

HC20/HC50 Mobile Computers

Empower clinical and non-clinical healthcare workers to improve efficiency, task accuracy and patient outcomes

Introducing Zebra's newest family of rugged healthcare mobile computers, the Wi-Fi only HC20 and HC50, purpose built to deliver all the features healthcare workers need to improve efficiency, accuracy, the quality of patient care and patient outcomes. This series offers the perfect balance of ergonomics, features and cost — a pocketable device that is easy to carry, easy to use, easy to disinfect and easy to manage. Run demanding healthcare multi-media rich applications and enable comprehensive communications capabilities for superior collaboration. These small devices are big in extended functionality, able to transform into a two-way radio, a PBX handset and a workstation. And Zebra-only extras — such as Device Tracker, Intelligent Cabinets¹ and Mobility DNA¹ — practically eliminate lost devices and the cost of device access management, while adding complementary tools that boost usability and manageability.



Perfectly designed on the outside for healthcare

The ergonomics every healthcare worker wants

Zebra's thinnest and lightest healthcare mobile computer is perfectly balanced to minimize hand fatigue. Contoured surfaces and sculpted lower bumpers reduce pressure points and provide any size hand with a secure grip — and all day comfort.

Built for constant disinfecting

The disinfectant-ready design offers advanced medical grade plastics that support the widest selection of disinfectants in the industry. And a specially designed housing and USB-C port plug minimize crevices where pathogens can accumulate.

20% more display space to see more — and scroll less

The high resolution, 6-inch, FHD+ edge-to-edge display is bright and easy to read in virtually any lighting. And it works with the thin gloves typically worn by healthcare workers.

Call for help with one press of the emergency alert button

This programmable dedicated button can be configured to call a specific number or launch an application in emergency or duress situations, with an activation sequence that prevents false alarms.

One set of accessories for both models

Make carrying easy with the disinfectant-ready healthcare carry clip or hand strap. There are cradles designed for the backroom, a desk or a nurses station, plus extra batteries to ensure power for back-to-back shifts and a screen protector that boosts display durability.

Unbeatable battery features

No need to take these devices out of service to charge — if the battery runs low, just swap in a fully charged battery. With true hot swap², you can change batteries without impacting device functionality — no missed calls, no missed notifications, no lost data. PowerPrecision technology provides real-time metrics to monitor battery health, so you can easily spot and replace batteries that can no longer hold a full charge. And you can use any standard USB-C charge cable for charging flexibility.

Perfectly designed on the inside with advanced mobile technologies to boost productivity and care quality

World-class split-second scanning

Barcode scanning is a crucial part of everyday healthcare workflows. Now, workers can easily capture barcodes on patient wristbands, medication vials, supplies, medical equipment, food trays and more — even if barcodes are damaged or poorly printed. And the white illumination and green LED aimer are patient friendly, safe for use everywhere in the hospital.

Capture high-resolution photos with the 16 MP rear camera

From clinical workers capturing wound condition to non-clinical workers documenting facility rounding, completion of maintenance or damaged incoming inventory or equipment, a picture really is worth a thousand words. With the easy capture of high resolution photographic documentation, healthcare workers can spend less time explaining — and more time on crucial tasks.

Power today's healthcare apps

Healthcare workers use graphics-intensive applications — from clinicians visualizing patient vital signs remotely and viewing imaging studies to maintenance engineers accessing detailed equipment schematics. The HC20 and HC50 can handle it all with its faster processor, large memory space and 2TB MicroSD card slot.

The fastest Wi-Fi speeds for the most dependable connections

In the mission critical world of healthcare, a dropped or slow connection at the wrong time can have disastrous results. With support for Wi-Fi 6 (HC20)³ and Wi-Fi 6E (HC50), you can provide four times the number of devices with triple the speed of Wi-Fi 5.⁴ Everyone benefits — workers get the fastest and most reliable Wi-Fi connections, and your organization can quadruple staff without requiring additional network infrastructure.

Out-of-the-box capture of Unique Device Identifier (UDI) barcodes

Instantly check to see if medical equipment has been recalled before use, protecting patient safety. Easily capture charges for all items, protecting the bottom line. And inventory visibility is complete and more accurate, eliminating risky out of stocks.

Hear every word on every audio and video call

Get crystal clear voice, even if workers are in a noisy environment — from a busy emergency room to hospital hallways and the receiving dock. Advanced voice technologies include: three integrated microphones, advanced noise canceling algorithms, dual speakers for loudness, a high quality speaker phone and support for HD Voice and Bluetooth wireless headsets.

Turn the HC20/HC50 into two-way radios and PBX handsets

Empower your workers with multiple voice-calling capabilities — push-to-talk (PTT) communications and the ability to place and accept PBX calls. Now, nurses can reach a physician instantly or take a call from a family member checking on a loved one — all right on the HC20/HC50.⁵ And with Profile Manager, these optional voice solutions are easy to deploy and manage.

