TC52x and TC57x Series Touch Computer

The ultimate rugged touch computer — with a more advanced platform

When you choose the Zebra TC52x/TC57x, you get our best-selling TC52/TC57 rugged handheld mobile computer — and more. More advanced Zebra-only features that put the user experience in a class of its own to boost ease-of-use and productivity to new heights. More support for the latest mobile innovations, paving the way for new applications such as payment solutions that deliver more value — and superior future proofing. More Mobility DNA tools that make device management, device integration, application development and the user interface easier than ever. All in the first device in its class to offer the power of Android 10 — with up to 8 years of security updates to protect your device every day it is in service.

A user experience in a class of its own

All the power of Android 10
The best version yet, Android 10 is packed with new features that let workers do business faster, easier and more securely. Instant familiarity with Android virtually eliminates training time and adoption curves. And you can give workers the time-saving intuitive apps they expect.

Maximum application performance
Instantly navigate through application screens, thanks to the faster 2.45 GHz processor and new Universal Flash Storage (UFS).

Advanced higher-resolution touchscreen technology with Full HD
Full HD utilizes the entire 5 inch display, providing more room to view more information. The easy, familiar and flexible multi-touch operation works even when wet, with a gloved finger or a stylus. And the best-in-class outdoor readability screen is easy to read, even in bright sunlight.

An advanced scan engine for the fastest, easiest data capture
Easily capture 1D and 2D barcodes, labels and documents with the new SE4720 scanner. You get lightning fast barcode capture, maximum motion tolerance — workers can capture barcodes as fast as they can press the scan button; the ability to capture even poor quality, damaged and dirty barcodes. A larger 'sweet spot' makes scanning even easier with point-and-shoot simplicity — and enables the close-up capture of large barcodes. And a wide working range beyond 24 in./60 cm supports more applications.

Full shift power your workers can count on
The PowerPrecision+ high capacity battery delivers an impressive 14 hours of power[1] — plenty for the longest shift. With a two-minute Warm Swap mode, swapping batteries is fast and easy — there's no need to turn off the device or close active apps. And with fast charging, batteries are fully charged and ready to go in record time.

Easily find misplaced devices
An integrated Bluetooth beacon and support for Device Tracker allows users to quickly and easily locate misplaced or missing devices.

Shave steps and time out of tasks with rich locationing support
Enable locationing applications that improve the shopper experience and workforce efficiency — and increase sales — with support for Bluetooth 5.0 BLE and WiFi, as well as Zebra's SmartLens and MotionWorks solutions.

Maximize productivity with enterprise accessories
Backwards compatibility with all TC52/TC57 accessories allows you to cost-effectively upgrade to the latest technology. And new accessories help make life even easier for your workers. A new single-slot cradle with Ethernet and USB charges a device and battery — and enables easy device staging and updating. The ShareCradle Workstation provides a new level of flexibility, allowing you to connect a monitor, keyboard, mouse and more to the TC52x/TC57x, creating a workstation on the fly. A new electrical trigger in the attachable gun-style handle enables rapid-fire scanning. And a new stylus works in the rain, snow and more.

All the latest technology advancements

Rugged and ready for the toughest business day
The TC52x/TC57x may look like smartphones, but they are engineered for the enterprise. Drop it in water or on concrete, use it in the rain, snow or dusty areas. Sealing now includes the battery, increasing reliability. The unibody design provides extra impact protection for the sensitive electronics. And Corning® Gorilla® Glass provides maximum scratch-resistance and shatter-proofing for the touch panel and imager window.

Support for leading-edge technology solutions
Support is built-in for the upcoming new generation of payment solutions. The NFC radio was relocated to the top of the device, paving the way for easier tap-to-pay solutions. And with support for Zebra's HD4000 head-mounted display, you can drive cutting edge hands-free directed-action workflows that substantially improve productivity and task accuracy.

More WiFi range and speed — with less power
2x2 Multiple-User Multiple Input Multiple Output (MU-MIMO) technology allows access points to communicate with multiple devices simultaneously via pinpoint beamforming, boosting WiFi network capacity, speed and range. And processing is shifted from the mobile device to the access point, extending battery cycle time.

The highest quality voice in its class
Three microphones, high-volume speakers and noise-cancellation technology work together to ensure that callers on both ends of every call can hear every word — even in the noisiest areas.

5 MP front-facing camera supports more advanced apps
Video calling improves service and productivity. Customers enjoy a more personal touch, while remote experts can assist with repair to help onsite technicians resolve issues faster and increase first-time-fix rates.

