



FX9500/FX9600 Technical Accessory Guide



NOTE: FX9500 discontinued 11/2017 - see PMB 3037

NOTE: This document is only for general reference. Solutions Pathway and related PMBs should be used for product availability, pricing, and final solution selection.

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Communication Cables					
Part Number	Picture	Description	Notes	Required Items	
25-64396-01R		USB Cable			
Antennas					
Part Number	Picture	Description	Notes	Required Items	
SR5502-SR01000SSNA (US frequency) SR5502-SR01000SSEU (European-ETSI frequency)	Wire rope Carathore Eyecot	Overhead/Ceiling Mount Star Antenna kit - dual antennas	Designed to optimize tag reads as they move from aisle to aisle, room to room. ► Antennas are designed to be overhead/ceiling mounted. ► Includes two optimally angled antennas, two carabiners (for hanging antennas) and two 17 ft. / ~5 m. cables for connection to FX reader. ► Antennas are left hand circular polarized,, gain-max 9 dBic, gain linear max 6 dBil		
SR5500-SR01000SSNA (US frequency) SR5500-SR01000SSEU (European-ETSI frequency)	- Alvier rope Carabiner	Overhead/Ceiling Mount Star Antenna kit - single antenna	▶ Designed to optimize tag reads as they move from aisle to aisle, room to room. ▶ Antenna is designed to be overhead/ceiling mounted. ▶ Includes one optimally angled antenna, two carabiners (for hanging antenna) and one 17 ft. / ~5 m. cable for connection to FX reader. ▶ Antenna is left hand circular polarized,, gain-max 9 dBic, gain linear max 6 dBil		

	4. ~.		▶ Designed to optimize tag reads as they move from aisle to aisle, room to	
SR5200-SR01000SSNA (US frequency) SR5200-SR01000SSEU (European-ETSI frequency)		Wall Mount Star Antenna kit - single antenna	Iney move from asse to asse, room to room. ► Antenna is designed to be wall mounted. ► Includes one antenna, antenna mounting bracket and one 17 ft. / ~5 m. cable for connection to FX reader. ► Antenna is left hand circular polarized,, gain-max 9 dBic, gain linear max 6 dBil	
SP5504-SR01000SSNA (US frequency) SP5504-SR01000SSEU (European-ETSI frequency)	N. ZEBRA	Localized (POS) Antenna kit	Designed to track items through Point of Sale (POS) or other small footprint areas. ► Highly localized RFID antenna solution covers area approximately 2 ft. x 2ft. ► Antenna is designed to be overhead/ceiling mount suspended. ► Includes antenna, 20 ft. cable for connection to FX reader, and hang wire for suspending antenna. ► Antenna is left hand circular polarized gain-max 7.3 dBic, gain linear max 4.9 dBil ► Antenna can be suspended from ceiling using included hang wire or optional Mounting Pole (HN-001187-01 or HN-000537-01) can be used. ► Dimensions: 7 in. height x 7.3 in. diameter ► Weight: 2.2 lbs.	
AN510-CFCL60001US (US frequency) AN510-CFCL60002EU (European-ETSI frequency)		AN510 Ultra-Low Profile Indoor/Outdoor Antenna Kit (Flush Mount)	▶ IP67 rating allows antenna to be used in a wide range of indoor and outdoor environments ▶ Dimensions: 9.8 in. L x 9.8 in. W x 0.55 in. D (250 mm x 250 mm x 14 mm) ▶ Weight: 1.6 lbs. ▶ ~ 8.5 dB gain ▶ 68° vertical and 68° horizontal beam width. ▶ Flush mounting can be accommodated by attaching via screws or bolts through the corner holes in the housing. ▶ Polarization: RHCP ▶ Kit includes AN510 Antenna (AN510-FCL60001US or AN510-FCL60002EU) and IP67 Rated Pigtail Cable (CBLRD-7B8020140R)	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX reader

