

EX5500 Controller

Installation & Configuration Guide

0981-029 Rev A

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Introduction

The EX5500 Controller is a component of the Stanley Healthcare suite of enterpriselevel visibility solutions based on standard Wi-Fi communication for security and safety applications. The EX5500 Controller provides sophisticated RFID detection, monitoring, and control capabilities.

The EX5500 Controller triggers Hugs Tags as they pass through an Egress or as they approach the Controller. Tags in turn transmit a message to either the Location Receivers or to compatible Access Points within range. The Controller can activate or deactivate Tags, program them, or even instruct Tags to operate in a specific way (for example, to blink). This provides instant acknowledgment that a tagged asset has passed through a gate, doorway, or other specifically defined area.



Figure 1: Stanley Healthcare EX5500 Controller

EX5500 Controller Applications and Industry Examples

Theft Prevention

Healthcare organizations or enterprises with expensive and mission-critical equipment can tag valuable assets that are intended to remain within a specified area. The Stanley Healthcare System can track the location of such items and trigger an alert when they pass through an exit point or enter a restricted area.

Automatic Inventory Management

Logistics organizations can update inventory records by automatically determining assets within defined areas, ensuring real-time knowledge of inventory levels without manual checks or barcode scanning.

Real-Time Alerts

Organizations can use Stanley Healthcare Controllers to trigger automated events and alerts based on the current location of an asset. For example, in a shipping yard, notifications can be sent when vehicles pass through gates and enter or exit a certain dock or bonded area.

Security applications

Stanley Healthcare Controllers can be installed at the entrances of restricted areas to trigger alerts when unauthorized persons attempt to enter or leave. In hospitals, Controllers can notify staff regarding patient movement, such as a patient leaving the behavioral health department, or an infant being moved out of the NICU.

Mission Critical Applications

The EX5500 Controller can work in an off-line mode, enabling it to function as a security application even when the network is down and communication with MobileView is lost.

EX5500 Controller Features

RFID detection of Stanley Healthcare Tags

The EX5500 Controller triggers Tags to transmit as they pass through a defined area, within a range of up to 6.5 meters (21.3 feet). This is typically enough to cover door or gate areas. The EX5500 also supports a chained configuration, thus enabling an increased RFID detection range for larger areas.



The EX5500 Controller's effective range may be less than the configured range due to specific site or environmental constraints. The effective range must be taken into consideration when planning and designing the deployment.



Figure 2: EX5500 Positioned at a Doorway Triggering a Tag

Tag behavior modification:

The EX5500 Controller can wirelessly activate and deactivate Tags. Tag battery life can be extended by switching them off when they leave a defined tracking area through a gate or doorway. The Controller can also be configured to change the Tag transmission rate temporarily to accommodate different usage patterns in different environments.

Message Programming functions

The EX5500 Controller can store messages on the Tag for subsequent transmission. The message transmission can subsequently be triggered by other EX5500s, enabling sophisticated process control functions.

The EX5500 Controller can trigger a Tag to:

• Transmit up to 15 bytes of data sent to it by the EX5500

- Transmit one of 15 pre-stored messages
- Store up to 15 bytes of data sent to it by the EX5500

Network connectivity

The EX5500 Controller enables remote programming, monitoring, and software updates by the Location Engine. In addition, the EX5500 can work in an offline mode, thus eliminating the need for a physical network connection. In the offline mode however, remote configuration and monitoring is not available.

EX5500 LED Status Indicators

The EX5500 has a single LED that changes color based on the Controller status as follows:

- Constant Green: The Controller is on and working correctly.
- Blinking Green: The Controller is offline.
- Constant Orange: The Controller is being bypassed, for example by a keypad operation.
- Constant Red: Controller failure or network down.
- No LED indication: Controller is off.



Figure 3: EX5500 LED Indicator

EX5500 Controller Connector Panel

The EX5500 Controller has five connectors and two relay switches on the connector panel.



Figure 4: Stanley Healthcare EX5500 Connector Wiring



Figure 5: Stanley Healthcare EX5500 Connectors

(#1) Ethernet LAN Connection: RJ-45 connector. In a configuration with a physical Ethernet cable connection to the LAN, the network cable is attached here.

Permanent connection to a wired network is not mandatory. However, you must have a wired connection to configure the EX5500 Controller. Some monitoring functions are not available if the Controller is not wired. This connection is also used for Power over Ethernet (PoE, 802.3af).

