ZEBRA GLOBAL SERVICES

Zebra OneCare increases device availability, keeping TC51 and TC56 devices where they provide the most value – in the hands of workers. Refer to Solution Builder for more information:

Zebra OneCare Essential

Covers normal wear and tear and Comprehensive Coverage; depot repair with 3-day in-house turnaround time; provides full access to technical support resources and software releases.

Zebra OneCare Select

Builds on OneCare Essential, offering advanced replacement of devices needing repair; service dashboard; 24/7 Level one support and more.

SALES/REFERENCE MATERIALS

Partner Gateway:
https://partnerportal.zebra.com

Product Home:
www.zebra.com/tc5x

Zebra Services:
www.zebra.com/services

Learning Portal:
www.zebra.com/training

Solution Builder:
https://solutionbuilder.zebra.com

Developer Tools:
www.zebra.com/software

Ready-to-go enterprise applications:
www.zebra.com/app-finder

App Gallery
https://appgallery.zebra.com

TC51/TC56 Touch Computer
BEAUTY, BRAWN AND BRAINS — EVERYTHING WORKERS WANT, WITH EVERYTHING A 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. Your enterprise customers need a device that will last for years, built for all-day everyday enterprise use, with all the features they need to enable workers to achieve peak productivity and keep their data secure. The TC51 and TC56 Touch Computers from Zebra deliver it all. Your customers no longer have to compromise device design for enterprise functionality — or enterprise functionality for device design. They get a business-durable industrial device that looks and feels like the most popular consumer-style smartphones to meet worker expectations, along with the enterprise-class features, power, security and manageability their business requires. The TC51 and TC56 — the next evolution in enterprise touch computing.

FEATURES AND BENEFITS

With a choice of the Wi-Fi 'ac'-enabled TC51 or the Wi-Fi 'ac' and 4G LTE-enabled TC56, your customers can maximize the productivity of workers inside and outside the four walls with the next evolution in enterprise touch computing.

Active Edge™ Touch Zone for Unparalleled Ease of Use — only from Zebra

Now, users can access the features and apps they need faster than ever. Users can create unique dedicated soft keys on either side of the display to access everything from the scanner, camera and specific line-of-business apps to text messaging and push-to-talk.

Maximum Display Size with Advanced Technology

The 5 inch display offers plenty of real estate for graphics-intensive intuitive applications. This capacitive touch panel gives 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 in Performance for Virtually Any Type of Data

Zebra not only invented the barcode scanning industry — we continue to re-invent the industry with technology that raises the bar in terms of performance and features. With our powerful SE4710 scan engine inside the TC51/TC56, workers can scan practically any barcode at laser-like speeds — 1D and 2D, regardless of whether it is dirty, damaged or poorly printed on a paper label or displayed on the screen of a mobile phone. The extra wide best-in-class working range and field of view, plus omni-directional scanning make barcode capture easier than ever. And the 13 MP rear-facing camera enables the easy capture of high-resolution photos, signatures, videos and more, so workers can capture more types of business intelligence to streamline more business processes.

Rugged and Ready for Business

While the TC51/TC56 looks like a smartphone, it is designed to deliver reliable operation, despite drops in water or onto concrete, use in dusty areas and more. The unibody design provides extra impact protection for 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 Processing Power to Do It All

The blazing fast 1.8 GHz hexa-core 64-bit processor can run everything workers need to take care of business, from multiple graphics-intensive line-of-business apps to PBX deskphone functionality. The processor uses up to 15% less power, while apps run up to 5 times faster. And with support for a future version of Android, your customers get superior investment protection.* (*Requires purchase of service contract). (See page 4 for more details on processor competitive differences.)

PowerPrecision+ for Superior Battery Power and Power Management

With its user-replaceable battery, devices are always available — never sitting idle while charging. An impressive maximum 14 hours of power supports the longest shift. Access to a full suite of battery metrics makes it easy 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.

Superior Voice Capabilities and Audio Quality

Up to four times the loudness of popular smartphones and noise-cancelling technology provides crystal clear audio on both ends of every call.

COMPETITIVE COMPARISON: GROUP 1

In the chart below, blue shading indicates the best specification for a specific feature.

