TC22R Integrated Handheld RFID Reader

Track assets easily with a lightweight, all-touch design

In an increasingly competitive marketplace, you need to stay a step ahead with asset tracking that's easy, intuitive and efficient. The Zebra TC22R Integrated Handheld RFID Reader provides an integrated, lightweight, all-touch design that helps your associates keep track of assets and inventory for extended periods with less fatigue. Capture data in less time and with less effort using a TC22R handheld reader that delivers industry-leading performance, such as read rates up to 1,300 tags per second, in an all-in-one form factor.

Accelerate Your Inventory Management

Ergonomic Design for All-Day Comfort
The TC22R handheld reader combines real-time visibility with simplicity and ease of use. This lightweight reader enables workers to continue cycle counts with less fatigue than heavier devices. That means you get the high performance that comes with field-proven Zebra software in a compact, all-in-one device.

Simplified Deployment
The TC22R handheld reader offers a fully integrated Android-based solution that can be supported by mainstream MDMs, reducing deployment headaches and management overhead.

And with the latest Bluetooth® and Wi-Fi capabilities, the TC22R handheld reader offers easy deployment that gives your business a competitive edge.

Industry-Leading Performance
With a robust read rate of up to 1,300 tags per second, the TC22R handheld reader enables greater insights into asset movement and real-time data from the first mile to the last or from the front of the store to the back. In addition, because the TC22R handheld reader has an integrated NFC reader built-in that assists with mobile POS applications, you can capture data in less time and with less effort.

Easy Connectivity
With Wi-Fi 6 and Bluetooth, the TC22R handheld reader is easy to use and manage across your network. That means implementation takes less training time, allowing you to reduce deployment timelines and streamline configuration.

Get the Most Out of Your RFID Investment—From the Leader in RFID
Zebra has more fixed, handheld and portal RFID systems installed than any other RFID provider, giving you the peace of mind that comes from choosing RFID products that are well-tested in practically every industry—and in some of the world's largest companies. And with over 300 RFID technology patents that have allowed us to deliver many industry firsts, you can count on our best-in-class advanced technologies to maximize the performance of your RFID solution.

To learn more about the TC22R Integrated Handheld RFID Reader, visit www.zebra.com/tc22r

Specifications

Physical Characteristics

Dimensions	5.7 in. H x 3.3 in. W x 6.96 in. L 14.5 cm H x 8.4 cm W x 17.7 cm L
Weight	20.07 oz. / 569 g
Display	6.0 in. color Full High Definition+ (1080 x 2160), LED backlight, 450 nits
Touch Panel	Multi-mode capacitive touch with bare or light gloved fingertip input
Power	User-removable, quick-release, rechargeable 7,000 mAh Li-Ion battery with PowerPrecision+ for real-time battery metrics
Network Connections	WLAN, WPAN
Notifications	Audible tone, vibration
Indicators	Decode LEDs, battery status LED, beeper
Keypad	On-screen keypad
Buttons	User-programmable button for barcode scanning (default), PTT or other use, volume up/down, power
User Input	Tri-function user-programmable trigger
Interface Ports	USB 3.1 (Bottom Type C), Super Speed (host and client)

User Environment

Operating Temperature	14° F to 122° F / -10° C to +50° C
Storage Temperature	-40° F to 158° F / -40° C to +70° C
IP Sealing	IP65
Humidity	5–95% non-condensing
Electrostatic Discharge	±15 kV air discharge ±8 kV direct discharge
Tumble Specification	500 cycles (1,000 drops, 1.6 ft./0.5 m) at room temperature
Drop Specification	Multiple 5 ft./1.5 m drops to concrete

Performance Characteristics

CPU	5430 hexa-core 2.1 GHz
Operating System	Android: for supported versions, visit www.zebra.com/android-versions
Memory	6 GB RAM / 64 GB Flash

RFID Characteristics

Standards Supported	EPC Class 1 Gen 2; EPC Gen 2 V2
RFID Engine	Zebra Proprietary Radio Technology
Maximum RFID Read Rate	Up to 1,300 tags/sec

Wireless LAN

WLAN Radio	IEEE 802.11a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax; 2x2 MU-MIMO, Wi-Fi 6E (802.11ax), Wi-Fi certified; Wi-Fi 6 Certified, Dual Band Simultaneous; IPv4, IPv6
Data Rates	6 GHz: 802.11ax—20 MHz, 40 MHz, 80 MHz, 160 MHz—up to 2,402 Mbps; 5 GHz: 802.11a/n/ac/ax—20 MHz, 40 MHz, 80 MHz, 160 MHz—up to 2,402 Mbps; 2.4 GHz: 802.11b/g/n/ax—20 MHz up to 286.8 Mbps
Operating Channels	Channel 1–13 (2,401–2,483 MHz): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13; Channel 36–165 (5,150–5,850 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, 165; Channel 1–233 (5,925–7,125 MHz); Channel Bandwidth: 20/40/80/160 MHz; actual operating channels/frequencies and bandwidths depend on regulatory rules and certification agency
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC
Security and Encryption	WEP (40 or 104 bit); Enhanced Open (OWE); 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, EAP-PWD; WPA3 Enterprise 192-bit mode (GCMP256) - EAP-TLS
Certifications	Wi-Fi Alliance Certifications: Wi-Fi CERTIFIED n, Wi-Fi CERTIFIED ac, Wi-Fi CERTIFIED 6 (Wi-Fi 6E), WPA2-Personal, WPA2-Enterprise, WPA3-Personal, WPA3-Enterprise (includes 192-bit mode), Protected Management Frames, Wi-Fi Enhanced Open, WMM (Wi-Fi Multimedia), WMM-Power Save, WMM-Admission Control, Voice-Enterprise, Wi-Fi Direct, Wi-Fi Agile Multiband, Wi-Fi QoS Management, Wi-Fi Optimized Connectivity, Passpoint

Wireless PAN

Bluetooth	Class 2, Bluetooth v5.2

Regulatory Compliance

Electrical Safety	IEC 62368-1 (ed.2) IUL 62368-1, second edition, CAN/CSA-C22.2 No. 62368-1-14
RFI/EMI/EMC	FCC Part 15 Subpart B Class B; ICES 003 Class B; EN 301 489-1; EN 301 489-3; EN 55035; EN 55032 Class B; EN 60601-1-2
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
RFID	EU EN 302 208, FCC Part 15 Subpart C; Canada: RSS-247

Markets and Applications

Retail and Hospitality

- Inventory cycle counting
- Mobile POS/line-busting
- Item finding

Light Manufacturing

- Product and component tracking
- Work-in-progress

Government

- Asset tracking
- Document management

Transportation and Logistics

- Inventory cycle counting
- Loading verification
- Inbound/outbound verification

RFID Characteristics

Nominal RFID Read Range - Integrated Antenna	40 ft. / 12.2 m
Frequency Range and RF System Output	US: 902–928 MHz; 0–36 dBm (EIRP) EU: 865–868 MHz; 0–33 dBm (ERP) 916.3, 917.5, and 918.7 MHz; 0–36 dBm (ERP) Japan: 916–921 MHz (w LBT), 0–36 dBm (EIRP)
Integrated RFID Antenna Gain	4 dBi

Data Capture

Scanning	SE4710 1D/2D scan engine
Camera	Forward-facing 16 MP camera, front-facing 5 MP camera
NFC	NFC ISO 14443 Type A and B; Mifare, FeliCa and ISO 15693 cards, NFC Forum tags 2,3,4,5; Host Card Emulation, Contactless Payment Support
UHF RFID	Refer to RFID Characteristics section

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