AN510-CSCL60003US (US frequency) AN510-CSCL60004EU (European-ETSI frequency)	AN510 Ultra-Low Profile Indoor/Outdoor Antenna Kit (VESA/Studded Mount)	▶ IP67 rating allows antenna to be used in a wide range of indoor and outdoor environments ▶ Dimensions: 9.8 in. L x 9.8 in. W x 0.55 in. D (250 mm x 250 mm x 14 mm) ▶ Weight: 1.6 lbs. ▶ ~ 8.5 dB gain ▶ 68° vertical and 68° horizontal beam width. ▶ Includes 4 Studded mounts in 100mm VESA pattern allowing antenna to be mounted using common brackets. ▶ Polarization: RHCP ▶ Kit includes AN510 Antenna (AN510-SCL60003US or AN510-SCL60004EU) and IP67 Rated Pigtail Cable (CBLRD-7B8020140R)	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity
AN520-FCL60010US (US frequency) AN520-FCL60011EU (European-ETSI frequency)	AN520 Ultra-Rugged Low Profile Indoor/Outdoor Antenna	▶ IP68 rating allows antenna to be used in a wide range of indoor and outdoor environments ▶ Dimensions: 5.9 in. L x 5.9 in. W x 0.55 in. D (150 mm x 150 mm x 14 mm) ▶ Weight: .55 lbs. ▶ ~ 5.5 dB gain ▶ 115° vertical and 115° horizontal beam width. ▶ Flush mounting can be accommodated by attaching via screws or bolts through the comer holes in the housing. ▶ Polarization: RHCP	►IP67 Rated Pigtail Cable (CBLRD-7B8020140R) ►One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX reader
AN610-SCL71129US (US frequency) AN610-SCL71128EU (European-ETSI frequency)	AN610 Slim General Purpose Indoor Antenna	Designed for carpeted space and customer-facing environments (i.e. under POS counter) Dimensions: 10.8 in. L x 8.5 in. W x 0.3 in. D Weight: 1.1 lbs. ~ 3 dB gain 60° vertical and 80° horizontal beam width. Has integrated mounting holes within ABS plastic frame and includes 1 ft pigtail cable Uses Zebra's standard antenna cables Polarization: LHCP Rev C version of antenna (top picture has a thinner profile by removing the gray border/frame that surrounds the antenna on Rev A and B versions (bottom picture) - see PMB 3121.	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX reader

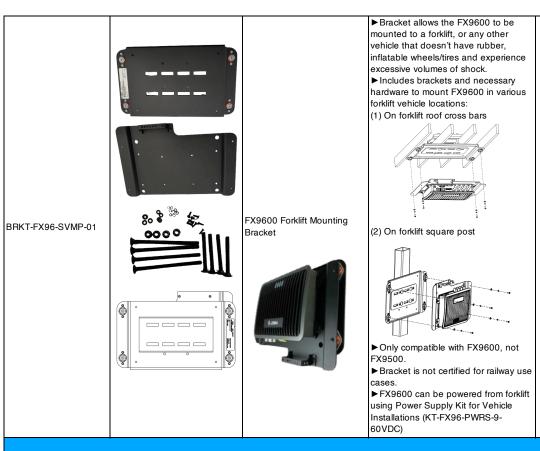
SP5505-SR00000SSNA (US frequency) SP5505-SR00000SSEU (European-ETSI frequency)	AN610 Slim General Purpose Indoor Antenna Under Counter KIT	► Kit allows AN610 to be mounted under counter. Typically used in retail environments with SmartLens solution. ► ~ 3 dB gain ► 60° vertical and 80° horizontal beam width. ► Kit includes: - AN610 antenna (AN610-SCL71129US or AN610-SCL71128EU) - 20 ft. white antenna extension cable - Under counter mounting tray - self stick clips for routing antenna	
AN620-SCL71131US (US frequency) AN620-SCL71130EU (European-ETSI frequency)	AN620 Slim General Purpose Indoor Antenna	cable to FX reader. ▶ Designed for carpeted space and customer-facing environments (i.e. under POS counter) ▶ Dimensions: 15.4 in. L x 10.8 in. W x 0.47 in. D ▶ Weight: 2.2 lbs. ▶ ~ 3 dB gain ▶ 48° vertical and 75° horizontal beam width. ▶ Has integrated mounting holes within ABS plastic frame and includes 1 ft pigtail cable ▶ Uses Zebra's standard antenna	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX reader
AN650-FCL71325US (US frequency) AN650-FCL71324EU (European-ETSI frequency)	AN650 Ultra-Low Profile Ground/Mat Antenna	cables ▶ Polarization: LHCP Antenna is optimized for RFID deployments involving moving products, assets and people. Antenna is ideal for applications where traditional side antennas are unsuitable or not optimized for the application. ▶ At just 8 mm / 0.3 in. thick, the durable, high performance AN650 is uniquely capable of lying flat on the ground within a doorway sized footprint and can withstand payloads of over 200 kg (440 lbs). ▶ Dimensions: 915 mm x 305 mm x 8 mm (36 in x 12 in x .3 in) ▶ Weight: 4.4 lbs. ➤ 9 dB gain ▶ beam width 20° in XZ, 80° in YZ beam width ▶ Uses Zebra's standard antenna cables ▶ Polarization: Circular	One RF Antenna Cable (CBLRD-1B400)

