

# MC3390xR UHF RFID Reader

## Best-in-class long-range RFID reader with a powerful Android platform

Introducing the next evolution in long-range RFID readers. The MC3390xR integrated long-range handheld UHF/RAIN RFID reader brings a new level of efficiency and accuracy to inventory management, order fulfillment, cross-docking and more. You get the same proven lightweight ergonomic design of the successful MC3300R family, now with Zebra's latest, most powerful and secure Android architecture. The ultra-powerful processor, integrated NFC reader and 35% larger capacity battery boost task speed and ease of use. The integrated long-range antenna delivers best-in-class RFID read range and higher throughput, so inventory counts can be accomplished more quickly and accurately. With Zebra's signature rugged design, the MC3390xR is built for your semi-industrial environments. And you can create intuitive Android applications that use the MC3390xR's powerful computing platform, large touchscreen and physical keypad.



### Low TCO with flexible deployment tools

#### Simplify application development with a common platform

If you are using other Zebra handheld RFID readers across your supply chain, you can streamline application development with a single software development kit. There's no need to learn a different app development framework or rewrite an application — use the same SDK for the MC3390xR, MC3330xR, MC3390R, MC3330R, RFD2000 and RFD8500 RFID Sled.

#### Simplify full-fleet rollouts with EMDK and RFID SDK for Xamarin

Xamarin's cross-development platform lets developers use their C# skills and tools to develop fast, beautiful apps for Android devices. With Zebra's EMDK and RFID SDK for Xamarin, it's easy to incorporate all the advanced enterprise features of the MC3390xR into your Xamarin apps. Our EMDK simplifies enterprise application design for faster, more cost-effective development cycles, while our RFID SDK for Xamarin allows you to use RFID apps you've developed for other Zebra devices on the MC3390xR.

### Unparalleled data capture performance and flexibility

#### Best-in-class RFID read range and accuracy

The integrated long-range antenna can capture RFID tags more than 95 ft./ 29 m away — 200% farther than the next leading competitor. This reliable, long-range RFID performance enables more frequent and more accurate inventory-count operation, so you can better manage your on-the-floor, backroom and distribution inventory.

#### Superior sensitivity for greater accuracy

Zebra's high-performance ASIC radio technology provides superior sensitivity and greater read accuracy, delivering a read rate that is more than 25% faster and over 40% more accurate than other devices in this class.<sup>1</sup>



**Bring a new level of efficiency and accuracy to inventory, order fulfillment and cross-docking applications with the MC3390xR.**

For more information, visit [www.zebra.com/mc3390xr](http://www.zebra.com/mc3390xr)

### **Integrated mid-range or long-range 1D/2D barcode scanning**

Workers don't need different devices to capture RFID tags and barcodes — the MC3390xR can capture it all. Choose between a mid-range scan engine or the extended range scan engine that can capture barcodes from 3 in./7.62 cm to as far as 70 ft./21.4 m away. Both options offer Zebra's exclusive PRZM Intelligent Imaging technology for first time, every time capture of 1D and 2D barcodes, regardless of condition.

### **Easy-to-use locating technology**

The MC3390xR can help pinpoint the location of a specific item. Item Finder mode uses audible and visual cues to quickly guide workers to the location of any desired item.

### **Capture multiple barcodes and entire forms with a single scan**

Do you need to capture multiple barcodes on one or more labels on an item? The MC3390xR makes it easy. Workers can easily capture all the right barcodes on numerous labels, all with one press of the scan trigger.

## **Powerful platform for demanding enterprise applications**

### **Built for semi-industrial environments**

The MC3390xR offers a 5 ft./1.5 m drop specification and with IP54 sealing, it can handle splashing liquid and dust. The Corning™ Gorilla™ Glass touchpanel and imager window bring maximum scratch-resistance and shatter-proofing to two of the most vulnerable device features. The result? Workers can drop the MC3390xR on concrete and use it in dusty areas — and still expect reliable operation.

### **Power full shifts with the class-leading 7000mAh battery**

The new 7000mAh extended capacity battery is standard with every MC3390xR. More power means fewer battery changes, easier battery management and a smaller battery pool. And Zebra's PowerPrecision+ technology provides a full suite of metrics that make it easy to identify, remove and replace aging batteries.

### **Lightweight and streamlined design**

The MC3390xR is one of the lightest UHF RFID readers in its class and is built for easy one-handed use, whether workers are right- or left-handed.

### **Unparalleled computing power**

Power your most demanding apps of today and tomorrow with a superior processor and memory — every model offers an ultra-powerful 2.2 GHz octa-core processor and 4 GB RAM/32 GB Flash.

### **Backward compatible accessories**

You can use most of your existing MC3200/MC3300/MC3300R accessories for a cost-effective upgrade. And choose from new accessories like the universal ShareCradle that simplifies backroom management.

### **Feedback for any environment**

With high visibility LEDs, workers can easily keep track of charging status and confirm a task was completed, even in the noisiest environments. LEDs are located on both sides of the device to ensure visibility from any angle.

