inventory in the backroom from the moment it arrives.

This 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 SmartSensor.

Sensing Network Appliance (SNAP) SmartSensor

Track it all: inventory, associates, customers and mobile devices

The SNAP SmartSensor 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 and shoppers? Add a 360 degree fisheye video camera to track people as they move through your store. Want to know who is in your store, and where they are? Add micro-location technology to track the mobile devices in the hands of your associates and customers with GPS-style accuracy. 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 SmartSensor

Track inventory in your POS lanes

This sensor logs items passing through your POS lanes. With a highly localized antenna technology, a POS Lane SmartSensor can be installed in every lane, without risking interference. Inventory accuracy and visibility into shrink improve. And your POS Lane and Transition Point SmartSensors 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 SMARTSENSE FOR RETAIL SENSORS, PLEASE VISIT WWW.ZEBRA.COM/SMARTSENSE OR ACCESS OUR GLOBAL CONTACT DIRECTORY AT WWW.ZEBRA.COM/CONTACT

Sensing Network Appliance (SNAP) SmartSensor 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	32° to 122° F/0° to 50° C
Storage Temperature	-40° to 158° F/-40° to 70° C
Humidity	85% RH, non-condensing at 70° 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), Orthogonal 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, PPPoE, 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

Transition Point SmartSensor 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 -4° to 131° F/-20° to 55° C

Storage Temperature -40° to 158° F/-40° to 70° 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 SmartSensor 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 -4° to 131° F/-20° to 55° C

Storage Temperature -40° to 158° F/-40° to 70° 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 SmartSensor 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 -4° to 131° F/-20° to 55° C

Storage Temperature -40° to 158° F/-40° to 70° 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)

SPECIFICATION SHEET

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