TC53e/TC53e-RFID/TC58e Mobile Computers

Faster. Smarter. More rugged. More sustainable. More secure. And a feature set that keeps pace with evolving business needs.

Introducing the latest addition to the top-selling TC5 Series, the TC53e, TC53e-RFID and TC58e. These devices take their place alongside the TC53 and TC58, building on their feature set to meet the ever-evolving mobility needs of today's front line workers. Qualcomm's latest processor and Secure Element support improve power and security. Support for Wi-Fi™ 6E and second generation 5G provide the fastest wireless speeds, improving connection reliability and application performance. Short-range UHF RFID opens up a world of new use cases. Constructed with 25 percent post-consumer recycled plastics, this device is the most sustainable TC5 Series device yet. The TC53e/TC53e-RFID/TC58e — everything your workers need to do business better.

A future-proof platform

Enhanced Durability
These dustproof, waterproof, drop-proof and tumble-proof devices deliver the reliable performance your workers need to ensure maximum workforce productivity and return on investment.

Crystal Clear Audio
Workers can easily hear every word on every call with comprehensive voice features, including three integrated microphones, two speakers, support for wireless and wired headsets and AI neural network-based noise suppression for superior intelligibility.

The Most Secure TC5 Series Device Yet
A Secure Element provides the best physical security on a mobile device through a dedicated chip that prevents physical hardware attacks and unauthorized access to sensitive data.

More Processing Power
The new Qualcomm® processor delivers nearly twice the power of the prior generation processor,[1] while consuming less power.

Better Multi-tasking
Up to 8 GB RAM and 128 GB Flash, plus support for up to 2TB of onboard storage provides the memory to support virtually any application.

All the Latest Wireless Communications
With 2nd generation 5G, Wi-Fi 6E and Bluetooth® 5.3, you're investing in a device that offers the latest, fastest and most reliable wireless communications.

A Larger, Higher Resolution Display[1]
The 6-in. FHD+ bright edge-to-edge display provides a richer viewing experience and is easy to see indoors and outside. And the touchscreen works when wet and with gloves.

Give your workers the powerhouse they need to maximize efficiency and productivity with the TC53e, TC53e-RFID and TC58e.
For more information, visit www.zebra.com/tc53e-tc58e-tc53e-rfid

Extended Future Android™ Support

With support for future versions of Android, you get the peace of mind that the device you purchase today will support the new features of Android, well into the future.

Zebra's Most Sustainable Handheld TC5 Series Device

The TC53e, TC53e-RFID and TC58e[3] mobile computers are not only good for business — they are good for the environment. These devices are designed and constructed with 25 percent post-consumer recycled plastics — and without many major environmental toxins, such as mercury and PFO/PFOAs. Power consumption is reduced and battery technology is green — batteries are removable and recyclable. Battery statistics provide insight into when batteries are no longer healthy enough to hold a full charge, allowing you to use batteries longer, without risking mobile device downtime. Packaging is 98 percent biodegradable and utilizes recycled materials. And these devices can double as a workstation, PBX handset and two-way radio, reducing the number of devices you need — along with your consumption of plastics and electronics.

Split Second Access to Shared Devices with Identity Guardian

Workers can scan a barcode on their badge and simply look into the device to unlock and provision the device with all the right applications and permissions. No more worrying about shared PINs, stored login credentials — or compromised credentials that could provide unauthorized users with access to your network and data.

Unmatched Battery Technology

Get full shift power with all four battery options — the standard, BLE and wireless charge 4680 mAh batteries and the extended 7000 mAh battery. And these PowerPrecision+ batteries provide the intelligence to identify batteries that can no longer hold a full charge and more, making battery management simple.

Reduced Total Cost of Ownership

These devices are available for sale for four years, with support available for an additional four years, providing peace of mind that the devices you buy today can serve your needs well into the future.

Do more with more data capture options

Flexible Scanning Options

Different use cases require different scanners. Capture high volumes of barcodes, photos and documents indoors with the SE4720. Capture barcodes, photos and documents indoors and outside — even in bright sunlight — with the SE4770.

