

Handheld UHF RFID Reader

RFR901

Bluebird's Next-Gen RFID Solutions Set Global Standard with New Handheld Reader

Introducing the next generation of our world-class handheld UHF RFID reader, the RFR900—trusted by global retailers such as INDITEX, H&M, UNIQLO, and more. The new RFR901 is packed with advanced features to deliver unparalleled value to our customers. Its lightweight, ergonomically shaped pistol grip ensures maximum comfort during use. With the RFR901's longest read range and fastest read rate, you can boost your workers' efficiency and productivity. Plus, our Universal Mount—designed to attach to a wide range of consumer devices—provides maximum flexibility and helps reduce adoption costs.

- **Lightweight and Ergonomic Design Perfect for Everyone**

The RFR901 weighs only 353g, making it suitable for everyone. Its lightweight design prevents wrist strain during prolonged use, while the ergonomically shaped pistol grip ensures correct finger placement and easy adaptation. These features enhance comfort and boost productivity in your daily work.

- **Unmatched RFID Reading Performance**

The RFR901 outperforms the competition with a read range of up to 10 meters and a read rate of over 1,300 tags per second—offering a 40% longer range and a 30% faster rate than major competitors. This enables workers to detect RFID tag information much more quickly and over greater distances, eliminating the need for ladders or other lift equipment. As a result, it saves time and helps prevent safety incidents. Additionally, the RFR901 can store over 60,000 RFID tags in batch mode.

- **User-Friendly Programmable Trigger**

Switching trigger modes is surprisingly easy—just double-click the trigger button to access all three modes: RFID tag reading, 1D/2D barcode scanning, or both simultaneously. With this convenient single-button operation, users enjoy greater flexibility and productivity than ever before. Additionally, the trigger features a programmable key for quick access to preferred functions, such as Push-To-Talk (PTT).

- **Flexible Mount Options for Your Convenience**

The RFR901 features a Universal Mount designed to attach to a wide range of consumer smartphones already used by your workers. You can also select mounts compatible with any Bluebird mobile computer, including both current models and future EF, VX, and HF Series devices. If you are looking to adopt RFID systems at a reasonable cost, the RFR901 is the smart choice.

- **Electrical and Bluetooth 5.0 Host Connection**

The RFR901 is equipped with both electrical and Bluetooth® connectivity. It supports a 10-pin electrical connector, allowing Bluebird EF Series, VX500, and HF550 devices to be mounted directly on the RFR901 sled for immediate data reading. In addition to the physical connection, Bluetooth 5.0 enables easy pairing with all mobile devices—including current and future Bluebird models as well as consumer smartphones—via real-time wireless connection. Furthermore, the RFR901 offers NFC OOB (Out-of-Band) Pairing, allowing for quick Bluetooth connections to compatible mobile devices with just a tap. This helps minimize downtime and reduces adoption costs.

- **Proven Durability in Harsh Environments**

The RFR901 has been rigorously tested to withstand the harsh conditions commonly found at industrial sites. It features a 1.5 meter (5 ft.) drop specification and a 1,000-cycle, 0.5 meter (1.6 ft.) tumble specification. Additionally, its IP54 sealing protects against dust and water, and it operates reliably within a wide temperature range from -20°C to 60°C (-4°F to 140°F). These robust design features ensure maximum reliability and substantial efficiency in demanding environments.



RFR901
Handheld RFID Reader
with EF550



- **Maximum-Efficiency in the Charging Process**

The RFR901 comes with both 1-slot and 4-slot cradles, allowing you to charge the RFR901 alone, the mobile computer alone, or both devices simultaneously. The charging cradles also feature USB and Ethernet ports, enabling connection to a host PC or corporate network. This makes it easy to manage your RFR901—such as performing firmware upgrades, configuration changes, and device control—while charging.

- **Ultimate Benefits of SDKs**

Reduce your developers' workload with our robust Software Development Kits (SDKs). Bluebird provides extensive pre-built functionality for Android, Microsoft, and Xamarin developers, making it easy to build applications and integrate with existing services. There's no need to rewrite applications to use our latest RFR901 model—its SDKs are based on those of the current Bluebird RFID handheld reader, the RFR900. Simply recompile your existing application with our new SDK to get started with the RFR901.