	Zebra TC51/TC56	Honeywell 75e	Honeywell CT50	Bluebird EF500/R
Platform				
Size	6.1 in. x 2.9 in. x 0.7 in. 155 mm x 75.5 mm x 18.6 mm	(With standard battery) 5.3 in. x 2.9 x 0.7 in. 134 mm x 73 mm x 18 mm	6.3 in. x 3.3 in. x 0.8 in. 160 mm x 82.5 mm x 19 mm	EF500: 6.1 in. x 3.0 in. x 0.7 in. 155.6 mm x 77.9 mm x 16.5 mm EF500R: 6.4 in. x 3.1 in. x 0.8 in. 162.5 mm x 77.9 mm x 21.4 mm
Weight	249 g/ 8.8 oz. (HD battery)	204 g/ 7.2 oz (std battery) 244 g/ 8.6 oz (extended battery)	342 g/ 12.1 oz with battery pack	260 g/ 9.2 oz. (EF500) 330 g/ 11.6 oz. (EF500R)
Operating System	Android 7.0 Nougat with Mobility Extensions (Mx)	Windows 10 IoT Mobile Enterprise or Android 6.0 Marshmallow	Windows 10 IoT Mobile Enterprise or Android 6.0 Marshmallow	WEHH 8.1 or Android 5.1 Lollipop
Processor	1.8 GHz hexa-core, 64-bit	2.26 GHz quad core, 32-bit	2.26 GHz quad core, 32-bit	1.2 GHz quad core, 32-bit
Memory (RAM/Flash)	Standard: 2 GB/16 GB Optional: 4 GB/32 GB	2 GB/16 GB	2 GB/16 GB	2 GB/8 GB
Battery	4300 mAh PowerPrecision+ for better battery management; fast charging	1670 mAh (standard) 3340 mAh (extended)	4040 mAh	3200 mAh (standard) 6400 mAh (extended)
Battery Swap	Warm battery swap	No	No	Warm battery swap
Display	5 in. HD Works when wet; Works with gloves	4.3 in. Works when wet; works with gloves	4.7 in. HD Works when wet; works with gloves	5 in. Works when wet; works with gloves
Communications				
WWAN	4G LTE	No WWAN configuration	4G LTE	GSM, LTE
WLAN	802.11 a/b/g/n/ac/d/h/i/r	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac	802.11 a/b/g/n
Data Capture				
Barcode scanning	1D/2D SE4710	1D/2D	1D/2D	1D/2D Zebra SE4710
Camera	13 MP Rear	8 MP Rear	8 MP Rear	13 MP Rear, 1.3 MP Front
Environmental				
Drop Spec.	Multiple 4 ft./1.2 m to tile over concrete over op. temp.; Multiple 6 ft. drops to concrete with the rugged boot accessory per MIL STD 810 G	4 ft./1.2 m to concrete	8 ft./2.4 m to concrete at room temp; 5 ft./1.5 m to concrete at -10°C to 50°C	4 ft./1.2 m (EF500) 7.8 ft./2.4 m (EF500R)
Operating Temp.	14°F to 122°F/-10°C to 50°C	-4°F to 122°F/ -20°C to 50°C	-4°F to 122°F/ -20°C to 50°C	-4°F to 140°F/ -20°C to 60°C
At-a-Glance Attack Strategy: TC51/TC56 Advantages				
Use these mini fight-sheets for a quick at-a-glance view of the advantages of the TC51 and TC56 over the primary competitive devices.	• Smaller battery, shorter life; even with the extended battery • No warm battery swap • Smaller, non-HD display makes reading the screen more difficult, especially outdoors • 75e's processor has a higher clock speed, but it is quad core and slower/less efficient compared with TC51/TC56's hexa-core processor • Lower resolution camera — lower quality image capture • No 802.11 d/h/i/r	• Significantly heavier • CT50 has slower scanning performance: in lab testing, TC51/ TC56's SE4710 scanned 2x-5x times faster than CT50 • Does not support enterprise-grade Wi-Fi: no roaming for VoIP • CT50 battery is hard to remove (requires two hands, and sometimes even a pen or small tool) • Slower 32-bit processor increases scanning and data processing times • Lower resolution camera — lower quality image capture	• Older OS version • Smaller standard battery; extended battery adds depth and weight, increasing the effort to use and hold the device • Less Flash memory • Slower, less powerful 32-bit processor increases scanning and data processing times • No 802.11 d/h/i/r/ac • Few accessories

COMPETITIVE COMPARISON: GROUP 2

In the chart below, blue shading indicates the best specification for a specific feature.