		▶ Designed to withstand exposure to rain, snow and extreme temperature - ideal for the receiving dock doors or outdoor shopping areas	
AN720-L51NF00WUS (US frequency) - - AN720-L51NF00WEU (European-ETSI frequency)	AN720 Compact Rugged Indoor-Outdoor Antenna	Dimensions: 5.2 in. L x 5.2 in. W x 0.7 in. D Weight: 0.8 lbs. IP67 rated ∼ 3 dB gain 100° beam width - for even wider coverage Comes complete with an articulating mount Uses Zebra's standard antenna cables Polarization: LHCP	One RF Antenna Cable (CBLRD-1B400)
AN710-L61NF00WUS (US frequency) - AN710-L61NF00WEU (European-ETSI frequency)	AN710 Compact General Purpose Indoor Antenna	➤ AN710 discontinued 9/2019, now use AN720 - see PMB 10137. ➤ Designed for carpeted space and customer-facing environments (i.e. under POS counter) ➤ Dimensions: 5.75 in. L x 5.75 in. W x 0.69 in. D ➤ Weight: 1.1 lbs. ➤ 3 dB gain ➤ 80° beam width - ideal for most applications ➤ Complete with an attached articulating mount and 2 ft pigtail cable ➤ Uses Zebra's standard antenna cables ➤ Polarization: LHCP	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX
ANT-71721-01 (Left circular polarization) - ANT-71720-01 (Right circular polarization)	AN200 General Purpose Indoor-Outdoor Antenna	 ▶ Discontinued 10/2014, now use AN440 for indoor usage or AN480 for outdoor usage. ▶ General-purpose indoor/outdoor antenna can be used in a wide range of areas for versatile and reliable application coverage. ▶ Its rugged design withstands a range of environmental conditions from extreme heat and cold to moisture and vibration, making this antenna ideal for nearly any application. ▶ Dimensions: 11.1 in. L x 11.1 in. W x 1.9 in. D ▶ Weight: 3 lbs. ▶ Polarization: LHCP or RHCP 	One RF Antenna Cable (CBLRD-1B400)
AN480-CL66100WR (Left circular polarization) - AN480-CR66100WR (Right circular polarization)	AN480 High-Performance Worldwide Indoor Antenna	► This single port indoor antenna offers the maximum flexibility and performance required to meet the needs of enterprises around the world. ► Dimensions: 10.2 in. L x 10.2 in. W x 1.98 in. D ► Weight: 3 lbs. ► Polarization: LHCP or RHCP	One RF Antenna Cable (CBLRD-1B400) OR N Female to Reverse-Polarity TNC Male Adapter for connecting directly to FX reader