Secure text messaging — when audio calls aren't appropriate

Comply with privacy laws that protect patient information with text messaging that is secure and auditable — unlike text messaging on the cellular public network.⁵

High quality video conferencing for superior collaboration

Enable remote telehealth consultations with physicians, pharmacists and other caregivers through the HC50's 5 MP front facing camera.

Android 'plus' — enhanced with enterprise capabilities

Support through Android 16 ensures forward compatibility with future versions of Android. Deploy 'no touch' updates on your schedule with Zebra Zero Touch. Control availability of GMS services on your devices with Stage Now to increase security. Add over 100 features to improve Android's security, data capture support, wireless connectivity and device manageability. And with LifeGuard™ for Android™, you get a lifetime security guard for your Zebra mobile devices. LifeGuard ensures the latest security patch is always installed, while providing powerful update modes that put you in control over how and when devices are updated.

The Zebra-only difference — everything you need to build a truly complete healthcare mobility solution

Mobility DNA

Simplify every aspect of device management and give workers time-saving tools that improve productivity with this comprehensive collection of applications that contain many no-cost tools.

No more lost and missing devices with Device Tracker

Find lost and misplaced devices quickly and easily with Device Tracker — even if the device is turned off or the battery is depleted.

Turn the HC20/HC50 into workstations with Workstation Connect

When tasks require a larger screen, keyboard, mouse and printer, just insert the HC20/HC50⁹ into a Connect Cradle to create a fully-featured mobile-driven workstation — ideal at nurses stations, on portable 'computers on wheels', ward hubs and more.

Specifications

Physical Characteristics	
Dimensions	6.5 in. L x 3.0 in. W x 0.49 in. D 165 mm L x 76.3 mm W x 12.5 mm D
Weight	HC20: 8.4 oz./239 g HC50: 8.5 oz./242 g
Display	6.0 inch color Full High Definition+ (1080 x 2160), 450 NITS
Imager Window	Corning® Gorilla® Glass
Touch Panel	Multi mode capacitive touch with bare or light gloved fingertip input
Backlight	LED backlight
Power	User removable; rechargeable Li-Ion; 3800mAh/14.63Wh; standard capacity with BT BLE; PowerPrecision for real-time battery metrics; fast charge; true hot swap (HC50)
Expansion Slot	Supports up to 2TB MicroSD
Network Connections	WLAN, WPAN, USB 3.1 (Bottom Type C) - Super Speed (host and client)
Notifications	Audible tone; multi-color LEDs; vibration
Keypad	On-screen keypad
Voice and Audio	Three microphones with noise cancellation; dual speakers for loudness; Bluetooth wireless headset support; high quality speaker phone; HD Voice, including Superwideband (SWB), Wideband (WB) and Fullband (FB)
Buttons	Dual dedicated scan buttons; programmable button for PTT or other use; volume up/down
Safety/Alert	Red Alert Button with emergency dialer feature
Performance Characteristics	
CPU	Qualcomm® 5430 hex-core, 2.1 GHz
Operating System	Upgradable to Android 16
Memory	HC20: 6 GB RAM/64 GB UFS Flash HC50: 8 GB RAM/128 GB UFS Flash
Security	Product supports Secure Boot and Verified Boot
User Environment	
Operating Temperature	14°F to 122°F/-10°C to 50°C
Storage Temperature	-40°F to 158°F/-40°C to 70°C
Humidity	5%-95% non-condensing
Drop Specification	Multiple 4 ft./1.25 m drops to tile over concrete over operating temperature range per MIL-STD 810H
Tumble Specification	500 tumbles, 1.6 ft./0.5 m
Sealing	IP68 and IP65, with battery per applicable IEC sealing specifications
Electrostatic Discharge (ESD)	+/- 15 kV air discharge; +/- 8 kV direct discharge; +/- 8 kV indirect discharge
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