(#2) Power Jack: Accepts an input voltage of 24-48V DC. This is a standard 2.5 mm jack connector for direct power supply. The power adaptor is not supplied with the Controller and can be purchased separately. When PoE is used, this connector becomes redundant.

(#3) Chain IN/RS-232 Connector): RJ-45 connector. This connector is used for receiving power and data from chained Controllers. RS-232 is used as a console interface with the Exciter Manager Application (to change IP for example). For this option you need a special 10-pin RJ45 to DB9 serial cable (AeroScout PN 40031500000)

(#4) Chain OUT and Control Connector: RJ-45 connector. This connector is used for distributing power and data to chained Exciters and to connect the External LF Antenna device. The output voltage is 12 V DC (0.5A maximum).

(#5) **Termination Switch:** For defining the termination settings in a chained Exciters installation. The default factory setting is Termination **On** (o-o). In a chained Exciters installation, the termination of the first and last Exciter in the chain must be set to **On** (o-o) and the other Exciters set to **Off** (-o-o-).

(#6) IP Reset: Restores the Controller's IP address to the company-set default value.

(#7) Relay Switch: Keypad Relay.

- (#a) 24-48 IN: Power connection accepts 24-48 V Direct Current
- (#b) GND IN: Ground/Earth
- (#c) R1 NC: Relay 1 normally closed connection
- (#d) R1 COM: Relay 1 common connection, always connect
- (#e) R1 NO: Relay 1 normally open connection
- (**#f) R2 NC:** Relay 2 normally closed connection
- (#g) R2 COM: Relay 2 common connection, always connect
- (**#h**) **R2 NO:** Relay 2 normally open connection

(#8) Relay Switch: Device Relay

- (#i) 12 IN: Power connection accepts 12V Direct Current
- (#j) KEY1: Weigand Keypad connection
- (#k) KEY LED: Connects to Keypad LED
- (#1) DC OUT: Direct Current Power out
- (#m) KEY0: Weigand Keypad connection
- (#n) GND: Ground/Earth
- (#o) DOOR IN: Door switch connection



Connect to COM and NO if you want the switched circuit to be on when the relay is on.

Connect to COM and NC if you want the switched circuit to be on when the relay is off.

Network and Power Connections to EX5500

Usage Option	Description
Single EX5500 – not connected to a network	EX5500s can be used as standalone devices that function independently without any network connection. In this case, you only need to connect the EX5500 to the power supply.
	Using System Manager, set the device as "not connected to the network."
Single EX5500 – connected to a network	EX5500s can be remotely controlled (for configuration and monitoring purposes) via the local area network. In this case, you need to connect it to both a power source and the network.
	EX5500s also support power-over-Ethernet (PoE), which supplies both power and network services via a single connection.

The following is a brief summary of available powering and networking options:

Direct Power Supply

Connect a 48 VDC power source direct to the Controller's power jack.

The EX5500 Controller requires approximately 8 W of power. When connecting a Controller to a direct power source with one of the above options, verify that the power level is sufficient. When using a direct power source for chained Exciters, you can only power up to two Exciters sequentially, even if the power source is sufficient for more. Exciters must only be powered by a limited (marked LPS or NEC class 2) power supply.

PoE Switch

Note

If your network has a Power-over-Ethernet infrastructure, you can connect a CAT-5 Ethernet cable from the PoE switch to the Controller's LAN connector. This supplies both the power and the network connection.



PoE standard 802.3af class 0 allows power for a single EX5500 Controller

When using PoE with the other chained Exciters, a PoE connection must be made to every second Exciter in the chain. In addition, the LAN connectivity that the PoE supplies is not used for slave Exciters in a chain. Slave Exciters receive data from the Master Exciter via the Chain IN connection.

110/220 VAC to 48 VDC PoE Single-Port Injector

The PoE Single Port Injector converts 110/220 VAC to 48 VDC. In addition, it can receive a network connection and you can run a single cable to the Controller's LAN connector, thus supplying both power and network connectivity.

When using this injector, the Controller power jack is not used.



Figure 6: 110/220 VAC to 48VDC PoE Single-Port Injector

The injector's IN connector is connected to the network. The injector's OUT connector is connected to the Controller's LAN connector.

The injector can be used for both networked and non-networked Controllers. In the case of a non-networked Controller, the IN connector on the injector is not used.

110/220 VAC to 48 VDC Power Supply Adaptors

These adaptors convert 110 VAC or 220 VAC to 48 VDC.



