# ZEBRA TC52/ TC57

# Touch computing of the enterprise-class

With the TC52 and TC57 you offer your mobile workers hardware that is as easy to use as their own smartphone. At the same time, the devices can withstand a few years of intensive daily use and offer all the functions that enable your employees to achieve top-level productivity with maximum data security during business.

## AT A GLANCE

- **Large display**
  The 5 "display is clearly visible even in bright sunlight. The capacitive touchpanel also works with wet fingers, gloves or stylus.

- **Ultimate Scanning Performance**
  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.

- **Robustness in smartphone format**
  TC52 and TC57 work reliably even in dusty and humid environments and even when falling on concrete. Unibody design provides additional impact protection for the sensitive electronics. And the Corning Gorilla Glass touch panel provides maximum scratch and shatter protection.

- **New 5 MP front-facing camera supports more advanced apps**
  With the new front-facing camera, you get built-in support for the latest positioning technology, Visible Light Communication (VLC) which allows you to track the location of shoppers and workers with compatible overhead LED lighting.

- **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 the next two versions of Android (P and Q)1 and future apps, such as artificial intelligence.

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**HARDWARE**

# ZEBRA TC52/ TC57

## TECHNICAL SPECIFICATIONS

### PHYSICAL CHARACTERISTICS

- **Dimensions:** 155 mm L x 75.5 mm W x 18.6 mm H
- **Weight:** 249 g with battery
- **Display:** 5.0 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 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 +, 4300mAh/15.48Wh typical, 4.2V Cell Charge voltage, Cell nominal voltage 3.6V, Improved battery metrics for better battery management; fast USB charging (500 mA)
- **Expansion Slot:** User accessible MicroSD up to 32GB SDHC and up to 256 GB SDXC SIM Slots TC57 only: 1 nano SIM
- **Network Connections:** TC52/TC57: WLAN, WPAN (Bluetooth), USB 2.0, High Speed (Host and Client) TC57 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; and SWB & FB audio
- **Buttons:** Six programmable buttons for maximum flexibility: Back button, dual dedicated scan buttons, dedicated push-to-talk button and volume up/down buttons

### PERFORMANCE CHARACTERISTICS

- **CPU:** Qualcomm Snapdragon™ 660 octa-core, 2.2 GHz
- **Operating System:** Android 8.1 Oreo with Zebra's Restricted Mode for control over GMS and other services
- **Memory:** 4GB RAM/32GB 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 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 Specification:** 500 1.6 ft./0.5 m tumbles, meets or exceeds IEC tumble specification
- **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 discharge; +/- 8kv direct discharge; +/- 8kv indirect discharge

### 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 Digimarc support
- **Camera:** Front — 5 MP; f/2.0 aperture Rear — 13 MP autofocus; f/2.2 aperture; 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. TC57 Only: Card Emulation via Host and UICC

### 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 (TC57 only)
- **Proximity Sensor:** Automatically detects when the user places the handset against head during a phone call to disable display output and touch input

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## TECHNICAL SPECIFICATIONS

### WIRELESS WAN DATA AND VOICE COMMUNICATIONS (TC57 ONLY)

- **Radio Frequency Band:** Supports VoLTE , Carrier Aggregation up to 3DL CA
  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:** TC57 only: Autonomous, Concurrent GPS; GLONASS; Gallileo; BeiDou, and A-GPS. Supports IZAT™ XTRA
- **Multimedia:** Wi-Fi Multimedia™ (WMM) and WMM-PS; Including TSPEC

### WPAN

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

### WARRANTY

Subject to the terms of Zebra's hardware warranty statement, the TC52/57 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

### WLAN

- **Radio:** TC52: IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/ v3/w; Wi-Fi™ certified; IPv4, IPv6, 2x2 MU-MIMO
  TC57: IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v3/w; Wi-Fi™ certified; IPv4, IPv6, 5GHz 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): 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 band-widths 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
- **Certifications:** WFA (802.11n, WMM-PS, 801.11ac, PMF)
- **Fast Roam:** PMKID caching; Cisco CCKM; 802.11r; OKC

### RECOMMENDED SERVICES

Zebra OneCare Essential and Select support services Zebra Visibility Services — Asset Visibility Service (AVS) and Operational Visibility Service (OVS)3

