FX7500 Fixed RFID Reader

Advanced fixed RFID reader for business class environments

The faster your business moves, the more your business-critical applications will demand from an RFID reader. And these days, no one is slowing down their pace of business. So that's where Zebra began with the FX7500 Fixed RFID Reader. We created a new RFID radio technology, purposely designed for faster, more accurate read rates, and more consistent performance. Then we paired that radio with a new, more flexible Linux®-based network architecture that integrates the tools and open-standard interfaces you need for fast, easy deployment with your RFID and back-end applications. The result is a fixed RFID reader that sets a new performance standard–delivering peak performance at all times with excellent reader sensitivity and better interference rejection, at a lower cost per read point.

Easy to Deploy, Simple to Manage–In Any Enterprise, Large or Small
Ever wished you could minimize the gap between your technology dream and its reality? Everything about the FX7500 is designed to get your RFID plan off the drawing board and into your business environment, without delays, complications or unexpected costs. Installation is dead simple. Hang the supplied bracket, then snap the reader in place. No outlet nearby? No problem. Integrated Power over Ethernet (PoE) lets you place the FX7500 where it is needed without installing extra outlets–ideal for large open areas. Once plugged into the network, devices are auto-detected; for most applications, predefined configuration files and a built-in testing tool let you simply verify that your FX7500 readers are up, running and ready to operate. Port configuration options let you deploy exactly the number of read points you need–no need for expensive overlaps. For large scale global deployments, the FX7500 helps reduce costs by conforming out-of-the-box with major worldwide RFID standards and interfaces, including FCC and ETSI EN 302 208, LLRP and Reader Management. IPv6, FIPS and TLS compliance help ensure network security. A built-in USB host port* with select third party adaptors provides easy connectivity with Wi-Fi™ and Bluetooth® networks. Add the FX7500's Auto mode configuration and third-party application hosting capabilities, and you have an unbeatable workhorse that is adaptable to multiple application environments–the ideal platform for your RFID solution.

Features

All-New High Performance Radio Technology
Higher sensitivity, improved interference rejection and echo cancellation means you get the best-in-class dense reader mode performance, up to 1200+ tags/sec in FM0 mode.

Integrated Power Over Ethernet (POE), Optically Isolated GPIO, USB Client* and Host Ports with Wi-Fi and Bluetooth Connectivity
All the tools you need for fast, easy deployment and simplified on-going management of your RFID applications are built right into the FX7500 architecture.

2-Port and 4-Port Reader Configurations
More configuration options mean more flexibility to optimize your read field. Deploy precisely the number of read points you need for proper coverage, no more, no less, and reduce your TCO.

Plenum Area Rated
The FX7500 is approved and suitable for environmental air handling space installation, so it can operate effectively within walls and ceilings.

Support for Worldwide Standards
Supports FCC and ETSI EN 302 208 in either 4-port or 2-port mono-static antenna configurations, EPC standards-based defined reader management, and auto-discovery flexible firmware upgrade features. Seamlessly integrates with existing IT environments; enables remote and centralized management; simplifies and reduces the cost of set-up, deployment, testing and management.

Next Generation Reader Platform, Including Dense Reader Mode Support
Best-in-class read rates deliver superior read performance.

Linux: 512 MB Flash/256 MB RAM
Integration of a wide range of third-party applications for fast application deployment; supports upgrading to meet future requirements; maximizes product lifespan; provides outstanding security and investment protection.

Easy to Deploy, Manage and Scale

MotionWorks Enterprise RFID Reader Management
With RFID Reader Management, you can easily deploy and manage a network of Zebra passive RFID readers. Fully compatible with our current portfolio of devices in this category, RFID Reader Management allows you to configure and monitor the status of every cloud-ready Zebra RFID reader in your system from one consolidated application, without requiring multiple tools to manage different types of readers.

IoT Connector
With IoT Connector, you can gather data from cloud-capable edge devices in a simple, consistent manner. Use the information and insights gained to make decisions in real time. Developed as a standard feature of our barcode scanners and RFID readers, IoT Connector is simple to configure—no coding required—and uses standard protocols within the Internet of Things.

Specifications

Physical Characteristics	
Dimensions	7.7 in. L x 5.9 in. W x 1.7 in. D (19.56 cm L x 14.99 cm W x 4.32 cm D)
Weight	1.9 lbs ± 0.1 lbs (0.86 kg ± 0.05 kg)
Housing Material	Die-cast aluminum, sheet metal and plastic
Visual Status Indicators	Multicolor LEDs: Power, Activity, Status and Applications
Mounting	Keyhole and standard VESA (75mm x 75mm)
Environmental	
Operating Temp.	-4° to +131°F/-20° to +55°C
Storage Temp.	-40° to +158°F/-40° to +70°C
Humidity	5-95% non-condensing
Shock/Vibration	MIL- STD-810G
Regulatory Compliance	
Safety	UL 60950-01, UL 2043, IEC 60950-1, EN 60950-1
RF/EMI/EMC	FCC Part 15, RSS 210, EN 302 208, ICES-003 Class B, EN 301 489-1/3
SAR/MPE	FCC 47CFR2:OET Bulletin 65; EN 50364
Other	ROHS, WEEE
Recommended Services	
Support Services	Service from the Start Advance Exchange On-Site System Support Support
Advanced Services	RFID Design and Deployment Services
Connectivity	
Communications	10/100 BaseT Ethernet (RJ45) w/ POE support; USB Client (USB Type B)*, USB Host Port (Type A)*
General Purpose I/O	2 inputs, 3 outputs, optically isolated (Terminal Block)
Power Supply	POE, POE+ or +24V DC (UL Approved) 12V-48VDC operation can be supported
Antenna Ports	FX 7500-2: 2 mono-static ports (Reverse Polarity TNC) FX 7500-4: 4 mono-static ports (Reverse Polarity TNC)

Hardware, OS and Firmware Management	
Processor	Texas Instruments AM3505 (600 Mhz)
Memory	Flash 512 MB; DRAM 256 MB
Operating System	Linux
Firmware Upgrade	Web-based and remote firmware upgrade capabilities
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
Air Protocols	EPCglobal UHF Class 1 Gen2, ISO 18000-6C
Frequency (UHF Band)	Global Reader: 902 MHz–928 MHz (Maximum, supports countries that use a part of this band), 865 MHz–868 MHz US (only) Reader: 902 MHz–928 MHz
Transmit Power Output	10 dBm to +31.5 dBm (POE+, 12V ~48V External DC, Universal 24V DC Power Supply); +10 dBm to +30.0 dBm (POE)
Max. Receive Sensitivity	-82 dBm
IP Addressing	Static and Dynamic
Host Interface Protocol	LLRP
API Support	Host Applications–.NET, C and Java EMDK; Embedded Applications–C & Java SDK

Warranty

The FX7500-2 and FX7500-4 are warrantied against defects in workmanship and materials for a period of one year (12 months) from date of shipment, provided the product remains unmodified and is operated under normal and proper conditions.

Footnotes

*Configurations without a USB hub require an external USB hub for full USB functionality

Markets and Applications

Warehousing/ Distribution
Retail
Manufacturing
Transportation

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