Figure 7: 110/220 VAC to 48 VDC Adaptor

The adaptor is connected to the EX5500 Controller's power jack. The network must be connected separately to the EX5500 Controller's LAN connector. This adaptor is most commonly used for chained Exciters. It can power up to two Exciters.

Power Connection Summary

Power Supply	Input	Output	Max. Current	Available Power	Maximum # of Exciters with One Source
PoE single port injector	100-240 VAC, 50-60 Hz	48 VDC	0.32 A(1)	15.4 W	2
Standard PoE 802.3af switch port(2)	-	48 VDC	0.32 A(1)	15.4 W	1 EX5500 Controller or 2 other types of Exciter
External power source	_	48 VDC	>1 A	>48 W	2

The following table summarizes the power connection options:



To prevent power loss, PoE cables must not exceed 100m (330') in length.

Chaining the EX5500 Controllers

In an area where the required LF coverage exceeds the capacity of one EX5500 Controller, you can extend the coverage by chaining several Exciters. For example, a large entrance with two sets of double doors too wide for a single Exciter, might require two Exciters chained together. EX5000, EX3210, EX2000B or EX4200 Exciters can be chained to an EX5500 Controller.



EX5500 Controllers cannot be chained to other EX5500 Controllers.

The system treats chained Exciters as a single device with a single ID. Transmissions do not interfere with one another.

Each Exciter must be positioned to allow transmission range overlap between neighboring Exciters. This ensures full coverage of the area.

Figure 7 shows 5 chained Exciters, their connections and the state of each Exciter termination switch.



Figure 8: EX5500 Chaining Using a Power Adaptor

EX5500 Chain Connection

Up to 4 Exciters can be connected to the EX5500 in a chain, as follows:

1. The first Exciter in the chain, directly connected to the LAN, is designated the "Master". Other Exciters are designated "Slave".

EX5500 Controllers can act as either Master or Slave Exciters.

- 2. The Master Exciter is connected to the first Slave Exciter as follows: Master Chain OUT to Slave Chain IN.
- 3. Slave Exciters are then connected as follows: Slave OUT to Slave IN.
- 4. The Termination Switch of the Master Exciter and the last Slave Exciter in the chain must be set to On (o-o).

On the other Slave Exciters, it must be set to Off (-o o-).

5. The Master/Slave configuration is set via System Manager.

Slave Exciters inherit the Master Exciter ID and LF configuration, as well as the transmission range.

eneral				
ternal LE Exciter	Identification			
	Name:	Exciter No 0		
	ID:	3.0		
	Map ID:	17.1.0		
	Map Nama:	Office 1		
	Map Name.	Oncer		
	IP Configuration			
	Connected to ne	etwork		
	MAL Address:	102 100	1 0	
	IP Address:	132 . 166 .		
	Forc	1511		
	HW configuration			
	Exciter Model:	Unknown		
	Exciter Modules:	Estemal I.F.	I there are not	DVG Di Deserium
		Enable	Enable	Enable
	Chaining and Extern	ial Connections		
	Exciter is Slave			
	Exciter External Cor	nnection: Slave or	None	
		🔘 Master E	xciter	
	Predefined Configura	ation		
Comment				
				*



Each slave must be connected <u>directly</u> to the network and configured the following parameters configured before being connected to the MASTER:

• Transmission Range: Select the desired transmission range of the slave Exciter so that the LF coverage is sufficient and some overlap exists between the chained Exciters' LF coverage

Exciter Modules	Settings Tag Reaction Tag Transmission Par	ameters Advanced
General		
Internal LF Exciter	HW Configuration	
	HW ID: 1	
	Maximum LF transmission 25 range (cm):	-

- Connected to network: Make sure the Connected to network checkbox is unchecked.
- Chaining and External Connections: Check the Exciter is Slave Checkbox

eral nal I E Eucitor	-			
nai Er Excitei	Identification			
	Name:	Exciter No.0		
	ID:	3_5		
	Map ID:	17_1_0		
	Map Name:	Ground 1		
	IP Configuration			
	Connected to n	etwork		
	MAC Address:			
	IP Address:	192 . 168 .	3.1	
	Port	1511		
	HW configuration			
	Exciter Model:	Unknown		
	🔽 Enable Exciter L	.EDs		
	Exciter Modules:			
	🗸 Internal LF	External LF	🔲 Ultrasound	🔲 Wi-Fi Receiver
	🗸 Enable	Enable	Enable	Enable
	Chaining and Extern	al Connections		
	📝 Exciter is Slave			
	Exciter External Co	nnection:	None	
		Master F	voiter	

Resetting the EX5500 Controller IP Address

You can reset the EX5500 Controller's IP address to the factory default value. The default IP address is 192.168.1.178.