Complete cellular network flexibility with single device simplicity
The TC57x provides workers anywhere in the world with dependable cellular service. Support for carrier aggregation substantially improves application performance by increasing data capacity and speeds. And certification on leading public safety networks provides the connectivity first responders need when networks are overloaded in crisis situations.

Ultra high-resolution photos and videos
The 13 MP color rear camera captures detailed photos and videos for proof-of-condition/delivery/service, onsite support and more.

Bluetooth 5.0 — 2x speed, 4x the range, all with less power
Improved data speeds up to 2 Mbps increase application flexibility and performance for Bluetooth peripherals, such as printers and headsets, while Bluetooth Low Energy (BLE) reduces power requirements to extend battery cycle times.

Drive workforce productivity and device control to a new level with the powerful Mobility DNA™ suite

So many tools, so much value
LifeGuard™ for Android™ provides security patches every day your devices are in service — up to eight years. Devices can be updated over the air with your supported Enterprise Mobility Management (EMM) system. Mobility Extensions (Mx) provides over a hundred features you can activate to improve the security, data capture support, wireless connectivity and device manageability of the standard Android operating system. Stage a handful or thousands of devices quickly and easily with StageNow — including deactivation of Google Mobile Services (GMS). Control the apps and device features your workers see with Enterprise Home Screen. Capture and send data right to your application, no coding needed, with DataWedge. WorryFree WiFi provides dependably superior WiFi. PowerPrecision Console and the PowerPrecision+ battery enable unsurpassed battery management. Add push to talk over WiFi or cellular. Turn the TC52x/TC57x into a PBX mobile phone. And more.

Specifications

Physical Characteristics

Dimensions	6.1 in. L x 2.9 in. W x 0.73 in. H 155 mm L x 75.5 mm W x 18.6 mm H
Weight	8.8 oz./249 g with battery
Display	5.0 in. Full High Definition (1920 x 1080); exceptionally bright, outdoor viewable; optically bonded to touch panel
Imager Window	Corning Gorilla Glass
Touchpanel	Dual mode capacitive touch with stylus or bare or gloved fingertip input (conductive stylus sold separately); Corning Gorilla Glass; water droplet rejection; fingerprint resistant anti-smudge coating
Backlight	LED backlight
Power	Rechargeable Li-Ion, PowerPrecision+, $\geq$ 15.48 Watt hours, $\geq$ 4150 mAh, improved battery metrics for better battery management, fast charging (up to 2.4 A); Warm Swap battery mode up to two minutes (120 seconds)
Expansion Slot	User accessible MicroSD supports up to 256 GB SDXC
SIM Slots	TC57x only: 1 nano SIM; 1 eSIM
Network Connections	TC52x/TC57x: WLAN, WPAN (Bluetooth), USB 2.0, High Speed (Host and Client) TC57x only: WWAN
Notification	Audible tone; multi-color LEDs; vibration
Keypad	On-screen keypad and enterprise keyboard
Voice and Audio	Three microphones with noise cancellation; vibrate alert; front facing speaker; Bluetooth wireless headset support; high quality speaker phone; PTT headset support; cellular circuit switch voice; HD voice; Super-wideband (SWB) and Fullband (FB) audio; 3.5mm audio jack
Buttons	Four programmable buttons for maximum flexibility: dual dedicated scan buttons, dedicated push-to-talk button and volume up/down buttons

Performance Characteristics

CPU	Qualcomm Snapdragon™ 660 octa-core, 2.45 GHz
Operating System	Android 10, upgradeable through Android 11
Memory	4GB RAM/32GB UFS Flash

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% non-condensing
Drop Specifications	Multiple 6 ft. drops to concrete with the rugged boot accessory per Mil STD 810 G; multiple 4 ft./1.2m drops to tile over concrete -10°C to 50°C (14°F to 122°F)
Tumble Specification	500 1.6 ft./0.5 m tumbles, meets or exceeds IEC tumble specification
Sealing	IP68 and IP65 with battery per applicable IEC sealing specifications

User Environment (Continued)

Vibration	4 g's PK Sine (5 Hz to 2 kHz); 0.04 g 2/Hz Random (20 Hz to 2 kHz); 60 minute duration per axis, 3 axis
Thermal Shock	-40°F to 158° F/-40°C to 70°C rapid transition
Electrostatic Discharge (ESD)	+/- 15 kV air discharge; +/- 8 kV direct discharge; +/- 8 kV indirect discharge