	Zebra TC51/TC56	Panasonic FZ-N1/FZ-F1	Panasonic FZ-E1/FZ-X1	Datalogic DL-Axist
Platform				
Size	6.1 in. x 2.9 in. x 0.7 in. 155 mm x 75.5 mm x 18.6 mm	6.1 in. x 2.9 in. x 0.6 in. 155.5 mm x 74.2 mm x 16.3 mm	6.5 in. x 3.4 in. x 1.2 in. 165 mm x 86.4 mm x 30.5 mm	6.2 in. x 3.1 in. x 0.7 in. 157 mm x 80 mm x 19 mm
Weight	249 g/ 8.8 oz. (HD battery)	281 g/ 9.9 oz.	426 g/ 15 oz.	350 g/12.3 oz. (std battery) 400 g/14.1 oz. (ext. battery)
Operating System	Android 7.0 Nougat with Mobility Extensions (Mx)	Windows 10 IoT Mobile Enterprise or Android 5.1 Lollipop	Windows 10 IoT Mobile Enterprise or Android 4.2 Jelly Bean	Android 4.1
Processor	1.8 GHz hexa-core, 64-bit	2.3 GHz quad core, 32-bit	2.3 GHz quad core, 32-bit	1 GHz dual core
Memory (RAM/Flash)	Standard: 2 GB/16 GB Optional: 4 GB/32 GB	2 GB/16 GB	2 GB/16 GB	1 GB 8 GB
Battery	4300 mAh PowerPrecision+ for better battery management; fast charging	3200 mAh / 6400 mAh (FZ-N1) 3200 mAh/6200 mAh (FZ-F1)	6200 mAh	3200 mAh (standard/WLAN) 6400 mAh (extended/WWAN)
Battery Swap	Warm battery swap	Warm battery swap	Warm battery swap	No
Display	5 in. HD Works when wet; Works with gloves	4.7 in. Works when wet; Works with gloves	5 in. HD Works when wet; Works with gloves	5 in. HD Works with gloves
Communications				
WWAN	4G LTE	4G LTE	Dual WAN (VZW/ATT) 4G LTE, HSPA+	4G, 3G
WLAN	802.11 a/b/g/n/ac/d/h/i/r	802.11 a/b/g/n/ac	802.11 a/b/g/n/ac	802.11 a/b/g/n
Data Capture				
Barcode scanning	1D/2D SE4710	1D/2D	1D/2D (SE4750); takes 6 times longer to beep	1D/2D
Camera	13 MP Rear	8 MP rear, 5 MP front	8 MP rear, 1.3 MP front	5 MP Rear
Environmental				
Sealing	IP65 and IP67	IP67	IP67	IP67
Drop Spec.	Multiple 4 ft./1.2 m to tile over concrete over op. temp.; Multiple 6 ft. drops to concrete with the rugged boot accessory per MIL STD 810 G	6 ft./1.8 m	10 ft./3 m	4 ft./1.2 m to plywood; 6 ft/1.8 m to concrete with rubber boot
Operating Temp.	14°F to 122°F/-10°C to 50°C	Not specified	-4°F to 140°F/ -20°C to 60°C	-4°F to 122°F/ -20°C to 50°C
At-a-Glance Attack Strategy: TC51/TC56 Advantages				
Use these mini fight-sheets for a quick at-a-glance view of the advantages of the TC51 and TC56 over the primary competitive devices.	• Older Android version • Smaller display, and larger overall dimensions • Extended battery and MSR increase the weight and thickness of the device • Lower resolution rear camera — lower quality image capture • No 802.11 d/h/i/r	• Older Android version • Same screen size, but almost double in weight, and twice as thick with the standard battery • Device is awkward to hold, even with large hands, and difficult with gloves • Lower resolution rear camera — lower quality image capture • Uses Zebra SE4710 scan engine, but takes six times longer to beep than Zebra • No 802.11 d/h/i/r • Strong environmental specifications listed on public datasheet, but product failed internal Zebra testing	• Older OS version • Larger frame; more difficult to hold due to its larger thickness • Nearly twice as heavy as TC51/TC56 (without offering improved rugged specs or performance) • Touch panel does not work when wet • Older, less powerful processor and only 1 GB RAM; scanning and data processing are slower • Lower resolution rear camera — lower quality image capture • No 802.11 d/h/i/r/ac	

