

# TC72/TC77 Series Touch Computer

## The Ultimate in Ultra-Rugged Enterprise-Class All Touch Computing

At the edge of your business are your front line workers that spend their days face-to-face serving the important asset in your company — your customers. Now, there's a device designed to take customer service to the next level by delivering everything your workers need to achieve peak efficiency, with trouble-free reliability — the TC72 and TC77 Android Touch Computers. This family builds on the highly successful TC7 Series family to create the ultimate ultra-rugged all-touch computer for all workers inside and outside the four walls — a smartphone experience for maximum simplicity, construction designed to withstand years of the toughest everyday use and abuse, and a new platform offering more capabilities than any other device in this class. The TC72 and TC77 — for a real competitive edge at the edge of your business, delivered.



### The Ultimate User Experience

#### Android for instant familiarity

Your workers already know how to use an Android device, virtually eliminating training time and adoption curves. And you can deliver the highly graphic interactive apps today's workers expect.

#### Advanced touchscreen technology

The high-definition display offers plenty of real estate for intuitive graphics-intensive applications. The easy, familiar and flexible multi-touch operation works even when wet, with a gloved finger or a stylus.

And with best-in-class outdoor readability, the screen is easy to read, even in bright sunlight.

#### Super simple data capture: barcodes, labels and documents

Advanced scanning technology and PRZM Intelligent Imaging deliver lightning fast capture of printed and electronic 1D and 2D barcodes, including Digimarc — regardless of condition. The expanded working range and wide field of view allow workers to scan barcodes nearer and farther away, while omnidirectional scanning delivers true point and shoot performance — no need to ever align the device with the barcode. Need to capture multiple barcodes on a label or data on a form? You can do it all with the press of a single button with Zebra's SimulScan, a no-cost pre-installed Mobility DNA application.

#### Full shift power your workers can count on

The PowerPrecision+ high capacity battery delivers up to an impressive 15 hours of power<sup>1</sup> — plenty for the longest shift. With 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 in record time.

#### Complete cellular network flexibility with single device simplicity

No matter where your workers are, they can stay connected. Simultaneous support for two carriers is ideal for workers that travel to areas better served by different carriers. And aggregated carrier support delivers faster upload and download speeds. The TC77 is certified on leading public safety networks, including AT&T FirstNet and Verizon, assuring responders have the connectivity they need even when networks are overloaded in crisis situations.



**The TC72/TC77 — The Ultimate Ultra-Rugged Enterprise Touch Computer.**

For more information, visit [www.zebra.com/tc72](http://www.zebra.com/tc72) or [www.zebra.com/tc77](http://www.zebra.com/tc77)

### **Longer 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.

### **Bluetooth 5.0 for twice the speed and four times the range**

An extended range of 800 ft./240 m and data speeds up to 2 Mbps increase application flexibility and performance for Bluetooth peripherals, such as printers and headsets, while Bluetooth Low Energy reduces power requirements to extend battery cycle times.

### **New 5 MP front-facing camera supports more advanced apps**

The front-facing camera offers built-in support for Visible Light Communication (VLC), which allows you to track the location of shoppers and workers using existing LED lighting infrastructure. Video calling improves service and productivity. Customers enjoy a more personal touch — and remote experts can see a repair in process to help onsite technicians resolve issues faster.

### **Ultra high-resolution photos and videos**

The 13 MP color rear camera captures highly detailed photos and videos — ideal for proof-of-condition/delivery/service, onsite technical support and more.

### **The highest quality voice in its class**

With high-volume speakers and noise-cancellation technology, callers on both ends of every call can hear every word.

## **Built to last**

### **The ultimate in ultra-rugged proven design**

When it comes to use and abuse and demanding environmental conditions, the TC72/TC77 is at the top of its class. Built to handle 8 ft./2.4 m drops to concrete and 2,000 tumbles, with IP65 and IP68 sealing, this device is virtually waterproof, drop-proof, dust-proof and tumble-proof — workers can drop it, use it outdoors in the rain, snow, freezing cold or sweltering heat and still expect reliable operation. And the Corning Gorilla Glass touch panel and imager window bring maximum scratch-resistance and shatter-proofing to the display and lens eye.