• Press the **IP Reset button** with a ballpoint pen for 5 second.

After a successful IP reset, a red LED indication appears for two seconds.

Configuring the EX5500 Controller

EX5500 Controllers are configured using AeroScout System Manager or Cisco MSE. The configuration settings consist of device installation and network definitions.

Configuring the EX5500 Controller via System Manager

The EX5500 Controller requires settings in the System Parameters and the Exciter Properties dialog boxes to be configured. System Manager can automatically detect the Exciter Model. Once detected a number of settings are automatically configured by System Manager.

System Parameters

- 1. Select **Configuration**, **System parameters**. The **System Parameter** dialog box opens.
- 2. Select the **Devices** tab.
 - a. Set the Wi-Fi Receiver Multicast Address Filter.
 - b. Set the Wi-Fi Receiver Monitoring Interval.

ieneral Devices Filters Wi-Fi Devices Lo	gger SNMP					
General						
Generic Command acknowledge timeout (ms	ec): 2000)				
Generic Command Retries:	3					
IBSS Destination Address:	01	0C	CC	00	00	00
CCX Destination Address:	01	40	96	00	00	03
Location Receiver Parameters						
Enable Received Messages of Type:	IB:	ss			ссх	
Beacon Check Interval (seconds):	30					
Maximum time without beacons (sec):	5					
CRC for Tags						
Enable SSID Transmission						
Access Point Parameters						
LBS Verification timeout (seconds):	90					
Never verify LBS:						
Exciter Parameters						
Wi-Fi Receiver Multicast Address Filter:	CCX		•			
	-					

- 3. Select the **SNMP** Tab.
 - a. Check the Enable SNMP Traps checkbox.
 - b. Set the MobileView IP Address.

c. Set the Check Interval.

Enable SNMP Transition	aps	Logger	
SNMP Trap Destina	ation		
IP Address:	192 . 168 . 70	. 14	
Port:	162		
Community:	Public		
Check Interval:	5	sec.	

Exciter Properties

- 1. Add the EX5500 Controller to System Manager.
- 2. On the map double-click the EX5500 Controller. The Exciter Properties dialog box opens.
- 3. In the Exciter Properties dialog box General Module select the Settings tab.
 - a. Enable the Internal LF Exciter.
 - b. Select and **Enable** the **Wi-Fi Receiver**. Selecting and Enabling the **Wi-Fi Receiver Module** adds the **Controller** module in the **Exciter Modules** pane.

Identification Name: ID:	Hugs demo 1234\$		
Name: ID:	Hugs demo 1234\$		
ID:		55	
ID:	2.2		
A CONTRACTOR OF	2,2		
Map ID:	17_1_0		
Map Name:	Hugs Floor		
IP Configuration			
Connected to	Network		
MAC Address:	00 0C CC AC	45 39	
ID Address	102 168 70	102 Port	1511
IF Address.	192 . 100 . 70 .	105 POIL	1511
HW configuration			
Exciter Model:	EX-5500	Enable Exciter I	EDs
Exciter Modules:			
Internal LF	External LF	Ultrasound	Wi-Fi Receiver
Enable	Enable	Enable	Enable
Chaining and Exte	ernal Connections		
Exciter External C	onnection: Slave Supp	or None ly power to another Exe	iter
Predefined Co	nfiguration		
	Map Name: IP Configuration Connected too MAC Address: IP Address: HW configuration Exciter Model: Exciter Model: Exciter Models: Internal LF Chaning and Exte Slave Exciter Exciter External C Predefined Co	Map Name: Hugs Floor IP Configuration Connected to Network MAC Address: 00 0C CC AC IP Address: 122 , 168 , 70 , HW configuration Exciter Model: EX-5500 Exciter Models: Slave Exciter Exciter Chaning and External Connections Slave Exciter Exciter External Connection: Slave Supp Predefined Configuration	Map Name: Hugs Floor IP Configuration Connected to Network MAC Address: 00 0C CC AC 45 39 IP Address: 192 . 168 . 70 . 103 Port: HW configuration Exciter Model: EX-5500 I Enable Exciter I Exciter Model: EX-5500 I Enable Exciter I Exciter Model: EX-5500 I Enable Enable Chaining and External Connections Slave Exciter Exciter External Connection: Slave or None Supply power to another Exc Predefined Configuration

- c. Select the General Transmission Parameters tab.
- d. Set the LF Transmission Interval to 200 milliseconds.