AN440-CPDFQ915WR		AN440 High Performance Area Antenna	➤ Dimensions: 28.3 in. L x 12.5 in. W x 1.5 in. D ➤ Weight: 8 lbs. ➤ Polarization: Two circular polarized patch array	Two RF Antenna Cables (CBLRD-1B400)
AN400-CB66203WR	△ MOTOROLA	AN400 High Performance Area Antenna	➤ Discontinued 10/2014, now use AN440-CPDFQ915WR ➤ Dimensions: 28.3 in. L x 12.5 in. W x 1.5 in. D ➤ Weight: 8 lbs. ➤ Polarization: Two circular polarized patch array	Two RF Antenna Cables (CBLRD-1B400)
Jamison RFID Portal antennas (3rd party) *		Portal Antennas		
Antenna Accessorie	s			

(3rd party) *	In/amduct/B00IF7PAFW?keywo	TNC Male Adapter	► Allows antennas with pigtail cable to be directly connected to FX reader ► Allows for compact installations where the reader and antenna will be mounted close to each other (i.e. under counter installations)	
mp.//www.amazom.com/g	produced booters received	10401307/02041107/02001107/0		1 1431 0 1
CBLRD-7B8020140R		IP67 Rated RF Pigtail Antenna Cable	► This cable normally connects AN510 Indoor/Outdoor antennas to standard Zebra RFID antenna cables. ► Normally included with each AN510 antenna Kit. ► Cable is IP67 rated. ► Cable length is approx 14 in.	
CBLRD-1B4000680R		RF Antenna Cable (68"/~5.5 ft. long)	► Cable connects RFID antenna to reader. ► Type LMR240 cable	
CBLRD-1B4001800R		RF Antenna Cable (180"/15 ft. long)	► Cable connects RFID antenna to reader. ► Type LMR240 cable	
CBLRD-1B4002400R		RF Antenna Cable (240"/20 ft. long)	► Cable connects RFID antenna to reader. ► Type LMR240 cable	
CBLRD-1B4002400F		RF Antenna Cable (240"/20 ft. long) Flame Retardant	➤ Discontinued 2/2019 - see PMB 10043 ➤ Cable connects RFID antenna to reader. ➤ Type LMR240 cable	
CBLRD-1B4003600R		RF Antenna Cable (360"/30 ft. long)	► Cable connects RFID antenna to reader. ► Type LMR240 cable	

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BRKT-70661-01R		Standard RFID Antenna Mounting Kit.		
BRKT-70662-01R		Heavy Duty RFID Antenna Mounting Kit	►Has 16" extension arm	
BRKT-70665-01R	EXTENSION AND EXTENSION AND SWYEL BASE SWYEL PLATE	Industrial RFID Antenna Mounting Kit	➤ Discontinued 10/2014 ➤ Has 24" extension arm	
HN-001187-01		Standard Length Mounting Pole for POS Antenna	▶ Designed to allow POS Antenna (SP5504) to be suspended from ceilings ▶ Pole is 6 ft. long and is intended to be used for ceilings that are 14 ft. or under in height.	
HN-000537-01		Extended Length Mounting Pole for POS Antenna	▶ Designed to allow POS Antenna (SP5504) to be suspended from ceilings ▶ Intended to be used for ceilings that are more than 14 ft. in height. ▶ Includes two 6 ft. long poles which can be nested together to form varying lengths of +6 ft to under 12 ft. (one pole is the HN-001187-01 Standard Length Mounting Pole)	
Mounting Hardware	and Accessories			
Part Number	Picture	Description	Notes	Required Items



Wireless Communications Adapters

Part Number	Picture	Description	Notes	Required Items
ALFA Network: AWUS03	ek RTL8812AU 6AC - Realtek RTL8812AU	USB WiFi Adapter for FX9600	►FX9600 navtively supports USB WiFi adapters with the Realtek chipset RTL 8187 or RTL 8812AU. ►Adapters listed have been tested by Zebra	
various (3rd party) * various: Bluetooth 4.0 do various: Bluetooth 3.0 do Asus: Mini Bluetooth 2.1 MediaLink: Bluetooth 4.6	Dongle USB-BT211	USB Bluetooth Adapter for FX9600	►FX9600 navtively supports certain Bluetooth adapters. ► Adapters listed have been tested by Zebra	

RV50X (3rd party) *



Sierra Wireless AirLink® RV50X Cellular Modem ► Allows FX reader to be connected to LTE cellular networks for mobile usage.