### **A platform to handle all your apps — today and tomorrow**

The ultra-powerful processor provides superior performance on all voice and data apps. You also get built-in support for future versions of Android as well as future apps, such as artificial intelligence.

### **Maximize productivity with enterprise accessories**

Unlike consumer smartphones, a full suite of business-class accessories improve ease of use and management. A trigger handle makes scanning easier and unique ShareCradles that charge devices and batteries simplify backroom management. And full backwards compatibility with TC70x/TC75x accessories ensures a cost-efficient upgrade.

### **Rich locationing support**

Easily implement locationing with support for many technologies, including VLC, Bluetooth 5.0 BLE and WiFi, plus Zebra's SmartLens and MPact Solutions.

### **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.

## **Drive workforce productivity, efficiency and device value to a new level with powerful new Mobility DNA apps**

### **WorryFree WiFi — dependably superior WiFi, delivered**

Provide every worker with the best possible WiFi connection, every minute of every shift. This free tool delivers near instant application response times, unmatched roaming performance, plus exceptional voice quality and network diagnostics.

### **PowerPrecision Console for better battery management**

This free PC-based tool makes it easy to identify and remove aging batteries from your battery pool before they impact productivity.

### **End-to-end revolutionary control of the update process**

Take the cost and complexity out of updating your Android devices with LifeGuard™ Analytics — free with your Zebra OneCare Support contract. See which updates are available along with priority and which devices are eligible for the update. Automatically update your devices over the air with the press of a button. And easily monitor and manage the status of updates in real time.

### **Easily manage access to Google Mobile Services (GMS)**

StageNow's new Restricted Mode delivers an industry first — an easy way to simply click to deactivate Google Mobile Services (GMS) that come standard with the operating system — and reactivate should you need them down the road. StageNow is free and pre-loaded on every TC72/TC77.

# Specifications

## Physical Characteristics

Dimensions	6.3 in. L x 3.3 in. W x 1.1 in. D 161 mm L x 84 mm W x 28 mm D
Weight	13.3 oz / 376 g
Display	4.7 in. High Definition (1280 x 720); exceptionally bright, outdoor viewable; optically bonded to touch panel
Imager Window	Corning Gorilla Glass
Touchpanel	Dual mode capacitive touch with stylus, finger or gloved fingertip input (conductive stylus sold separately); Screen Protector and Rain modes; Corning Gorilla Glass
Backlight	LED backlight
Power	Li-Ion 3.7 V, 4620 mAh. PowerPrecision/PowerPrecision+: Improved battery technology for longer cycle times and real-time visibility into battery metrics for better battery management
Expansion Slot	User accessible microSD with 32 GB SDHC and up to 256 GB SDXC
SIM	TC77 only: 2 Nano SIM slots (Dual SIM, Dual Stand-by - EU Only)
Network Connections	TC72: WLAN, WPAN (Bluetooth) TC77: WWAN (cellular, WLAN (WiFi), WPAN (Bluetooth); USB 2.0 High Speed (host and client)
Notification	Audible tone; multi-color LEDs; vibration
Keypad	On-screen keypad and Enterprise Keyboard
Voice and Audio	Three microphone support with noise cancellation; vibrate alert; speaker; Bluetooth wireless headset support, high quality speaker phone; PTT headset support; cellular circuit switch voice; HD Voice

## Performance Characteristics

CPU	Qualcomm Snapdragon™ 660 octa-core, 2.2 GHz
Operating System	TC72: Upgradeable to Android 14 TC77: Upgradeable to Android 14
Memory	4 GB RAM/32 GB Flash pSLC
Internet Protocol	IPv4 and IPv6

## 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 90% non-condensing
Drop Specifications	Multiple 6 ft./1.8 m drop to concrete across full operating temperature range, multiple 8 ft./2.4 m drop to concrete at room temperature per MIL-STD 810G
Tumble Specifications	2,000 3.3 ft./1.0 m tumbles; meets and exceeds IEC tumble specifications