Paramet			
Jeneral	LF Transmission Interval		
Internal LF Exciter	In milliseconds:	200	1
Wi-Fi Receiver	In seconds:	1	-
Controller	O In minutes:		
Comment			

- 4. Select the Internal LF Exciter Module.
 - a. Select the Tag Reactions tab.
 - b. Ensure the Send leaving Exciters range notification option is unavailable.

Exciter Modules	Settings Tag	Reaction Tag 1	Transmission Parameters	Advanced	
General	Messages an	Data			
Internal LF Exciter	Send only	Exciter ID			
Wi-Fi Receiver	Send mes	sage]	HevaDecimal *	
Controller			to second associated. The	Trexablecimar	
	Store	message in Tag,	In record number 0		
	Send stor	ed message nun	nber 0		
	Send Retr	ieved from Host	Telemetry Data		
	Additional Ad	tions			
	Set Tag's	activity status		Inactive *	
	Change s	pecial control co	mmand on Tag to:	0 *	
	Change M	Map ID on Tag to	[ID:Hugs Floor, Map:]	7_1_0]	
	Change C	ell ID on Tag to:	LID:Default Cell of Ma	n Hugs Floor Cell:18	1 . *
	Make Tao	blink for:	1 sec [Pero	vitted range 1-2551	
· · · · ·	Sand law	ing Exciter's ran	ae potification	inted range 1 2001	
	Jena leav	ing exciter s fair	genotification		
	Oltrasound C	onliguration on	Tay		
	O Do not cr	ange Oltrasound	Conliguration		
	C Activate U	Iltrasound Recei	ver		
	Include	Tags with Firmw	are version 4.9A and earl	er (Refer to User Guid	e before use)
	O Deactivat	e Ultrasound Re	ceiver		
	Clear Ultr	asound Exciter II	D		
Comment					

- c. Select the Tag Transmission Parameters tab.
- d. Tag Repetitions of an Exciter, select the Number of Repetitions option.
- e. Set the Number of Repetitions to 3.

raal Tag Transmission Mode mai LF Exciter Fi Reseriver © Use the preconfigured Tag Transmission I © Modify the Tag Transmission I © Modify the Tag Transmission I © For a temporary dural ○ Permanently	after triggered by an Exciter event: nsmission Interval tterval to 0.256 * sec.
 Permanently 	tion of to -
Stop Tag transmissions Stop Tag transmissions	ation of
Other Tag Repetitions of an Exciter Event No Repetitions whore of Repetitions whore of Repetitions	t s 3 •
Set Data Frame format Tag Response Mode Ø Power Save Ensure Mode	CCX *

- f. Select the Advanced Tab
- g. Ensure the Make Tag Blink option is set to Exclude ...



5. Select the **Controller** Module.

Configure as follows:

Exciter introduces	Settings						
General	Controller Mode						
nternal LF Exciter	Security solutions						
Vi-Fi Receiver	Chokenoint control						
Controller							
	Relays and Sensors						
	Relay 1 :	Relay 2 :					
	Normally Inactive •	Normally Inactive 🔻					
	MagLock	☐ MagLock ✔ Siren ✔ Strobe ☐ Camera					
	Siren						
	Strobe						
	Camera						
	Elevator control	Elevator control					
	Other	Other					
	Connected to door sensor						
	Failsafe timeout 300 second:	s					
	Purpage Dentise						
	Bypass Device						
	Bypass Device Keypad 🔹						
	Bypass Device Keypad • Bypass timeout 15 seconds	Keypad offline code 8426					
	Bypass Device Keypad Bypass timeout 15 seconds	Keypad offline code 8426					
	Bypass Device Keypad • Bypass timeout 15 seconds Controller Reaction	Keypad offline code 8426					
	Bypass Device Keypad • Bypass timeout 15 seconds Controller Reaction Timeout 3 seconds	Keypad offline code 8426					
	Bypass Device Keypad Bypass timeout 15 seconds Controller Reaction Timeout 3 seconds	Keypad offline code 8426					
	Bypass Device Keypad Bypass timeout 15 seconds Controller Reaction Timeout 3 seconds	Keypad offline code 8426					
omment	Bypass Device Keypad • Bypass timeout 15 seconds Controller Reaction Timeout 3 seconds	Keypad offline code 8426					
omment	Bypass Device Keypad • Bypass timeout 15 seconds Controller Reaction Timeout 3 seconds	Keypad offline code 8426					

Controller Mode

a. Select **Security solutions** for Hugs tags only. Select **Chokepoint control** for other deployments.