UNDERSTANDING CLOCK SPEED:

THE 1.8 GHZ HEXA-CORE TC51/TC56 PROCESSOR VS. COMPETITIVE 2.3 GHZ QUAD CORE PROCESSORS

If you compare the processor speed (also known as clock speed) of the TC51/TC56 against its competition, at first glance at the specifications, it appears to be the slower than most of the competitive devices in its class. However, nothing could be farther from the truth. In reality, none of the competitive processors can touch the speed and energy efficiency of the TC51/TC56 processor. Here's why:

- **Purpose-built to deliver faster performance at the same frequency.** Clock frequency alone does not define processing speed. While the competition offers 32-bit processors, the advanced 64-bit architecture of the TC51/TC56 processor allows more instructions to be completed per clock cycle. That's why the 1.8 GHz hexa-core processor in the TC51/TC56 can outperform the 2.3 GHz quad-core processors in competitive mobile devices.

- **ARM® big.LITTLE™ processor technology for more efficient use of processing power.** The six cores in the TC51/TC56 processor fall into two categories: high-performance, designed for heavy processing loads, such as the first time an application/web page is loaded, and high-efficiency, designed for lighter jobs, such as data entry on an app page. By using the right core for the right task, parallel processing power increases, effectively executing more instructions in less time, with less power. The results are a savings of 75% in CPU energy and up to a 40% increase in performance.**

(** Source: https://www.arm.com/products/processors/technologies/biglittleprocessing.php)

MOBILITY DNA CAN POSITIVELY IMPACT SALES

A sales conversation focused solely on hardware is in danger of becoming a commodity battle. Want to truly differentiate your offering? Go beyond hardware and speak of Mobility DNA's software ecosystem. Every strand of your customer's Android mobility platform is simpler with Zebra's Mobility DNA. That's because from the start, your customers get the industry's most comprehensive suite of mobility must-haves to accelerate their solution. More off-the shelf end-user apps, more robust administration utilities and easier app development. Workers have the ability to do more. Enterprises gain peace of mind with deeper visibility and true mobility control over devices, operations and workflows. Everything works better, and it's all simplified securely under your customer's control. For more information on Mobility DNA, please visit www.zebra.com/mobilitydna

Mobility DNA Features

Feature	Benefits
Productivity Tools	
SimulScan	With this powerful technology, enterprises can take process automation to the next level. Enables the capture of the contents of an entire form in a single scan — including barcodes, text fields, phone numbers, images, signatures even check boxes.
Swipe Assist	Allows users to create and place a virtual data capture button on the screen of their mobile computer, bringing the simplicity and flexibility of touch computing to data capture.
Workforce Connect	Three Workforce Connect solutions give the TC51/TC56 powerful voice capabilities. Workforce Connect PTT Express (included) provides instant PTT 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 TC51/TC56 Series to function as a full featured mobile telephone with multi line capability across Wi-Fi networks.
Management Tools	
StageNow	StageNow allows any size organization to easily stage a handful or thousands of Android devices with a quick scan of a barcode or a tap on an NFC tag.
App Gallery	Enables TC51/TC56 users to discover, purchase, deploy and update enterprise apps.
Enterprise Home Screen	Ensures devices are utilized only for work. In just a few easy steps, your customers can create single-purpose devices that will run only one application or define which applications and features are available to users, or groups of users.
Development Tools	
EMDK for Android	Enables your customers to take full advantage of the purpose-built capabilities that the TC51/TC56 has to offer. Includes a comprehensive set of APIs and sample code.
Enterprise Browser	This powerful, next generation industrial browser enables developers to build feature-rich web applications that integrate seamlessly with the features in Zebra mobile computers and peripherals.

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