### **Integrated NFC for simple, split-second pairing**

With a quick tap, workers can pair the MC3390xR with Zebra's family of ring scanners, mobile printers, and Bluetooth headsets. And you can also use the NFC reader for "tap to authenticate" applications, where workers simply tap their employee ID badge to log into authorized applications and resources.

## **Simplify data entry with a keypad and large touchscreen**

### **The perfect combination: large touchscreen and keypad**

Whether your application requires touch or physical keypad input, we've got you covered. Your application can utilize the entire display, while the physical keypad provides the same familiar user input experience your workers have today. And with three different options, you can choose the right keypad for your data entry needs — alphanumeric, numeric and functional numeric.

## **The ultimate in Android support**

### **The only device in this class to offer Android 11**

Android 11 makes the MC3390xR easier to use and even more secure with support for future Android versions. For your IT department, there are 50+ new security and privacy improvements.

### **A lifetime security guard for Android**

With LifeGuard™ for Android™, you get the security updates you need to keep your MC3390xR RFID readers secure every day they are in service — along with an easy end-to-end control of the OS update process, plus built-in support for the next version of Android.

# Specifications

## Physical Characteristics

|                         |                                                                                                                                                    |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions              | 6.45 in. L x 3.78 in. W x 10.67 in. D<br>164 mm L x 96 mm W x 271 mm D                                                                             |
| Weight (with handstrap) | MC3390xR with SE4770: 26.2 oz./743 g<br>MC3390xR with SE4850: 27.1 oz./769 g                                                                       |
| Display                 | 4-inch (800 x 480) WVGA; color display                                                                                                             |
| Imager Window           | Corning Gorilla Glass                                                                                                                              |
| Touchpanel              | Corning Gorilla Glass touch panel with air gap; supports dual input mode with finger, gloved finger and stylus (conductive stylus sold separately) |
| Backlight               | LED backlight                                                                                                                                      |
| Expansion Slot          | User accessible MicroSD with 32 GB SDHC and up to 512 GB SDXC                                                                                      |
| Network Connections     | USB 2.0 High Speed (host and client), WLAN and Bluetooth                                                                                           |
| Notification            | Side LEDs and audible tone                                                                                                                         |
| Keypad                  | Numeric (29 key), Function Numeric (38 key), Alpha Numeric (47 key)                                                                                |
| Voice                   | PTT Express and Workforce Connect PTT Pro (Internal speaker, microphone and Bluetooth wireless headset support)                                    |
| Audio                   | Built-in speaker and microphone                                                                                                                    |

## Performance Characteristics

|                  |                                                                                                                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU              | Qualcomm Snapdragon™ 660 octa-core 2.2 GHz                                                                                                                                                                                                   |
| Operating System | Upgradeable to Android 14                                                                                                                                                                                                                    |
| Memory           | 4 GB/32 GB Flash                                                                                                                                                                                                                             |
| Power            | All models ship with rechargeable Li-Ion, 3.6V, 7000mAh PowerPrecision+ battery; full charge under five (5) hours; hot swap support with temporary WLAN/Bluetooth session persistence<br>Backwards compatibility with 5200mAh (2X) batteries |

## User Environment

|                      |                                                                                    |
|----------------------|------------------------------------------------------------------------------------|
| Operating Temp.      | -4° F to 122° F/-20° C to 50° C                                                    |
| Storage Temp.        | -40°F to 158°F/-40°C to 70°C                                                       |
| Humidity             | 5% to 95% RH (non-condensing)                                                      |
| Drop Specifications  | Multiple 5 ft./1.5 m drops to concrete over the entire operating temperature range |
| Tumble Specification | 1,000 1.6 ft./0.5 m tumbles                                                        |
| Sealing              | IP54                                                                               |
| Vibration            | Sine: 4g's peak, 5hz to 2khz,<br>Random: .04g <sup>2</sup> /hz, 20hz to 2khz       |
| Thermal Shock        | 40° F to 158° F/-40° C to 70° C                                                    |

## Wireless LAN

|                                              |                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Radio                                        | IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v <sup>2</sup> /w/mc <sup>2</sup> ; Wi-Fi™ certified; IPv4, IPv6, 2x2 MU-MIMO                                                                                                                                                                                                                                        |
| Data Rates                                   | 5GHz: 802.11a/n/ac — up to 866.7 Mbps<br>2.4GHz: 802.11b/g/n — up to 300 Mbps                                                                                                                                                                                                                                                                         |
| Operating Channels (depending on Regulatory) | Channel 1-13 (2412-2472 MHz):<br>1,2,3,4,5,6,7,8,9,10,11,12,13<br>Channel 36-165 (5180-5825 MHz):<br>36,40,44,48,52 56,60,64,100,104,108,112,116, 120,124,128,132,136,140,144, 149,153,157,161,165<br>Channel Bandwidth: 20, 40, 80 MHz<br>Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency. |
| Security and Encryption                      | WEP (40 or 104 bit); WPA/WPA2 Personal (TKIP, and AES); WPA3 Personal (SAE); WPA/WPA2 Enterprise (TKIP and AES); WPA3 Enterprise (AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP and EAP-PWD; WPA3 Enterprise 192-bit Mode (GCMP-256) — EAP-TLS; Enhanced Open (OWE)                                         |
| Certifications                               | WFA (802.11n, WMM-PS, 801.11ac, PMF); WiFi Direct WMM-AC, Voice Enterprise                                                                                                                                                                                                                                                                            |
| Fast Roam                                    | PMKID caching; Cisco CCKM; 802.11r; OKC                                                                                                                                                                                                                                                                                                               |