Relays and Sensors

- a. Select the **Normally** state of **Relay 1** and **Relay 2** as either **Active** or **Inactive**. If a relay is connected to a door Maglock, the normally active relay configuration would match the door that is normally locked.
- b. For the Active and Inactive Relay(s) select the trigger response(s) required, by checking the corresponding trigger device box.
- c. Check the box **Connected to door Sensor** as required. (The Exciter sends SNMP traps to MobileView when the door is open and closed)

Failsafe Mechanism

- a. Select the **Enable failsafe...** option to allow the Exciter to monitor the network status.
- b. Enter a time lapse period in seconds, in the Failsafe Timeout field. If a network connection is not registered within this period the failsafe mechanism is triggered and the connected trigger device is disabled.

Bypass Device

An override option exists on secure doors. In the event of system activation the timeout function disables the override function for a specified time.

- a. Select the override device from the drop down list.
- b. Set the offline code.

Controller Reaction

- a. Enter the Timeout in seconds.
- 6. Set a Mask around the EX5500 Controller.



- 7. If you wish to change IP settings (IP, subnet, gateway, or ports), you can do so by right-clicking on the Exciter icon and selecting **IP Settings**.
- 8. Check the EX5500 Controller status by right-clicking the Exciter icon and selecting **Status**.
- In the Status dialog box verify the firmware version. (DSP and Second Boot) are compatible with the current version of Stanley Healthcare Engine and the Exciter hardware version. Consult Stanley Healthcare Support for appropriate firmware versions.
- **10**. Position and mount each EX5500 Controller in the site according to the site survey recommendations.
- 11. Align the EX5500 Controller position according to the required coverage area.
- **12.** If you wish to define an EX5500 Controller as an offline Exciter, you must define the Controller as **disconnected from network** in the **Exciter Properties** dialog box, approve the settings and then disconnect the Exciter from the network.

For more information, refer to the *AeroScout Engine User Guide*.

Configuring the Controller via Cisco MSE

Follow this procedure:

1. Open the WCS and select **Configure**, **Chokepoints**.

Alarm Summa	v ap	A 2729	₹1 <u>0</u> 1	25 🔻		Wireless Control System	Advanced Search Secol Search Search
Monitor - Repor	ts 🔻 📢	Configure - Ser	vices + Administre	tion - Tools	- pelo -		🔞 🔁 📇 Logo
pure + Chokepoints		Controllers Access Points Ethernet Switch	hes				Entries 1 - 19 of 19
		Chokepoints					10 C 00 1 3 39 30
MAC Address	Ωh	Spectrum Experts		Bange	Static IP	Map Location	
00:00:00:60:61:23	Ð	Casterlas Ter	Controller Template Launch Pad	3.0	192.168.100.156	System Campus > Cell. Sel	ect Build > Cell Select Floor
00:00:00:00:00:02:25		Controller Con		4.0	192.168.101.37	Nr Campus > Nir Building :	NIT FL2 AP
00:00:00:61:00:22	Ð	Controller Auto	o-Provisioning	1.0	192-168-100-160	Unassigned	
00:00:00:00:00:17	۴.	AP Configuration	on Templates 🔹 🕨	0.0	2.2.2.1	Unassigned	
00:00:00:00:00:127	۶.	Autonomous A Templates	Autonomous AP Migration Templates	0.0	2.2.2.2	Unassigned	
00:00:00:00:00:23	÷.,	Scheduled Configuration Tasks	0.0	2.2.2.3	Unassigned		
00:00:00:00:00:14	F.	ACS View Servers TFTP Servers 200084 No		0.0	2.2.2.4	Unassigned	
00:00:00:60:15:14	kt			0.0	192.168.100.153	Kfir Campus > Building 1 >	81
00:00:00:60:00:1b	kł			0.0	192.168.100.155	Kfir Campus > Building 1 >	8.1
00:00:00:60:66:db	kEX,			0.0	192.168.101.38	Kfit Cantous > Building 1.>	EL1
00:00:00:60:81:27	kEX,	3200	No	0.0	192.168.100.142	System Campus > Cell Sel	ect Build > Cell Select Floor
00:00:00:60:93:87	kEX,	3200E	No	0.0	192.168.100.78	Kfr Campus > Building 1 >	£11
00:00:00:41:00	EX_	4100	No	3.0	10.10.10.02	Nr. Campus > Nr. Building :	E NIT FLI LR
00:00:00:41:10:03	EX_	100_03	No	1.0	10.10.10.03	Nir Campus > Nir Building :	NIT FL2 AP
00:00:00:78:43:80	Ex_4	100_Shay	No	0.0	9.9.9.9	Unassigned	
00:00:00:60:61:40	Ex_4	200_Shay_2	No	0.0	192.168.100.214	System Campus > Cell Sel	ect Build > Cell Select Floor
00100100160184105	Excit	ter-Auto	No	0.0	192.168.100.222	QA-Auto-Dont-Touch > QA-	Auto-Dont-Touch > First
00:00:00:00:00:02:34	type	5_92_92	Yes	1.0	192.168.92.92	MichaelCampus > MichaelBr	alding > Third OfficeNew
00:00:00:60:93:17	3200	_92_116	Yes	1.0	192.168.92.116	MichaelCampus > NichaelBr	viding > Third OfficeNew