▶ Provides a great way to use the FX's Network Connect for EtherNet/IP (connection to PLCs) feature in a distributed environment.

► Also includes GPS radio to capture location of RFID reads.

► Connects to FX reader via Ethernet port.

https://www.sierrawireless.com/

GPIO devices

Part Number	Picture	Description	Notes	Required Items
SM312D (3rd party) *		Photo Eye		
http://www.bannerengine	ering.com/			
PREF-301-RYG (3rd party) * http://eng.menics.co.kr/		Light Stack		

Power Cords/Power Supplies

NOTE: FX9600 supports either 24V Power Supply, 802.3af (PoE) or 802.3af (PoE+). PoE/PoE+ will only power the FX9600, not any auxillary GPIO devices (i.e. alarms, light stacks, motion sensors, etc.) attached to it.

Part Number	Picture	Description	Notes	Required Items
PWR-BGA24V78W1WW	XOCC CONTRACTOR OF THE PARTY OF	Power Supply for FX7400/FX7500/FX9500 and FX9600	▶ 24V, 3.25A, 78W ▶ Uses locking connector. Connect to FX reader and rotate clockwise 1/4 turn to lock power cable into reader. ▶ Provides US DOE Level VI compliance for power efficiency. ▶ Has increased operating temperature range vs. PWR-BGA24V78W0WW - 20C to +55C. This matches the operating temperature spec of the FX9600. PWR-BGA24V78W0WW is typically used with the FX7400/FX7500.	23844-00-00R

PWR-BGA24V78W0WW	Power Supply for FX7400/FX7500 and FX9500	Discontinued 2/2019, now use PWR-BGA24V78W1WW - see PMB 10043. ▶24V, 3.25A, 78W ▶Uses locking connector. Connect to FX reader and rotate clockwise 1/4 turn to lock power cable into reader. ▶Provides US DOE Level VI compliance for power efficiency.	23844-00-00R
PWRS-14000-260R	Power Supply for FX7400/FX7500 and FX9500	▶90-264VAC,24VDC, 3.25A ▶Energy Efficiency Level V and IEC 60950-1 2nd Edition compliant. ▶Discontinued 3/2017, now use PWR- BGA24V78W0WW - PMB 2903.	50-16000-221R
50-14000-159R	Power Supply for FX7400/FX7500 and FX9500	► Discontinued 8/2013 - replaced by PWRS-14000-259R ► 90-264VAC,24VDC,3.0A ► For US and all non-EU customers	50-16000-221R
50-14000-260R	Power Supply for FX7400/FX7500 and FX9500	➤ Discontinued 9/2011 - replaced by PWRS-14000-260R ➤ 90-264VAC,24VDC,3.0A ➤ For all EU and ZA South Africa customers	50-16000-221R
KT-FX96-PWRS-9-60VDC	Power Supply Kit for FX9600 Vehicle Installations	▶ Allows FX9600 reader to be powered from a vehicle. ▶ Can be used with electric or gas fork lifts. ▶ Support FX9600 4-Port readers, not 8 port readers. ▶ 9-60VDC input, 12VDC output, Up to 10A ▶ Uses the same vehicle power supply used by the VC70. ▶ Kit includes Power Supply (PWRS-9-60VDC-01R), DC Power Cable to vehicle (25-159551-01), Power Cable to FX9600 for Vehicle Installations (25-159554-01)	
PWRS-9-60VDC-01R	Power Supply for FX9600 Vehicle Installations - bare wire connector	▶9-60VDC input, 12VDC output, Up to 10A ▶Can be used with electric or gas fork lifts.	►DC Power Cable (25-159551 01) ►Power Cable to FX9600 for Vehicle Installations (25- 159554-01)
25-159551-01	DC Power Cable (9-60 VDC)	► Cable connect vehicle battery to DC Power Supply ► Works with gas and electric vehicles (\$ 60VDC) ► Includes vehicle ignition sense wire. Wire must be connected to positive terminal of vehicle battery if not connected to ignition. ► 10 ft. long cable ► Includes fuse.	►DC Power Supply (PWRS-9-60VDC-01R) ►Power Cable to FX9600 for Vehicle Installations (25-159554-01)