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	HC20: SE4720 1D/2D Scan Engine with White Illumination / Green Aimer ⁶ Occasional barcode scanning available via camera; barcode decoding software included ⁷ HC50: SE4720 1D/2D Scan Engine with White Illumination / Green Aimer
Camera	Rear: 16 MP HC50 only: Front 5 MP
NFC	ISO 14443 Type A and B; Sony FeliCa and ISO 15693 cards ⁸ ; Card Emulation via Host; Contactless payment support; ECP1.0 and ECP2.0 polling support; Apple VAS certified
Voice	
VOIP Communications	Workcloud Communication PTT Express simple push-to-talk calls over Wi-Fi (optional). Workcloud Communication PTT Pro enables instant push-to-talk calls over Wi-Fi and cellular (optional). Workcloud Communication Enterprise Voice allows HC20/HC50 devices to double as fully-featured and customizable PBX mobile handsets (optional).
Wireless LAN	
Radio	IEEE 802.11 a/b/g/n/ac/ax/d/h/i/r/k/v/w/mc; 2x2 MU-MIMO; Tri-band (2.4 GHz, 5 GHz, 6 GHz); Wi-Fi CERTIFIED 6™ (Wi-Fi 6E ²); Dual Band Simultaneous; IPv4, IPv6
Data Rates	6 GHz: 802.11ax — 20 MHz, 40 MHz, 80 MHz, 160MHz - up to 2402 Mbps; 5 GHz: 802.11a/n/ac/ax — 20 MHz, 40 MHz, 80 MHz, 160 MHz - up to 2402 Mbps; 2.4 GHz: 802.11b/g/n/ax — 20 MHz - up to 286.8 Mbps
Operating Channels	Channel 1-13 (2401-2483 MHz): 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 Channel 36-165 (5150-5850 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 1-233 (5925-7125 MHz); Channel Bandwidth: 20, 40, 80, 160 MHz Actual operating channels/frequencies and bandwidths depend on regulatory rules and certification agency
Security & Encryption	WPA3 Enterprise 192-bit mode, GCMP256 — EAP-TLS; WPA3 Enterprise, AES-CCMP-128 — EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2, PEAPv1-EAP-GTC, LEAP, EAP-PWD; WPA3 Personal (SAE), AES-CCMP-128; WPA/WPA2 Enterprise, TKIP and AES-CCMP-128; WPA/WPA2 Personal (PSK), TKIP and AES-CCMP-128; Enhanced Open (OWE), AES-CCMP-128; WEP 40 bit and 104 bit
Fast Roam	802.11r Fast BSS Transition; PMK Caching; Cisco CCKM; OKC

Markets and Applications

Facilities

- Hospitals
- Non-acute facilities (ambulatory centers, outpatient and home healthcare)
- Nursing/care homes
- Hospice/palliative care (outside of hospital)

Applications

Non-clinical

- Environmental health
- Facilities management
- Patient transport
- Materials management
- Food services
- Engineering and security
- Hospital supply chain management
- Training staff

Clinical

- Nurses
- Physicians
- Clinical support staff
- Therapists
- Lab/Pharmacist technicians
- Phlebotomists
- Midwives
- Nutritionists
- Physiotherapists
- Behavior health specialists
- Dieticians
- Consultants

Certifications	Wi-Fi Alliance Certifications: Wi-Fi CERTIFIED n; Wi-Fi CERTIFIED ac; Wi-Fi CERTIFIED 6 (Wi-Fi 6E); WPA2-Personal; WPA2-Enterprise; WPA3-Personal; WPA3-Enterprise (includes 192-bit mode); Protected Management Frames; Wi-Fi Enhanced Open; WMM (Wi-Fi Multimedia); WMM-Power Save; WMM-Admission Control; Voice-Enterprise; Wi-Fi Direct; Wi-Fi Agile Multiband; Wi-Fi QoS Management; Wi-Fi Optimized Connectivity; Passpoint
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Wireless PAN

Bluetooth	Class 2, Bluetooth v5.2 with BLE beaconing
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Disinfecting and Cleaning

Highly disinfectant ready; Healthcare plastics — supports 30+ wipes and disinfectants. For information on Zebra-approved disinfectants and guidelines on cleaning HC20/HC50 devices, please visit: https://connect.zebra.com/DeviceDisinfection_us

Warranty

Subject to terms of Zebra's hardware warranty statement, the HC20 and HC50 are 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

Environmental Compliance

RoHS Directive 2011/65/EU; Amendment 2015/863; REACH SVHC 1907/2006
For a complete list of product and materials compliance, please visit www.zebra.com/environment

Recommended Services

Zebra OneCare™ Special Value (SV) (HC20 only); Zebra OneCare™ Essential/Select (HC50); Zebra VisibilityQ Foresight™; Professional Services Video on Device

Footnotes

1. Intelligent Cabinets and additional solutions may not be available in all countries.
2. True hot swap available on HC50 only; remains fully functional for up to 60 seconds to enable seamless battery changes.
3. Wi-Fi 6E available on HC20 Series with Enterprise license upgrade.
4. 5G vs. Wi-Fi 6: a Powerful Combination for Wireless; Intel; <https://www.intel.com/content/www/us/en/wireless-network/5g-technology/5g-vs-wifi.html>
5. Requires Zebra's Workcloud Communication PTT Express, PTT Pro or Enterprise Voice.
6. Not available in North America.
7. Standard in North America; optional in the rest of the world.
8. According to ISO/IEC 18092 (Ecma 340) standard.
9. The HC20 requires a Mobility DNA Enterprise license to support Workstation Connect.

Specifications subject to change without notice

Mobility DNA

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

HC50: Mobility DNA Professional integrated solutions are preloaded and pre-licensed, provided at no cost. HC20: Mobility DNA Professional is included. To take advantage of the complete Mobility DNA offerings, a Mobility DNA Enterprise license is required.

For more information about Mobility DNA tools, please visit www.zebra.com/mobility-dna-kit



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