2. Select Add Chokepoint.

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Add Chokep	Add Chokepoint					
Configure > Choke	points > Ad	d Chokepo	oint			
MAC Addres	s	00:0	c:cc:62:00:	12		
Name		Roo	m 122			
Entry/Exit C	hokepoint		Enable			
Range 🔍		0		ft		
Static IP Add	fress	192	168.206.3	0		
Save Cancel]					

- 3. Enter the MAC address, Name and Static IP Address.
- 4. Click Save.
- 5. Select **Monitor**, **Maps** and then the relevant campus, building and floor.

IIIIII Alarm Summary ▲ 2729 ▼ 2 ● 137 CISCO					
Monitor ▼ Reports ▼ Configure ▼ Services ▼ Administration ▼ Tools ▼ 1 Maps Tree View ■ Maps (Root Area) Maps Maps (Root Area) Type Status					
Kfir Campus Kfir Campus Kfir Campus MichaelCampus MichaelCampus MichaelBuilding 1	Show	All Go Name System Campus			
Init Campus Init Campus Init Campus Init Campus Init Campus Init Campus Init Campus		Kfir Campus MichaelCampus			
		<u>Nir Campus</u> <u>OA-Auto-Dont-Touch</u>			
		<u>Kfir Campus > Building 1</u> <u>Kfir Campus > Building 2</u> <u>MichaelCampus > MichaelBuilding</u>			
		My Campus > Building 1			

6. Select Add Chokepoint and click Go.



- 7. Check the relevant Exciter and click **OK**. You are returned to the relevant floor area.
- 8. Locate the added Exciter on the map and click **Save**.
- 9. Select Services, Synchronize Services and synchronize the relevant MSE.
- 10. Open System Manager and configure the Exciter.

Mounting the Controller and External LF Antenna

Fixing the Controller to a Floating Ceiling:

• Attach the device to the false ceiling using the ceiling mounts located on the bottom casing of the device.



Figure 9: Controller mounted on a Floating Ceilings

Mounting the Controller on a Wall

Mount the Exciter with the Stanley Healthcare logo facing up.

• Attach the Controller to the wall using the two screw mounts on the bottom casing.

Fixing the External LF Antenna to a Floating Ceiling:

• Attach the antenna to the false ceiling using the ceiling mounts located on the bottom casing.



Figure 10: External LF Antenna Mounting Brackets

Mounting the External LF Antenna on a Wall

• Attach the External LF Antenna to the wall using the two screw mounts located on the bottom casing.

Mounting the Controller or External LF using the Exciter Mounting Clip

The Exciter Mounting Clip (Figure 19) accessory is sold separately from the Controller. It can be used to mount the Controller or the External LF in deployments where mounting on the ceiling grid is not possible.



Figure 11: Exciter Mounting Clip (SKU: EXAC-140)

- 1. Position the Mounting Clip on a standard 60cm (24") grid false ceiling.
 - a. Snap the Mounting Clip onto the topside of the T-Grid using the 'snaps' on the ends of the clip.