Capture barcodes in-hand to over 40 ft/12.2 m away with the SE55 with Intellifocus™ technology — making it easy to scan items in hand and on the top shelf of a warehouse shelf. And all options deliver split-second first time capture of virtually every barcode, regardless of condition.

Increase Versatility with Integrated Short-Range UHF RFID (TC53e-RFID only)

Integrated RFID opens up a world of possibilities with the right short read range — 4.0 ft/1.2m. Store associates can easily locate an item, check in seconds to make sure all items in a basket were purchased, read all items in a basket simultaneously at the POS, instantly reconcile incoming shipments and reprogram existing tags on returns and ensure each order is complete. Validate tickets instantly at concerts and sports events. And baggage handlers at the airport can quickly identify bags on a baggage cart.

Add Lightning-Fast Long Range RFID

Easily connect Zebra's standard range RFD40 and standard or extended range RFD90 Ultra-Rugged UHF RFID sleds via Bluetooth, NFC or Zebra's eConnex™ adapter with snap-and-go pairing. These sleds offer read ranges from 20 ft. up to 75 ft. away with an impressive read rate of 1,300 tags per second — enabling workers to take inventory in record time.

Get More Details with Higher Resolution Front and Rear Cameras

The rear-facing 16 MP color rear camera captures detailed photos to document damaged items, proof of delivery and more. Place video calls with the 8 MP front facing camera for on-the-spot collaboration needed to get the job done.

A world of solutions to do more with your devices

Locate Lost Devices

The BLE battery works hand-in-hand with Device Tracker to enable lost or misplaced devices to be located quickly and easily — whether the device is powered on or off because the battery is depleted.

Add New Capabilities with Zebra DNA

Zebra DNA makes it easier to setup, secure, manage and optimize your Zebra devices. And with Zebra DNA Cloud, it's easy to deploy and manage all of your Zebra DNA tools.

Add New Functionality with Zebra's Proven Solutions

Enable mobile payment in record time with Zebra Pay — all certifications are included. Turn these devices into a mobile-driven workstation or a complete POS with Workstation Connect and a Connect Cradle. With Workcloud Communications, you can add two-way radio functionality over Wi-Fi and cellular networks and PBX handset functionality, complete with a custom interface that makes it easy to execute even the most complex telephony features.

Specifications

Physical Characteristics

Dimensions	6.48 in. L x 3.04 in. W x 0.66 in. H (164.8mm L x 77.35mm W x 16.75mm H)
Weight	9.9 oz (282g) with standard battery
Display	6.0 in. Full High Definition+; 1080x 2160; LED back-light; 600 NITS; optically bonded to touch panel
Imager Window	Corning® Gorilla® Glass
Touch Panel	Multi-mode capacitive touch with bare or gloved fingertip input or conductive stylus (sold separately), Corning Gorilla Glass; water droplet rejection; fingerprint resistant anti-smudge coating
Backlight	LED
Power	Rechargeable Li-Ion, PowerPrecision+ for real-time battery metrics; Standard capacity: 4680 mAh (18.01 Watt hours); Extended capacity: 7000 mAh (26.95 Watt hours); BLE battery: 4680 mAh; Qi compatible Wireless charge battery: 4680 mAh; fast charging; Warm Swap battery mode
Expansion Slot	User accessible MicroSD card supports up to 2 TB
SIM	TC58e only: 1 nano SIM; 1 eSIM
Network Connections	WLAN, WPAN (Bluetooth), USB 2.0 (Back I/O - Host Only), USB 3.1 superspeed (Bottom Type C) - Super Speed (Host and Client); TC58e only: WWAN 5G
Notifications	Audible tone; multi-color LEDs; haptic feedback
Keypad	On-screen keypad and enterprise keyboard
Voice and Audio	Built-in microphones for AI noise suppression and stereo record; vibrate alert; Dual speakers for loudness; Bluetooth wireless headset support; PTT headset (Zebra USB-C) support; High quality stereophonic speaker phone; Cellular Circuit Switch voice; HD voice; VoLTE EVS; VoIP incl. SWB Audio
Buttons	Programmable buttons for maximum flexibility: dual dedicated scan buttons, dedicated push-to-talk button, volume up/down buttons and trigger button of trigger handle via Back I/O.
Interface Ports	USB 2.0 (Back I/O - Host Only), USB 3.1 superspeed (Bottom Type C) - Super Speed (Host and Client)