# ZEBRA TC52/ TC57

## Accessories

| Item number | Description |
|---|---|
| BTRY-TC51-43MA1-01 | PowerPrecision+ Spare Lithium Ion battery, 4300 mAh. Advanced new battery technology, provides a higher level of intelligence (State of Charge and State of Health) to deliver maximum performance (Single Pack). Also available as a 10-pack (PN: BTRY-TC51-43MA1-10) |
| SAC-TC51-4SCHG-01 | TC51/56 4-slot battery charger, charges four spare batteries. Includes: Power Supply PWR-BGA12V50W0WW and DC cable CBL-DC-388A1-01. Country specific AC line cord, Rack/Wall bracket sold separately. |
| PWR-BGA12V50W0WW | Power supply for 4-slot battery charger: 100-240 VAC, 12VDC, 4.16A. Requires: Country specific AC grounded line cord. |
| CBL-DC-388A1-01 | DC cable for Level 6 power supply PWR-BGA12V50W0WW (12 VDC, 4.16A), 1.8 M length. |
| 23844-00-00R | US AC line cord, 7.5 feet long, grounded, three wire for power supplies. |
| CRD-TC51-1SCU-01 | TC51/56 Single Slot Charge/USB ShareCradle. Charges and allows USB communication to one device. Includes PWR-BGA12V50W0WW and DC cable CBL-DC-388A1-01. Country Specific AC Line Cord and 25-124330-01R Micro-USB Cable, Sold Separately. |
| KT-TC51-ETH1-01 | USB-Ethernet Adapter kit for ShareCradle single-slot. Includes housing to secure Ethernet module to cradle. |
| PWR-BGA12V50W0WW | Power supply for single-slot cradle: 100-240 VAC, 12VDC, 4.16A. Requires: Country specific AC grounded line cord. |
| CBL-DC-388A1-01 | DC cable for power supply PWR-BGA12V50W0WW. (12 VDC, 4.16A) 1.8m length. |
| 23844-00-00R | US AC line cord, 7.5 feet long, grounded, three wire for power supplies. |
| 25-124330-01R | Micro-USB to USB Cable for single slot cradle communication. |
| CRD-TC51-5SCHG-01 | TC51/56 5-Slot Charge Only Cradle, charges up to five devices.  Includes power supply PWR-BGA12V108W0WW and DC cable CBL-DC-382A1-01. Country specific AC line cord sold separately. |
| CRD-TC51-5SETH-01 | TC51/56 5-Slot Ethernet Cradle, charges up to five devices and provides Ethernet communication. Includes power supply PWR-BGA12V108W0WW and DC cable CBL-DC-382A1-01. Country specific AC line cord sold separately. |
| CRD-TC51-5SC4B-01 | TC51/56 5-Slot Charge Only Cradle with 4-Slot Spare Battery Charger, charges up to 4 devices and up to 4 spare batteries. Includes power supply PWR-BGA12V108W0WW and DC cable CBL-DC-382A1-01. Country specific AC line cord sold separately. |
| PWR-BGA12V108W-0WW | Power supply for multi-slot cradle: 100-240 VAC, 12VDC, 9A. Requires: Country specific AC grounded line cord. |
| CBL-DC-382A1-01 | DC cable provides power from the power supply to multi-slot charge-only and Ethernet cradles. |
| 23844-00-00R | US AC line cord, 7.5 feet long, grounded, three wire for power supplies. |
| BRKT-SCRD-SMRK-01 | Rack/Wall mounting bracket, allows to install any Single-Slot or Multi-Slot cradle on a wall or a 19" IT rack. The bracket also allows to install up to four 4-Slot Spare Battery Chargers together on a wall or standard 19" IT rack. |
| CRD-TC51-5SCHG-01 | 5-Slot Charge Only Cradle, charges up to five devices. (Includes Power supply and DC cable) |
| CRD-TC51-5SETH-01 | 5-Slot Ethernet Cradle, charges up to five devices and provides Ethernet communication. (Includes Power supply and DC cable) |

