

Fixed RFID Reader

FR900



Sleek, Refined Design

- Sleek, compact, and sophisticated design
- Fits well in any corporate office or public environment such as a retail store or hospital
- Compact form factor: 200 x 180 x 40 mm (7.9 x 7.1 x 1.6 in.)

Perfect Accuracy

- Dense Reader Mode provides high accuracy and prevents reader-to-reader interference
- High accuracy even in applications with metal and liquid
- EPC Class-1 Gen-2 V2 compliant

Durable in Rough Environment

- Performs in dusty environments with IP53 sealing

Low-Cost and Easy Deployment

- Power-over-Ethernet (PoE and PoE+) allows flexible, low cost, single-cable installation
- Easy to install in tight spaces

One Reader, Multiple Antennas

- One reader connects up to 8 antennas
- Flexible and cost-effective modular solution

High Speed Processor & Linux

- Powerful processor and flash memory
- Linux OS



- PoE INSTALLATION
- COST-EFFECTIVE
- LESS CABLE CLUTTER



- EASY TO USE
- EASY TO DEPLOY



- PERFECT ACCURACY

FR900 Applications

- Personnel Tracking
- Real-Time Inventory
- Anti-Theft Sensing
- Drug Management
- Asset Management
- Inventory Management
- Patient Monitoring

FR900

Specification

PHYSICAL	
Dimensions	200 x 180 x 40 mm (7.9 x 7.1 x 1.6 in.)
Weight	1.2 kg (2.6 lb)
Visual Status Indicators	Multicolor LEDs : Power, Activity, Status, Fault, Ant 4-8
RF CHARACTERISTICS	
Max Receive Sensitivity	-84 dBm monostatic
Return Loss (minumum)	10 dB
Air Protocols	ISO 18000-63 (EPC Class 1 Gen 2 V2)
Frequency (UHF Band)	US: 902-928 MHz EU: 865-868 MHz JP1: 916-921 MHz, JP2: 916-923 MHz CN: 920.5-924.5 MHz Russian Federation: 866-868 MHz
Transmit Power Output	0 dBm to +33 dBm, configurable in 1 dB steps (calibrated above 9 dBm)
CONNECTIVITY	
Communications	10/100 BaseT Ethernet; USB Host & Client (Type A & B); Serial (DB9), RJ-45 2ea, HW Reset button, Function button (Optional) Wi-Fi and Bluetooth via dongle adapter
General Purpose I/O	4 inputs, 4 outputs (Optional : 4 inputs, 8 outputs) optically isolated (Terminal Block)
Power Supply	POE / POE+ + 24V DC Universal Power Supply
ENVIRONMENTAL	
Operating Temp.	-20° to +55° C / -4° to +131° F
Storage Temp.	-40° to +85° C / -40° to +185° F
Humidity	5-95% non-condensing
Sealing	IP53
Shock / Vibration	MIL-STD-810G

HARDWARE, OS AND FIRMWARE MANAGEMENT	
Memory	256 MB RAM / 512 MB Flash
Operating System	Linux
Firmware Upgrade	USB storage device Web-based and remote firmware upgrade capabilities
Management Protocols	Bluebird Shell (SSH Protocol), RM Agent (MQTT Protocol)
Network Services	DHCP, HTTP, FTP, SFTP, SSH, NTP, mDNS, LLNMR, MQTT
Network Stack	IPv4 and IPv6
Security	Transport Layer Security Ver 1.2, FIPS-140SSL / SSH-based security
Host Interface	EPCglobal Low Level Reader Protocol (LLRP)
API Support	.NET, C and Java EMDK
Software Support (Bluebird)	Bluebird Universe™ for RFID
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 For Malaysia: 919-923 MHz
SAR / MPE	FCC 47CFR2:OET Bulletin 65; EN 50364
Other	ROHS
WARRANTY	
Warranty	One year



EMPOWERING BUSINESSES WITH ACTIONABLE DATA
 BUSINESS INTELLIGENCE DELIVERED BY HIGH-PERFORMANCE RFID SOLUTIONS FROM BLUEBIRD

FR900 Antennas

PRODUCT NAME	AN950	ANS950	AN970	AN971
Concept	Mid Performance & Compact	Mid Performance & Slim	High Performance & General Purpose	High Performance & Large Area
Used For	Warehouse - Stocks Transition (Fork lift) - Conveyors Retail Back-room - Inventory Management - Gates	Sales-room - Display Shelves (wall, ceiling) - Display Hangers Fitting-room (wall, ceiling)	Warehouse - Portals, Outdoor gates Retail Back-room - Inventory Management - Gates	Warehouse - Portals, Outdoor gates Retail Back-room - Inventory Management - Gates

Antenna Product Specification

PRODUCT NAME	AN950	ANS950	AN970	AN971
PHYSICAL				
Dimensions (L x W x D)	132 x 132 x 18 mm 5.2 x 5.2 x 0.7 in.	74 x 74 x 9.5 mm 2.9 x 2.9 x 0.4 in.	259 x 259 x 33 mm 10.2 x 10.2 x 1.3 in.	575 x 260 x 33 mm 22.6 x 10.2 x 1.3 in.
Connectors	RP-TNC * Customizing available (Optional : N or SMA)	RP-TNC * Customizing available (Optional : N or SMA)	RP-TNC * Customizing available (Optional : N or SMA)	RP-TNC * Customizing available (Optional : N or SMA)
Mounting Bracket	VESA support	VESA support	VESA support	VESA support
Weight	0.37 Kg / 0.82lb	0.6 kg / 1.32lb	1.0 Kg / 2.2lb	3.2 kg / 7.05lb
Casing	Aluminium with white plastic cover	Superior Kydex	Aluminium with white plastic cover	UV Stable ASA, White
OPERATIONAL				
Frequency Range	865MHz ~ 868MHz / 900 ~ 940MHz	865MHz ~ 868MHz / 900 ~ 940MHz	865MHz ~ 868MHz / 900 ~ 940MHz	865MHz ~ 868MHz / 900 ~ 940MHz
Gain	5.5 dBic	2 dBic	9 dBic	9 dBic
VSWR (Return Loss)	1.5:1	1.4:1	1.3:1	1.22:1
Front to Back Ratio	8 dB	4 dB	20 dB	20 dB
Polarization	LHCP OR RHCP	LHCP OR RHCP	LHCP OR RHCP	1 x LHCP and 1 x RHCP
3db Beam Width	100° x 100°	120° x 120°	70° x 70°	70° x 70°
Max Power	10 W	6 W	10 W	10 W
Axial Ratio	2 dB	2 dB	1 dB	1 dB typical
ENVIRONMENTAL				
Operating Temperatures	-30° C to +70° C / -13° F to +158° F	-30° C to +65° C / -22° F to +149° F	-25° C to +70° C / -13° F to +158° F	-30°C to +70°C / -22°F to +158°F
Sealing	IP67	N.A	IP54	IP67
Storage Temperatures	-40°C to +70°C / -40°F to +158°F	-40°C to +70°C / -40°F to +158°F	-40°C to +70°C / -40°F to +158°F	-40°C to +85°C / -40°F to +185°F
Vibration	MIL-STD-810	MIL-STD-810	MIL-STD-810	IEC-68-2-6 (10 to 150 Hz, 0.5 g, one hour in each of two axes) (Random Vibration)
Humidity	IEC-68-2-30	IEC-68-2-30	IEC-68-2-30	MIL-Std 810G, METHOD 507.5, Procedure II - Aggravated