MC3330xR UHF RFID Reader

Best-in-class standard-range RFID read performance with a powerful Android™ platform

Introducing the next evolution of our successful MC3300R family of integrated UHF/RAIN RFID readers. The MC3330xR is packed with features to bring a new level of efficiency and accuracy to inventory and asset management applications. You get the same proven lightweight ergonomic design and superior RFID read performance, 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. Zebra's signature rugged design ensures maximum uptime. And you can create intuitive Android applications that use the MC3330xR's powerful computing platform, large touchscreen and physical keypad. The MC3330xR — the next evolution in handheld UHF/RAIN RFID readers.



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 MC3330xR, MC3390xR, MC3330R, MC3390R, 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 MC3330xR 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 MC3330xR.

Unparalleled data capture performance and flexibility

Extraordinary RFID performance — flexible, fast and accurate
Ideal for standard-range RFID applications, the MC3330xR can capture RFID tags up to 40 feet/12 meters away. Its integrated circular antenna delivers extraordinary reliability, no matter the orientation of the tag. Workers can accurately and rapidly capture RFID tags on even the most challenging items — from a shelf of clothing in a retail stock room to a box of files in the office — in half the time as the next leading competitor.[1]

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[1] than other devices in this class.

Bring a new level of efficiency and accuracy to inventory and asset management applications with the MC3330xR.
For more information, visit www.zebra.com/mc3330xr

Integrated enterprise-class 1D/2D barcode scanning

Workers don't need to juggle different devices to capture RFID tags and barcodes — the MC3330xR can capture it all. Zebra's exclusive PRZM Intelligent Imaging technology enables instant barcode capture on even the most challenging barcodes, including poorly printed, damaged, crinkled, faded, truncated and low contrast barcodes. And the expanded working range and wide field of view allow workers to scan barcodes nearer and farther away.

Easy-to-use locating technology

The MC3330xR 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 MC3330xR 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

More rugged and ready for all-day business

The MC3330xR offers a 5 ft./1.5 m drop specification and with IP54 sealing, it can handle splashing liquid and dust. The Corning™ Gorilla™ Glass touch panel and imager window bring maximum scratch-resistance and shatter-proofing to two of the most vulnerable device features. The result? Workers can drop the MC3330xR 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 MC3330xR. 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 MC3330xR 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 Memory.

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 MC3330xR 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 MC3330xR 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 MC3330xR 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 2.95 in. W x 8.31 in. D 164 mm L x 75 mm W x 211 mm D
Weight	24 oz./680 g (with handstrap)
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 RAM/32 GB Flash Memory
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 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, Random: .04g^2/hz, 20hz to 2khz
Thermal Shock	40° F to 158° F/-40° C to 70° C
Electrostatic Discharge (ESD)	+/- 15kV air, +/-8kV contact discharge +/-8kV indirect contact discharge

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 USA: FCC Part 2, 1093 OET Bulletin 65 Supplement 'C' Canada: RSS-102

Environmental Compliance

Environment
• RoHS Directive 2011/65/EU; Amendment 2015/863
• REACH SVHC 1907/2006
A complete list of product and materials compliance, please visit: www.zebra.com/environment

Warranty

Subject to the terms of Zebra's hardware warranty statement, the MC3330xR 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

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

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

Markets and Applications

Back-of-store retail

• Inventory/cycle counting
• Automatic replenishment
• Receiving/shrink control
• Omni-channel order fulfillment
• Item finding

Data centers/offices

• Asset management and tracking

Healthcare

• Inventory/cycle counting
• Asset management (for critical assets)
• Item finding
• Pharmaceutical and laboratory inventory
• Trunk stock demo/sample inventory (medical device and pharmaceutical manufacturers)

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	40 ft. / 12 m
RFID Power Output	0 dBm to +30 dBm
RFID Antenna Type	Integrated Circular Polarized
Frequency Range	865-928MHz *Specific regional and country settings supported upon country selection
Gen2X	Supports Gen2X industry communications standard.

Barcode Scanning

Scan Engine	SE4770 with LED Aimer

Wireless LAN

Radio	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v2/w/mc2; Wi-Fi™ certified; IPv4, IPv6, 2x2 MU-MIMO
Data Rates	5GHz: 802.11a/n/ac — up to 866.7 Mbps 2.4GHz: 802.11b/g/n — up to 300 Mbps
Operating Channels (depending on Regulatory)	Channel 1-13 (2412-2472 MHz): 1,2,3,4,5,6,7,8,9,10,11,12,13Channel 36-165 (5180-5825 MHz): 36,40,44,48,52 56,60,64,100, 104,108,112,116,120,124,128,132,136,140,144 ,149,153,157,161,165Channel Bandwidth: 20, 40, 80 MHzActual 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); Wi-Fi Direct WMM-AC, Voice Enterprise
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC

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/mobilitydnaMobility 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

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