## Wireless PAN

|           |                                                                            |
|-----------|----------------------------------------------------------------------------|
| Bluetooth | Class 2, Bluetooth v5.0 with BR/EDR and Bluetooth Low Energy (BLE) Support |
|-----------|----------------------------------------------------------------------------|

## Accessories

|                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single slot cradle with spare battery charger; 4-slot charge only cradle with 4-slot battery charger; 4-slot Ethernet cradle with 4-slot battery charger; 5-slot charge only cradle; 5-slot Ethernet cradle |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 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                 |
| Electrical Safety | UL 60950-1, CAN/CSA C22.2 No. 60950-1, IEC 60950-1, EN 60950-1                                                          |
| RF Exposure       | EU: EN 50364, EN 62369-1, EN 50566, EN 62311<br>USA: FCC Part 2, 1093 OET Bulletin 65 Supplement 'C'<br>Canada: RSS-102 |

## Environmental Compliance

|                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment <ul style="list-style-type: none"><li>RoHS Directive 2011/65/EU; Amendment 2015/863</li><li>REACH SVHC 1907/2006</li></ul> A complete list of product and materials compliance, please visit: <a href="http://www.zebra.com/environment">www.zebra.com/environment</a> |
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# Markets and Applications

## Supply Chain/Transportation and Logistics

- Cross-docking
- Item tracking/locationing

## Warehousing

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

## Manufacturing

- WIP
- Parts and finished good inventory

## User Environment

|                               |                                                                             |
|-------------------------------|-----------------------------------------------------------------------------|
| Electrostatic Discharge (ESD) | +/- 15kV air, +/-8kV contact discharge<br>+/-8kV indirect contact discharge |
|-------------------------------|-----------------------------------------------------------------------------|

## Interactive Sensor Technology (IST)

|                |                                          |
|----------------|------------------------------------------|
| Motion Sensors | 3-axis accelerometer with MEMS gyroscope |
|----------------|------------------------------------------|

## RFID

|                     |                                                                                        |
|---------------------|----------------------------------------------------------------------------------------|
| Standards Supported | EPC Class 1 Gen2; EPC Gen2 V2; ISO-18000-63                                            |
| RFID Engine         | Zebra Proprietary Radio Technology                                                     |
| Fastest Read Rate   | 900+ tags/sec                                                                          |
| Nominal Read Range  | 95 ft./ 29 m                                                                           |
| RFID Power Output   | 0 dBm to +30 dBm                                                                       |
| RFID Antenna Type   | Integrated Linear Polarized                                                            |
| Frequency Range     | 865-928MHz<br>*Specific regional and country settings supported upon country selection |
| Gen2X               | Supports Gen2X industry communications standard.                                       |

## Barcode Scanning

|              |                                                       |
|--------------|-------------------------------------------------------|
| Scan Engines | SE4770 with LED Aimer<br>SE4850 Extended Range Imager |
|--------------|-------------------------------------------------------|

## Warranty

Subject to the terms of Zebra's hardware warranty statement, the MC3390xR is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement, please visit: [www.zebra.com/warranty](http://www.zebra.com/warranty)

## Recommended Services

Zebra OneCare Essential and Select: Maximize Zebra device availability, device value and operational efficiency with these fully-featured support services that set the industry bar for support. Zebra VisibilityIQ™ Services: Improve device value with Zebra's optional VisibilityIQ™ Services. VisibilityIQ gives the data-driven, actionable insight to get the most from your devices, workers and daily tasks. VisibilityIQ™ Foresight aggregates big data onto a single, color-coded, cloud-based pane of glass, translating it into actionable insight to streamline workflow. VisibilityIQ™ DNA provides a view into key DNA tools, and VisibilityIQ™ OneCare™ cloud-based dashboard offers visibility into repairs, tech support, software security status and more.

## Footnotes

\* Based on Zebra test results from specific use cases  
Specifications subject to change without notice.

## Mobility DNA

Mobility DNA solutions help you get more value out of our mobile computers by adding functionality as well as simplifying deployment and management of our mobile devices. For more information on these Zebra-only features, please visit [www.zebra.com/mobilitydna](http://www.zebra.com/mobilitydna)

Mobility DNA is available on Android only. Features may vary by model and a Support Contract may be required. To learn what solutions are supported, please visit: <https://developer.zebra.com/mobilitydna>