Interactive Sensor Technology (IST)

Light Sensor	Automatically adjusts display backlight brightness
Magnetometer	eCompass automatically detects direction and orientation
Motion Sensor	3-axis Accelerometer with MEMS Gyro
Pressure Sensor	Automatically detects altitude information for locating (TC57x only)
Proximity Sensor	Automatically detects when the user places the handset against head during a phone call to disable display output and touch input

Data Capture

Scanning	SE4720 1D/2D Imager
Camera	Front — 5 MP Rear — 13 MP autofocus; flash LED generates balanced white light; supports Torch mode
NFC	ISO 14443 Type A and B; FeliCa and ISO 15693 cards; P2P mode and Card Emulation via Host. Card Emulation via Host and UICC

Wireless WAN, Data and Voice Communications (TC57x Only)

Radio Frequency Band	Supports VoLTE , Carrier Aggregation up to 3DL CA AT&T FirstNet Ready certification Verizon PNTM certification LTE FDD: 700/800/850/900/1800/1900/AWS/2100/2600 (28,13,14,12,17,19,20/5,26/8/3/2, 25/4,66/1/7); LTE TDD: 1900/2300/2500 (39/40/41,38); UMTS/HSPA/HSPA+: 850/900/AWS/1900/2100 (5/8/4/2/1); GSM/GPRS/EDGE: 850/900/1800/1900
GPS	TC57x only: Autonomous, Concurrent GPS; GLONASS; Gallileo; BeiDou, and A-GPS. Supports IZAT™ XTRA
Multimedia	Wi-Fi Multimedia™ (WMM) and WMM-PS; Including TSPEC

Wireless LAN

Radio	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc; 2x2 MU-MIMO; Wi-Fi™ certified; Dual Band Simultaneous; IPv4, IPv6
Data Rates	5GHz: 802.11a/n/ac — 20MHz, 40MHz, 80MHz - up to 866.7 Mbps 2.4GHz: 802.11b/g/n — 20MHz, 40MHz - up to 300 Mbps
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 Bandwidth: 20, 40, 80 MHz Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency.

Markets and Applications:

Retail Associates
- Price/inventory checks
- Item locator
- Line busting/POS
- Assisted selling

Retail Managers
- Workforce mgmt
- Planogram mgmt
- Promotion compliance
- Merchandising

Direct Store Delivery Drivers
- Order automation
- Delivery tracking
- Inventory mgmt
- Customer support

Field Service Technicians
- Asset mgmt
- Parts inventory
- Invoicing
- Scheduling

Parcel/Light Courier Drivers
- Proof of delivery
- Asset mgmt
- Location services

Government/ Public Safety
- eCitation
- Public transportation ticketing
- Situational awareness
- Communication and collaboration

Wireless LAN (Continued)

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, 802.11ac, WPA2-Personal, WPA3-Personal, WPA2-Enterprise, WPA3-Enterprise, WPA3-Enterprise 192-bit mode, WMM, WMM-PS, PMF, WiFi Direct WMM-AC and Voice Enterprise).
Fast Roam	PMKID caching; Cisco CCKM; 802.11r (Over-the-Air); OKC

Wireless PAN

Bluetooth	Class 2, Bluetooth v5.0, Bluetooth Low Energy (BLE)

Warranty

Subject to the terms of Zebra's hardware warranty statement, the TC52x/57x Series 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 support services

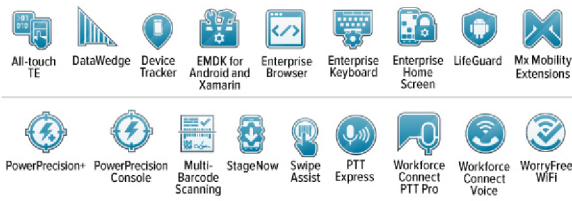Zebra Visibility Services – VisibilityIQ™ Foresight

Footnotes

1. Based on typical user profiles.
2. Upgrading to new supported versions of Android requires the purchase of a Zebra OneCare Service contract.

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

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

All-touch TE · DataWedge · Device Tracker · EMDK for Android and Xamarin · Enterprise Browser · Enterprise Keyboard · Enterprise Home Screen · LifeGuard · Mx Mobility Extensions

PowerPrecision+ · PowerPrecision Console · Multi-Barcode Scanning · StageNow · Swipe Assist · PTT Express · Workforce Connect PTT Pro · Workforce Connect Voice · WorryFree WiFi