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# ZEBRA TC52/ TC57

## Accessories

| Item number | Description |
|---|---|
| CRD-TC51-5SC4B-01 | 4-Slot Charge Only Cradle with 4-Slot Spare Battery Charger, charges up to 4 devices and up to 4 spare batteries on the same cradle. (Includes Power supply and DC cable) |
| SAC-TC51-4SCHG-01 | TC51/56 4-slot battery charger, charges four spare batteries. (Includes Power supply and DC cable) |
| SG-TC51-EXO1-01 | TC51/56 Rugged Boot and Handstrap. Provides additional protection to the device and allows user to attach a trigger handle. |
| KT-TC51-TRG1-01 | TC51/56 Snap-On Trigger Handle and Rugged Boot Kit. Trigger handle easily attaches to rugged boot and easily removed to access battery. Trigger handle includes a tether point for a wrist tether. Wrist Tether (SG-PD40-WLD1-01) sold separately. |
| TRG-TC51-SNP1-01 | TC51/56 Snap-On Trigger Handle. Requires TC51/56 rugged boot (sold separately or included in above kit KT-TC51-TRG1-01). Wrist Tether and rugged boot sold separately. |
| SG-TC51-EHDSTP1-03 | TC51/56 Replacement Handstrap for devices configured with a rugged boot (3-pack). Provides added safety against accidental drops of the device while on the move. |
| SG-TC51-BHDSTP1-03 | TC51 Basic Handstrap kit. Allows TC51 devices without a rugged boot to be configured with a handstrap (3-pack). For use with TC51 WLAN configurations only. |
| SG-TC51-HLSTR1-01 | TC51/56 soft holster for vertical orientation with open bucket design for easy insertion and removal. Features adjustable straps to accommodate handstrap, rugged boot and trigger handle configurations. |
| SG-TC7X-STYLUS-03 | Stylus with coiled tether 3-Pk. Made of conductive carbon-filled plastic material, optimized for enterprise durability. |
| CBL-TC51-USB1-01 | TC51/56 Rugged USB/Charge Cable. Accommodates TC51/56 with and without rugged boot. |
|  | Power Supply-100-240 VAC, 5 V, 2.5 A with country specific plugs.<br>US PWR-WUA5V12W0US<br>UK PWR-WUA5V12W0GB<br>Europe PWR-WUA5V12W0EU<br>Australia PWR-WUA5V12W0AU<br>China PWR-WUA5V12W0CN<br>Brazil PWR-WUA5V12W0BR<br>Korea PWR-WUA5V12W0KR<br>India PWR-WUA5V12W0IN |
| CBL-TC51-HDST25-01 | 2.5MM Female to 3.5MM Male Headset Adapter Cable. |
| CBL-TC51-HDST35-01 | 3.5MM Collared Female to 3.5MM Male Headset Adapter Cable. |
| HSDT-35MM-PTVP-01 | Over the ear headset with/MIC and PTT-3.5mm. Requires 3.5MM adapter cable CBL-TC51-HDST35-01 (sold separately). |
|  | Country Specific AC Line Cord Options<br><br>Abu Dhabi 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Australia 50-16000-217R: 1.9M long, AS 3112 plug.<br>Bolivia 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Brazil 50-16000-727R: 18AWG, 250V, 16A, BR (3w).<br>China 50-16000-217R: 1.9M long, AS 3112 plug.<br>50-16000-257R: 1.8M long, IEC 60320 C13 plug.<br>Dubai 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Egypt 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Europe 50-16000-220R: 1.8M long, CEE 7/7 plug. |

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## Accessories

| Item number | Description |
|---|---|
| | Country Specific AC Line Cord Options<br><br>Hong Kong 50-16000-219R: 1.8M long, BS1363 plug.<br>India 50-16000-669R: 1.9M long, BS 546 plug.<br>Iran 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Iraq 50-16000-219R: 1.8M long, BS1363 plug.<br>Israel 50-16000-672R: 1.9M long, S132 plug.<br>Italy 50-16000-671R: 1.8M long, CIE 23-16 plug.<br>Japan 50-16000-218R: 1.8M long, NEMA 1-15P plug.<br>Korea 50-16000-220R: 1.8M long, CEE 7/7 plug. 50-16000-256R: 1.8M long, CEE7/7 plug.<br>Malaysia 50-16000-219R: 1.8M long, BS1363 plug.<br>New Guinea 50-16000-217R: 1.9M long, AS 3112 plug.<br>Russia 50-16000-220R: 1.8M long, CEE 7/7 plug.<br>Singapore 50-16000-219R: 1.8M long, BS1363 plug.<br>UK 50-16000-219R: 1.8M long, BS1363 plug.<br>US 23844-00-00R: 7.5 feet long.<br>50-16000-221R: 1.8M long, USA NEMA 5-15P.<br>Vietnam 50-16000-220R: 1.8M long, CEE 7/7 plug. |