

## TC51 and TC56 Touch Computer

Beauty, brawn and brains — everything your workers want, with everything your business needs

Today's workers want a device that is every bit as contemporary and easy to use as the smartphone they use every day. You need a device that will last for years, built for all-day every day enterprise use, with all the features you need to enable your workers to achieve peak productivity and keep your data secure. Now you can have it all with the TC51 and TC56 Touch Computers from Zebra. No more compromising device design for enterprise functionality — or enterprise functionality for device design. Built for the new business world, you get an industrial design that looks and feels like the most popular pocketable consumer-style smartphones to meet worker expectations, along with the durability, enterprise-class features, power, security and manageability your business requires. And with many unique Zebra-only features, you get a touch computer that is truly in a class of its own. The TC51 and TC56 — the next evolution in enterprise touch computing.



### **Active Edge™ Touch Zone for One-touch Access to the Features Your Workers Use the Most**

Create unique dedicated keys on either side of the display for one-touch access to the most frequently used device features and applications, from the scanner, camera and line-of-business applications to telephony features such as push-to-talk and text messaging.

### **Maximum Display Size with Advanced Technology**

The 5 in. display offers plenty of real estate for graphics-intensive intuitive applications. This capacitive touch panel gives your workers easy, familiar and flexible multi-touch operation that 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.

### **The Ultimate Scanning Performance**

With our advanced scanning technology and PRZM Intelligent Imaging, your workers get lightning fast capture of 1D and 2D barcodes, even if they are damaged, dirty and poorly printed — or displayed on a screen. An extraordinary working range plus a wide field of view increases application flexibility — workers can scan barcodes nearer and farther away. And omnidirectional scanning delivers true point and shoot performance.

### **Automatically Capture and Process Entire Documents**

With SimulScan Document Capture, a Mobility DNA™ ingredient, your workers can simultaneously capture barcodes, text fields, phone numbers, images, signatures and even check boxes in the time it takes to press a button, improving invoicing and order speed and more.

### **Ultra-high Resolution Photos**

The 13 MP camera allows workers to easily document proof-of-condition, proof-of-delivery, proof-of-service and much more.

### **The Processing Power to Do It All**

The blazing 1.8 GHz hexa-core 64-bit processor can run everything your workers need to take care of business, from multiple graphics-intensive line-of-business apps to PBX deskphone functionality. You get better performance and better power consumption — while the processor uses up to 15% less power, apps run up to 5 times faster. And with support for future versions of Android (Oreo), you get superior investment protection.<sup>1</sup>

### **Rugged and Ready for Business**

While the TC51 and TC56 look like a smartphone, your workers can drop it in water or onto the floor, use it in dusty areas and more — and still expect reliable operation. The unibody design provides extra impact protection for the sensitive electronics. And the Corning® Gorilla® Glass touch panel and imager window bring maximum scratch- and shatter-proofing to two of the most vulnerable device features.

**The TC51 and TC56 — The next generation in enterprise touch computing.**

For more information, visit [www.Zebra.com/TC5X](http://www.Zebra.com/TC5X) or access our global contact directory at [www.zebra.com/contact](http://www.zebra.com/contact)

### **PowerPrecision+ Battery for Best-in-class Power and Manageability**

Your workers depend on their mobile devices nearly every minute of the workday. This user replaceable battery delivers up to an impressive 14 hours of power,<sup>2</sup> ensuring that workers have plenty of power for the longest shift and devices are always available. A wealth of easily accessible battery metrics make it easier than ever to identify, remove and replace aging batteries. And with Warm Swap mode, it lets users change the battery without having to power down the device or close open apps.

### **Unsurpassed Security with Zebra's Mobility Extensions (Mx)**

Mx is a series of features that make Android a more robust enterprise class operating system. Another Mobility DNA ingredient, Mx is pre-installed on every TC51/TC56 device and is simple to deploy, allowing you to easily create the most secure, purpose-built, enterprise class Android device. With Android and Mx, you can prevent unauthorized users from accessing the device, as well as the installation and opening of unauthorized apps. Additional device controls prevent configuration errors that can take the device offline and erode worker productivity. The ability to actively detect vulnerabilities and automatically execute the right corrective action helps prevent data leaks and more.

### **Multiple Configurations to Meet Different Business Needs**

Standard Configuration devices come with Google Mobile Services (GMS). GMS provides integrated Google applications such as Gmail and Google Maps. Professional Configuration devices ship without GMS, promoting greater privacy and security of personal information. Both configurations are based on Android Open Source (AOSP).