Figure 12: Exciter Mounting Clip positioned on a grid of a false cieling

- 2. Prepare the Ceiling Tile.
 - a. Measure and mark the required positions of the mounting screws on the ceiling tile
 - b. Drill holes in the ceiling tile at the marked positions
- 3. Mount the Controller or LF Antenna
 - a. Thread the screws (not provided) through the holes in the ceiling tile

- b. Screw them into the Mounting clip. The screw heads should remain 2-3cm below the ceiling tile.
- c. Attach the Controller or LF Antenna using the two screw mounts on the bottom casing.



Figure 13: External LF Antenna mounted using the Exciter Mounting Clip

EX5500 and Accessories Model Numbers

Product	SKU	Description
EX5500 Controller	EX-5500	EX5500 Controller. Includes 48V DC input, Ethernet and PoE interface
EX5500 Power Supply	ADP-047	AC/DC adaptor 45W 48V/1.0A 90-264VAC.
PoE Injector	ADP-030-U	110/220 VAC to 48 VDC PoE Single-Port Injector
Exciter Detector Tool	EXD-1000	Tool for visualizing the effective LF Exciter transmission field. Analyzes the Exciter coverage during deployment. Includes a PC application and detector hardware that can be connected via USB to a PC.
External LF Antenna	ANT-4200	External LF Antenna Device. Powered directly from the Exciter. Includes mounting plate and a ceiling mount.
Exciter Mounting Clip	EXAC-140	Heavy-duty Mounting Clip for Exciters. Snaps easily onto the topside of the T-Grid of a false ceiling with a standard 24" span grid. Enables mounting the Exciter using screws.

EX5500 Specifications

Physical and Mechanical

- Dimensions: 192mm X 242mm X 61mm (6.1in x 7.1in x 1.8in)
- Weight: 450g (16oz)
- Housing: Polycarbonate and ABS

Range

• Adjustable from 0.5m (20 in) up to 6.5m (21.3ft) in intervals of 0.5m (20 in)

LF Channel

- 125kHz
- Field intensity limits: 37.3dBµA/m at 10m (ETSI)
- Propagation limits: 21.8dBµV/m at 300m (FCC)
- Modulation: ASK

Network Interface

• Ethernet (RJ-45)

Power

- Input voltage: 12, 24-48VDC
- PoE (802.3af) 48VDC
- Maximum power consumption: 10W.
- Maximum power consumption of External LF Antenna: 5W.

Environmental

- Operating temperature: 0 to 50 °C (32°F to 122°F)
- Humidity: 0 to 95%, non-condensing



FCC Compliance Statement

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in residential installations. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio and television reception.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause such interference, which can be verified by turning the device off and on, the user is encouraged to eliminate the interference by one or more of the following measures:

- Re-orient or re-locate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to an outlet on a circuit different from the one that supplies power to the receiver.
- Consult the dealer or an experienced radio/TV technician.

WARNING! Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with FCC Rules Part 15 and with Industry Canada licence-exempt RSS standard(s). Operation is subject to two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received or that may cause undesired operation.

Le present appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisee aux deux conditions suivantes :(1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioelectrique subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

About Stanley Healthcare

Stanley Healthcare provides over 5,000 acute care hospitals and 12,000 long-term care organizations with enterprise solutions that transform safety, security and operational efficiency. The Stanley Healthcare EcoSystem enables customers to achieve organizational excellence and superior care in five critical areas: Patient Safety, Security & Protection, Environmental Monitoring, Clinical Operations & Workflow and Supply Chain & Asset Management. These integrated solutions are complemented by consulting, training and Transformational Lean[™] process reengineering. Stanley Healthcare is proud to be part of Stanley Black & Decker, Inc. For more information, visit www.StanleyHealthcare.com.

Stanley Healthcare

1300 Island Drive Suite 202 Redwood City, CA 94065 Tel: +1 (650) 596-2994 Fax: +1 (650) 596-2969 E-mail: info@aeroscout.com

Europe, Middle East, Africa Office

Tel : +32 2 709 29 49 Fax : +32 15 30 80 99 E-mail: emea@aeroscout.com Japan Office Tel: +81 3 3556 9003 Fax: + 81 3 5875 3723 E-mail: info@aeroscout.co.jp

Latin America Office Tel : +52 55 5001 5769 E-mail: latam@aeroscout.com

Asia-Pacific Sales Tel : +1 650 596 2994

E-mail: apac@aeroscout.com

Australia and New Zealand Sales Tel : +61 3 9038 8690 E-mail: anz@aeroscout.com