

## TC51 and TC56 Touch Computer

Beauty, Brawn and Brains — Everything Your Workers Want, With Everything Your Business Needs



### **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 multitouch 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.

### **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.



## The TC51 and TC56 - The Next Generation in Enterprise Touch Computing

For more information, visit [www.zebra.com/tc51](http://www.zebra.com/tc51)

### 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 prelicensed, 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.

# TC51/TC56 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. High Definition (1280 x 720); exceptionally bright, outdoor viewable; optically bonded to touch panel, 600 NITs
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 5
Backlight	LED backlight
Power	Rechargeable Li-Ion, Power Precision + Standard Capacity, 4300 mAh typical/4030 mAh minimum; improved battery technology for longer cycle times and real-time visibility into battery metrics for better battery management; fast USB charging (500mA)
Expansion Slot	User accessible microSD up to 32GB SDHC and up to 128 GB SDXC
SIM	1 Nano SIM slot (TC56 only)
Network Connections	WWAN, WLAN, WPAN (Bluetooth)
Notification	Audible tone; multi-color LEDs; vibration
Keypad	On-screen keypad and enterprise keyboard
Voice and Audio	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
Buttons	Programmable back button; dual dedicated scan buttons; dedicated push-to-talk button, and volume up/down buttons

## Performance Characteristics

CPU	Snapdragon 650 64-bit hexa-core 1.8GHz ARM Cortex A72, power optimization
Operating System	Android 8.1 Oreo
Memory	Standard: 2GB RAM/16GB Flash Optional: 4GB RAM/32GB Flash

## User Environment

Operating Temperature	-4°F to 122°F/-20°C to 50°C
Storage Temper ature	-40°F to 158°F/-40°C to 70°C
Humidity	5% to 85% non-condensing
Drop Specifications	Multiple 4 ft./1.2 m to tile over concrete over -10°C to 50°C (14°F to 122°F) Multiple 6ft. drops to concrete with the rugged boot accessory per MIL STD 810 G
Tumble Specifications	500 1.6 ft./0.5 m tumbles, meets or exceeds IEC tumble specification

## Wireless Wan Data and Voice Communications (TC56 Only)

Radio Frequency Band	Worldwide: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: 850/900/1800/1900Americas: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)
GPS	TC56 only: Integrated; Autonomous; Assisted GPS (A-GPS); Navstar; GLONASS; BeiDou

## Wireless Lan

Radio	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)
Data Rates	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)
Operating Channels	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
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 Data in Motion: FIPS 140-2 Level 1 Data at Rest: FIPS 140-2 Level 1
Certifications	WFA (802.11n, 802.11ac, WMM-AC, Voice Enterprise, WMM-PS), Miracast WFA (Mobile AP / Personal Hotspot) - TC56 only
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC

## 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
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1. Upgrading to Android Nougat requires the purchase of a Zebra OneCareService contract.2. Based on typical user profiles.Specifications subject to change without notice.

## User Environment

Sealing	IP67 and IP65 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)	+/-15kv Air; +/-8kv contact; +/-8kv charge body

## 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)

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>

## Interactive Sensor Technology (IST)

Light Sensor	Automatically adjusts display backlight brightness
Motion Sensor	3-axis Accelerometer with MEMS Gyro
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	SE4710 imager (1D and 2D) with extraordinary range: Scan range – Code 39 barcode: 20 Mil: 1.8 in. to 32.0 in./4.5 cm to 81.3 cm 3 Mil: 3.1 in. to 5.6 in./7.9 cm to 14.2 cm
Camera	Rear — 13 MP autofocus; f/2.4 aperture; rear camera flash LED generates balanced white light; supports Torch mode
NFC	ISO 14443 Type A and B; F; FeliCa and ISO 15693 cards; P2P mode and Card Emulation via UICC and Host

## Wireless Pan

Bluetooth	Class 2, Bluetooth v4.1 (Bluetooth® Smart technology); Bluetooth Wideband support HFPv1.6; Bluetooth v4.1 Low Energy (LE)
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