- **Long-Lasting Battery Power with Hotswap Support**

Battery performance is a crucial feature for those working in the field. With a 5,000mAh battery (or an optional 7,000mAh battery), the RFR901 provides ample power for all-day operation, allowing you to work longer without needing to recharge. Additionally, the hot-swappable battery minimizes power-related downtime and interruptions.

- **Extra Battery Lock (Acc)**

The RFR901 has an optional Extra Battery Lock that provides double protection from product damage and battery loss.

Industry & Applications

Retail

- Cycle Counting
- Item Finding
- Planogram Compliance
- Returns
- Inventory Management
- Warehouse Management
- Backroom Management
- BOPIS/BOPAC
- Direct Store Delivery
- Route Accounting

Hospitality

- Check-in and Administration
- Ticketing: Concerts, sporting events and more
- Loyalty Cards
- Food Safety and Traceability
- Inventory Management
- Field Service

Healthcare

- Patient Identification and Monitoring
- Medication Administration
- Specimen Collection
- Hospital Asset Management and Tracking
- RTLS (Real-Time Locating System)
- Pharmacy Management
- Medical Data Management

Data Centers

- Asset management and tracking

Warehousing

- Inventory cycle counting
- Automatic replenishment
- Receiving/shrink control
- Item tracking/locationing
- Omni-channel order fulfillment

RFR901 Specification

PHYSICAL CHARACTERISTICS	Dimensions (L x W x D)	133.6 x 85.4 x 144.5 mm
	Weight	353g
	Power	User replaceable Battery Standard : 3.63V, 5,000 mAh Extended : 7,000 mAh (Optional) BOS™ PowerManager
	Notification	Buzzer 5 LED
	User Input	Trigger, 3 push button - Mode Change, Batch mode - Power - BT
RFID PERFORMANCE	Standards Supported	EPC Class 1 Gen 2 EPC GEN2 V2
	Fastest Read Rate	1,300+ Tags/sec
	Nominal Read Range	32.8+ ft./ 10+ m
	Frequency Range / RF Output	US: 902-928MHz; 0 — 30 dBm EU: 865-868MHz; 0 — 30 dBm EU: 915-921MHz; 0 — 30 dBm Japan: 916-921MHz; 0 — 30 dBm Japan: 916-923 MHz; 0 — 24 dBm
	RFID Chipset	Impinj E710
USER ENVIRONMENT	Operating Temp.	-20°C to 60°C / -4°F to 140°F
	Storage Temp.	-40°C to 70°C / -40°F to 158°F
	Humidity	5% to 95% RH (non-condensing)
	Drop Spec.	Multiple 5ft./1.5 m drops to concrete at room temperature
	Tumble Spec.	1000 drops (500 tumbles, 1.6 ft./0.5 m) at room temperature
	Sealing	IP54
	Electrostatic Discharge (ESD)	+/-15kVdc air discharge +/-8kVdc direct discharge +/-8kVdc indirect discharge
REGULATORY	EMI / EMC	FCC Part 15 Subpart B Class B; ICES 003 Class B; EN 301 489-1; EN 301 489-3; EN 55024; EN 55032 Class B
	Storage Temp.	UL 60950-1, CAN/CSA C22.2 No. 60950-1, IEC 60950-1, EN 60950-1
	Humidity	EU: EN 50364, EN 62369-1, EN 50566, EN 62311; USA: FCC Part 2. 1093 OET Bulletin 65 Supplement 'C'; Canada: RSS-102
	Electrostatic Discharge (ESD)	EU: EN 300 328, FCC Part 15 Subpart C; Canada: RSS-247

RFR901 Specification (Continued)

ACCESSORIES	In-box	Battery, Wrist Strap
	Charging	Adapter Mount - EF40x, EF50x, EF50xR Mount - HF550 Mount - Universal Mount (for Consumer Devices) - Standalone Mount Power Adapter, Adapter Plug / Cord, USB Cable 1 Slot Charging Cradle - Universal & Standalone Cradle - EF40x, EF50x, EF50xR, HF550 Cradle 4-Slot Charging Cradle - Universal & Standalone Cradle - EF40x, EF50x, EF50xR, HF550 Cradle 4-Slot Battery Charger

※ Specifications are subject to change without notice.