## Wireless WAN Data and Voice Communications

TC77 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	TC77 only: Autonomous, Assisted GPS (A-GPS); Navstar; GLONASS; Galileo; BeiDou

## Wireless LAN

Radio	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w; 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	Channel 1-13 (2412-2472 MHz); Channel 36-165 (5180-5825 MHz) Channel Bandwidth: 20, 40, 80 MHz 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); WPA/WPA2 Enterprise (TKIP and AES) — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC and LEAP.EAP-PWD
Multimedia	Wi-Fi Multimedia™ (WMM) and WMM-PS
Features	Soft AP, 2x2 MU-MIMO, 256 QAM Modulation on 5G GHz radio; Maximum Ratio Combining (MRC), Tx/Rx Low-Density Parity Check (LDPC), Transmit Beamforming (TxBF) and Beamforming (BFee) capability, Full IEEE 802.11 a/b/g/n legacy compatibility
Certifications	WFA (802.11n, WMM-PS, 801.11ac, PMF)
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC

## Wireless PAN

Bluetooth	Class 2, Bluetooth v5.0, Bluetooth Low Energy (BLE)
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## Communication and Messaging

Workforce Connect PTT Express (included) provides instant push-to-talk small group communications across Wi-Fi networks. Workforce Connect PTT Pro (supported) provides a scalable network agnostic push-to-talk solution which also includes messaging, location services and two-way radio integration. Workforce Connect Voice client (supported) enables the TC72/TC77 Series to function as a full featured mobile telephone with multi line capability across Wi-Fi networks.

## Markets and Applications:

### Retail

- Price audits/changes
- Store receiving
- Inventory management
- Voice communications

### Manufacturing

- Order/returns processing
- Inventory management
- Customer service
- Work order management

### Transportation and Logistics

- Last mile delivery
- Package/pallet track and trace
- Proof of delivery/pickup (signature/photo)
- Route optimization

### Warehouse

- Picking/put-away
- Warehouse management
- Returns processing
- Voice communications

### Government and Public Safety

- eCitation
- Situational awareness
- Communication and collaboration
- Asset management

## User Environment

Sealing	IP65 and IP68 per applicable IEC sealing specifications
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)	+/-15kVdc air discharge; +/-8kVdc direct discharge; +/-8kVdc indirect discharge

## Interactive Sensor Technology (IST)

Light Sensor	Automatically adjusts display backlight brightness
Motion Sensor	eCompass, 3-axis Gyro, 3-axis accelerometer
Atmospheric Pressure Sensor	Yes, TC77 only

## Data Capture

Scanning	SE4770: 1D/2D omnidirectional imager SE4750: 1D/2D omnidirectional imager Digimarc Symbology support
Camera	Front — 5MP fixed focus Rear — 13 MP autofocus; f/2.4 aperture; flash LED generates balanced white light; supports Torch mode; 4K video with image stabilization Camera supports barcode scanning
NFC	ISO 14443 Type A and B; F; FeliCa and ISO 15693 cards; P2P mode and Card Emulation via Host SAM support for Calypso, Felica and Mifare technology TC77 only; Dual SAM support on TC77 SAM SKU

## Warranty

Subject to the terms of Zebra's hardware warranty statement, the TC72/TC77 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: <http://www.zebra.com/warranty>

## Recommended Services

Zebra OneCare® Essential and Select support services  
Zebra Visibility Services – VisibilityIQ™ Foresight or Asset Visibility Service

## Footnotes

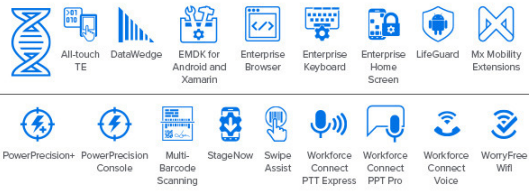
1. Based on typical user profiles  
Specifications subject to change without notice.  
For details related to Common Criteria support, please visit: [www.zebra.com/commoncriteria](http://www.zebra.com/commoncriteria)

## 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](http://www.zebra.com/environment)

## Mobility DNA Software

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>



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