Performance Characteristics

CPU	Qualcomm 4490 Kryo octa-core, 2.4 GHz
Operating System	Android; for supported Android versions, visit: www.zebra.com/android-versions
Memory	6GB RAM/64GB UFS Flash; 8GB RAM/64GB UFS Flash; 8GB RAM/128GB UFS Flash
Security	FIPS 140-2 Validated (ISO 19790) and Common Criteria certified (ISO 15408); Supports Secure Boot and Verified Boot

Wireless PAN

Bluetooth	Class 1 and Class 2, Bluetooth v5.3; secondary Bluetooth Low Energy (BLE) for beaconing within BLE battery

Wireless LAN

Radio	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax; 2x2 MU-MIMO; Wi-Fi 6E (801.11ax); Wi-Fi certified; Wi-Fi 6E Certified; Dual Band Simultaneous; IPv4, IPv6
Data Rates	5GHz: 802.11a/n/ac/ax—20/40/80/160 MHz — up to 2402 Mbps; 2.4GHz: 802.11b/g/n/ax—20MHz up to 286.8 Mbps 6GHz: 802.11ax — 20/40/80/160 MHz — up to 2402 Mbps
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC
Operating Channels	Channel 1-13: (2412-2472 MHz): 1,2,3,4,5,6,7,8,9,10,11,12,13; Channel 36-165: (5180-5825 MHz): 36,40, 44,48,52,56,60,64,100 ,104,108,112,116,120,124, 128, 132,136,140,144,149,153,157,161,165; Channel 1-233: (5925-7125 MHz); Channel Bandwidth: 20/40/80/160 MHz; NOTE: 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, EAP-PWD); WWAN device only — EAP-SIM, EAP-AKA; WPA3 Enterprise 192-bit mode (GCMP256) — EAP-TLS; Enhanced Open (OWE)
Certifications	Wi-Fi Alliance Certifications: Wi-Fi CERTIFIED n; Wi-Fi CERTIFIED ac; Wi-Fi CERTIFIED 6; Wi-Fi CERTIFIED 6E; Wi-Fi Enhanced Open; WPA2-Personal; WPA2-Enterprise; WPA3-Personal; WPA3-Enterprise (includes 192-bit mode); Protected Management Frames; Wi-Fi Agile Multiband; WMM; WMM-Power Save; WMM-Admission Control; Voice-Enterprise; Wi-Fi Direct; QoS Management; OCE

Wireless WAN, Data and Voice Communications (TC58e)

GPS	GPS, GLONASS, Galileo, Beidou, QZSS Dual-Band GNSS — concurrent L1/G1/E1/B1 (GPS/QZSS, GLO, GAL, BeiDou) + L5/E5a/BDSB2a (GPS/QZSS, GAL, BeiDou); a-GPS; supports IZAT™ XTRA
Multimedia	Wi-Fi Multimedia™ (WMM) and WMM-PS; TSPEC
Radio Frequency Band[2]	North America: 5G FR1: n2/5/7/12/13/14/25/26/29/30/38/41/48/66/71/77/78; 4G: B2/4/5/7/12/13/14/17/25/26/29/30/38/41/48/66/71; 3G: B2/4/5; Rest of World: 5G FR1: n1/2/3/5/7/8/12/20/26/28/38/40/41/66/71/77/78; 4G: B1/2/3/4/5/7/8/12/17/18/20/26/28/38/39/40/41/42/43/66/71; 3G: 1/2/4/5/8; 2G: 850/900/1800/1900; China/Japan: 5G FR1: n1/3/5/7/8/28/38/40/41/77/78/79; 4G: B1/3/5/7/8/28/34/38/39/40/41/42; 3G: B1/5 Supports private networking (LTE/5G)