### **Get More Value out of your Devices with Mobility DNA**

Every strand of your mobility platform is simpler with Zebra's Mobility DNA. That's because right from the start, you have the industry's most comprehensive suite of mobility must-haves to accelerate your solution. More off-the shelf end-user apps, more robust administration utilities and easier app development. Purpose built for enterprise, Mobility DNA makes ease, confidence and value intrinsic to your investment and our full line of Android mobile computers.

### **The Highest Quality Voice in its Class for Crystal Clear Voice Calls**

Speakers that deliver four times the loudness of popular smartphones and noise-cancellation technology ensure that callers on both ends of every call can hear every word — regardless of the volume of background noise.

### **The Most Powerful Family of Ready-To-Use Voice Solutions**

Give your workers better voice connections for better collaboration — and better outcomes. Workforce Connect™ Push To Talk (PTT) Express is pre-installed and pre-licensed, enabling team communications right out of the box, with any other worker carrying any PTT Express-enabled Zebra mobile computer. And with optional Workforce Connect Voice, your TC51/56 mobile computers can double as wireless/WLAN PBX handsets, reducing costs and eliminating a device to carry and manage.

### **FIPS 140-2 Validated**

The TC51/TC56 uses FIPS 140-2 validated cryptographic modules to maintain the confidentiality and integrity of customer information and keep customer data safe and secure — for data in motion and at rest.


### **The Fastest, Most Dependable Wireless Connections Inside and Outside the Four Walls**

The Wi-Fi enabled TC51 supports the fastest Wi-Fi connections with the most robust roaming support. The Wi-Fi and 4G LTE cellular-enabled TC56 keeps workers connected no matter where they are — in your facility or out in the field.

### **A Complete Suite of Enterprise Accessories**

A trigger handle and a variety of holsters make it easy to use the TC51 and TC56 in just about any workflow. Backroom management is easier with the ShareCradle that can charge it all — device and batteries, plus convenient multi-slot chargers. With an Ethernet connection option available for ShareCradles, syncing data with backend applications is easy. And vehicle cradles are ideal for delivery drivers and technicians out in the field. For Direct Store Delivery, wireless Dex is now possible with the new easy to use DX30 Bluetooth Dex accessory.

# TC51/TC56 Specifications

PHYSICAL CHARACTERISTICS	
<b>Dimensions</b>	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
<b>Weight</b>	8.8 oz./249 g with battery
<b>Display</b>	5.0 in. High Definition (1280 x 720); exceptionally bright, outdoor viewable; optically bonded to touch panel
<b>Imager Window</b>	Corning Gorilla Glass
<b>Touchpanel</b>	Dual mode capacitive touch with stylus or bare or gloved fingertip input (conductive stylus sold separately); Corning Gorilla Glass
<b>Backlight</b>	LED backlight
<b>Power</b>	 Rechargeable Li-Ion, PowerPrecision+, ≥ 15.48 Watt hours, ≥ 4150 mAh, improved battery metrics for better battery management, fast charging (up to 2.4 A)
<b>Expansion Slot</b>	User accessible MicroSD up to 32GB SDHC and up to 128 GB SDXC
<b>SIM</b>	1 Nano SIM slot (TC56 only)
<b>Network Connections</b>	WWAN, WLAN, WPAN (Bluetooth)
<b>Notification</b>	Audible tone; multi-color LEDs; vibration
<b>Keypad</b>	On-screen keypad and enterprise keyboard
<b>Voice and Audio</b>	Two microphones with noise cancellation; vibrate alert; speaker; Bluetooth wireless headset support; High quality speaker phone; PTT headset support; cellular circuit switch voice; HD Voice
<b>Buttons</b>	Programmable back button; dual dedicated scan buttons; dedicated push-to-talk button, and volume up/down buttons
PERFORMANCE CHARACTERISTICS	
<b>CPU</b>	Snapdragon 650 64-bit hexa-core 1.8GHz ARM Cortex A72, power optimization
<b>Operating System</b>	Android 7.0 Nougat
<b>Memory</b>	Standard: 2GB RAM/16GB Flash Optional: 4GB RAM/32GB Flash
USER ENVIRONMENT	
<b>Operating Temperature</b>	-4°F to 122°F/-20°C to 50°C (RH 5% to 95% Non-condensing)
<b>Storage Temperature</b>	-40°F to 158°F/-40°C to 70°C
<b>Humidity</b>	5% to 85% non-condensing
<b>Drop Specifications</b>	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 without rugged boot accessory -10°C to 50°C (14°F to 122°F)
<b>Tumble Specification</b>	500 1.6 ft./0.5 m tumbles, meets or exceeds IEC tumble specification
<b>Sealing</b>	IP68 and IP65 per applicable IEC sealing specifications
<b>Vibration</b>	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
<b>Thermal Shock</b>	-40° F to 158° F/-40° C to 70° C rapid transition
<b>Electrostatic Discharge (ESD)</b>	+/-15kv Air; +/-8kv contact; +/-8kv charge body