25-159554-01		Power Cable to FX9600 for Vehicle Installations	► Cable connects Vehicle Power Supply (PWRS-9-60VDC-01R) to FX9600. ► 6.5 ft. long cable	►Power Supply (PWRS-9-60VDC-01R) ►DC Power Cable to vehicle (25-159551-01),
ZE2435-4932 (3rd party) * https://lindelectronics.com		Vehicle Power Supply for FX7500/FX7400 and FX9600/FX9500 - Cigarette Lighter adapter	► Allows FX reader to be powered from a 12V vehicle cigarette lighter adapter.	
ZE2435I-4946 (3rd party) * https://lindelectronics.com		Vehicle Power Supply for FX7500/FX7400 and FX9600/FX9500 - bare wire connector	► Allows FX reader to be powered from a vehicle. ► Isolated adapter is rated for 20-60V input.	
PD-AS-951/12-24 (PoE Splitter) (3rd party) *	Pow Giran From 4 Data From 6 Data From 6 Data	24V PoE Power Supply solution for FX9600	 ▶ Used to power FX9600 via Power over Ethernet (PoE) at full 24V power. Not supported by FX9500. ▶ PoE will power FX9600 AND additional auxillary devices via the GPIO port (i.e. alarms, light stacks, motion sensors, etc.). ▶ Requires two components: Midspan/Power Injector that will provide power on Ethernet switch end. Exact model of Midspan is customer/installation specific. PoE Splitter that will separate data from power on FX9600 end and connect to barrel jack power connector and Ethernet port on FX9600. 	Will require DC Line cord (barrel jack connector) to connect PoE Splitter to FX9600
POE29U-1AT(PL)D-R		Single-port High Power Gigabit 802.3at Power Injector	Discontinued 4/2020 ► Used to power FX9600 via PoE ► 30W Single Port Power over Ethernet Midspan IEEE 802.3at Compliant Power Injector.	AC Line Cord (23844-00-00R)
AP-PSBIAS-2P3-ATR		Single-port High Power Gigabit 802.3at Power Injector	▶ Used to power FX9600 via PoE, not supported by FX9500. ▶ NOTE: PoE will only power the FX9600, not any auxillary GPIO devices (i.e. alarms, light stacks, motion sensors, etc.) attached to it. ▶ Discontinued 10/2016 due to sale of Zebra's WLAN business to Extreme Networks. Now source third party POE injector.	AC Line Cord (23844-00-00R)

AP-PSBIAS-1P3-AFR	Single-port High Power Gigabit 802.3at Draft Power Injector	▶ Discontinued 9/2013 - now use AP- PSBIAS-2P3-ATR - PMB 2292 ▶ Used to power FX9600 via PoE, not supported by FX9500. ▶ NOTE: PoE will only power the FX9600, not any auxilliary GPIO devices (i.e. alarms, light stacks, motion sensors, etc.) attached to it.	AC Line Cord (23844-00-00R)
50-16000-221R	AC Line Cord	►Used to power Direct Connect power supplies (i.e. PWRS-14000-260R). ►This AC Line Cord is for use in North America. See the AC Line Cords by Country TAG for comparable line cords to use in other countries.	
23844-00-00R	AC Line Cord	▶ Used to power Direct Connect power supplies (i.e. PWR-BGA24V78W1WW) and 802.3at Power Injector. ▶ This AC Line Cord is for use in North America. See the AC Line Cords by Country TAG for comparable line cords to use in other countries.	