Markets and Applications

Retail Associates

- Price/inventory checks
- Order fulfillment (BOPIS/BOPAC)
- Item locator
- Line busting/Mobile Point of Sale
- Assisted selling
- Task management
- Front of store replenishment
- Price management
- Inventory/cycle counts

Retail Managers

- Workforce mgmt
- Planogram mgmt
- Promotion compliance
- Merchandising
- Back of store management

Field Service Technicians

- Asset mgmt
- Parts inventory
- Invoicing/Mobile Point of Sale
- Scheduling

Postal Carriers/Courier Drivers

- Proof of delivery/condition
- Asset mgmt
- Invoicing/Mobile Point of Sale
- Location services

User Environment

Operating Temp.	-4F to +122F (-20C to +50C)
Storage Temp.	-40F to +158F (-40C to +70C)
Humidity	5% to 95% non-condensing
Sealing	IP68 and IP65 with battery per applicable IEC sealing specifications
Tumble Specification	1000 1.6 ft (0.5m) tumbles at room temperature without protective boot, meets or exceeds IEC tumble specification; 1000 3.2 ft (1.0m) tumbles at room temperature with protective boot, meets or exceeds IEC tumble specification
Drop Specifications	Exceeds per MIL-STD-810H: 8 ft (2.4m) to concrete with the boot; 6 ft (1.8m) to tile over concrete stand-alone terminal; 6 ft (1.8m) to concrete with the boot across temperature (+14F to +122F/-10C to +50C) exceeding MIL-STD-810H; 5 ft (1.5m) to tile over concrete across temperature (+14F to +122F /-10C to +50C) exceeding MIL-STD-810H
Electrostatic Discharge (ESD)	+/- 15 kV air discharge; +/- 8 kV direct discharge; +/- 8 kV indirect discharge

General Certifications

FIPS 140-2 ISO 19790; Common Criteria; NFC Forum Certification; Android Enterprise Recommended (AER)

Interactive Sensor Technology (IST)

Light sensor, magnetometer, motion sensor, pressure sensor (TC58e only), proximity sensor and gyro

Data Capture

Scanning	SE55 1D/2D Advanced Range Scan Engine with IntelliFocus™ technology; SE4720 1D/2D Scan Engine; SE4770 1D/2D scan engine (TC58e only)
Camera	Front—8 MP; Rear—16 MP autofocus; flash LED generates balanced white light; supports Torch mode + HDR (standard)
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 – Front Tap NFC for optimized contactless payment, VAS (Value Added Services) and Wallet support, Apple ECP1.0 and ECP2.0, Apple VAS and Google Smart Tap certified, VAS Library/SDK, Secure Element* for enhanced Apple/Google VAS secure key management * Selected SKUs
Integrated RFID	Short range integrated UHF RFID; 4 ft (1.2m) range; reads 20 tags per second; EU 865-868MHz and US 902-928Mhz (TC53e-RFID only)

Environmental Compliance

RoHS Directive 2011/65/EU; RoHS Amendment (EU) 2015/863; (EN IEC 63000:2018 Standard); For 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 TC53e, TC53e-RFID and TC58e are 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 support services; Zebra Visibility Services — VisibilityIQ™ Foresight; For information on Zebra services, please visit www.zebra.com/services

Footnotes

1. Compared to prior generation TC5 Series devices: TC51/TC56; TC52/TC57; TC52x/TC57x/TC52ax; Specifications subject to change without notice.
2. Actual band support may vary by country or carrier, contact Zebra Tech Support for more details.
3. TC58e: EPEAT Gold Certified

Zebra DNA

For more information on Zebra DNA, visit www.zebra.com/zebra-dnaZebra DNA features vary by model; a support contract may be required. To learn what solutions are supported, visit: https://developer.zebra.com/zebra-dna

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