INTERACTIVE SENSOR TECHNOLOGY (IST)	
<b>Light Sensor</b>	Automatically adjusts display backlight brightness
<b>Motion Sensor</b>	3-axis Accelerometer with MEMS Gyro
<b>Proximity Sensor</b>	Automatically detects when the user places the handset against head during a phone call to disable display output and touch input
DATA CAPTURE	
<b>Scanning</b>	SE4710 imager (1D and 2D) with extraordinary range: Scan range – Code 39 barcode: 20 Mil: 2.0 in. to 30.0 in./5.08 cm to 76.2 cm 4 Mil: 3.3 in. to 8.8 in./8.4 cm to 22.4 cm
<b>Camera</b>	Rear — 13 MP autofocus; f/2.4 aperture; rear camera flash LED generates balanced white light; supports Torch mode
<b>NFC</b>	ISO 14443 Type A and B; F; FeliCa and ISO 15693 cards; P2P mode and Card Emulation via UICC and Host
WIRELESS WAN DATA AND VOICE COMMUNICATIONS (TC56 ONLY)	
<b>Radio Frequency Band</b>	<b>Worldwide:</b> LTE: 700,800/900/1800/2100/2600 (FDD 28,20,8,3,1,7); UMTS/HSPA/HSPA+: 850/900/AWS/1900/2100; GSM/GPRS/EDGE: 850/900/1800/1900 <b>Americas:</b> LTE: 700/850/1900/AWS, (FDD 13,12,17,5,2,4); UMTS/HSPA/HSPA+: 850, 900, AWS, 1900, 2100 GSM/GPRS/EDGE: 850/900/1800/1900; CDMA: 850,1900 (BC0, BC1)
<b>GPS</b>	TC56 only: Integrated; Autonomous; Assisted GPS (A-GPS); Navstar; GLONASS; BeiDou
WIRELESS LAN	
<b>Radio</b>	IEEE 802.11a/b/g/n/ac/d/h/i/k/r/w; Wi-Fi™ certified; IPv4, IPv6; 2X2 MIMO (TC51 only) 1x1 SISO (for TC56)
<b>Data Rates</b>	5GHz: 802.11a/n/ac — up to 866.7 Mbps (up to 433.3Mbps for TC56) 2.4GHz: 802.11b/g/n — up to 144 Mbps (up to 72.2Mbps for TC56)
<b>Operating Channels</b>	Channel 1-13 (2412-2472 MHz); Chan 36-165 (5180-5825 MHz) Channel Bandwidth: 20, 40, 80 MHz Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency
<b>Security and Encryption</b>	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 Data in Motion: FIPS 140-2 Level 1 Data at Rest: FIPS 140-2 Level 1
<b>Certifications</b>	WFA (802.11n, 802.11ac, WMM-AC, Voice Enterprise, WMM-PS), Miracast WFA (Mobile AP / Personal Hotspot) - TC56 only
<b>Fast Roam</b>	PMKID caching; Cisco CCKM; 802.11r; OKC
WIRELESS PAN	
<b>Bluetooth</b>	Class 2, Bluetooth v4.1 (Bluetooth® Smart technology); Bluetooth Wideband support HFPv1.6; Bluetooth v4.1 Low Energy (LE)

# TC51/TC56 Specifications (continued)

## ADDITIONAL MOBILITY DNA SOLUTIONS



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)



AppGallery



SimulScan



EMDK



StageNow



Enterprise Browser



SwipeAssist



Enterprise Home Screen



Mobility Extensions

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>

## WARRANTY

Subject to the terms of Zebra's hardware warranty statement, the TC51/56Series 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](http://www.zebra.com/warranty)

## RECOMMENDED SERVICES

Zebra OneCare®; Managed Device Service

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

Specifications subject to change without notice.



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