X40

Hybrid Full-Touch Handheld computer

Smart Mobile Computer with Integrated UHF RFID Reading Capabilities

X40 is the latest RFID-enabled enterprise mobile computer, delivering 2x faster performance, Wi-Fi 6E speeds, and powerful on-device AI for smarter retail operations. Featuring the first AMOLED display in its class and a lightweight, ergonomic design with 26% more screen space, it ensures clear visibility and easy one-handed use.

Key Features

UHF RFID Support

With X40's RFID reading capability, users can simplify tasks such as luggage scanning, passenger validation, inventory checks, and workforce management.

Enhanced Scan Camera

Workers using X40 can scan barcodes quickly and accurately with ToF sensor autofocus, aiming support, multi-barcoding reading, and AR Core.

Brilliant AMOLED Display

The X40's AMOLED display, the first of its kind in an enterprise device, delivers bright, clear, vibrant visuals while using less power.

Support Front Face Reading

X40 supports front face NFC reading, which enables quick and flexible payments from any angle, ID checking and card emulation.

Ultimate Performance

Powered by the Qualcomm QC6490 CPU and 12.15 INT8 TOPS of on-device AI, the X40 helps users boost their working efficiency.



Applications

Retail

- Price/inventory checks
- Check-out verification
- Workforce management
- Communication & Collaboration
- Inventory/cycle counts
- Task assignment/management
- Merchandising
- Back of store management

Hospitality

- Inventory Management
- Counter / Front Task Management
- Order taking
- Guest Safety & Security
- Loyalty, Membership & Gift Cards

Airline

- Passenger Ticket Validation
- Check-in
- Boarding
- Gate baggage checking / scanning
- Passenger list checking
- In-flight sales
- Food & Beverage Management

Transportation & Logistics

- Proof of Pickup & Delivery
- Parcel loading check
- Staff Communications

Healthcare

- Pharmacy Management
- Patient tracking
- Clinical mobility

Government

- Identification Authentication
- User Authentication
- Staff communication
- Evidence Management
- Parking Enforcement
- Traffic Law Enforcement
- Patrol Mobile Solution

Key Features

Replaceable Warm Swap Battery

Unlike consumer smartphones, users can easily replace X40's battery themselves. The warm-swap battery supports fast charging, reducing downtime and keeping you connected while you work.

Maximized Productivity with Accessories

X40 is compatible with HF550X accessories, helping lower your rollout costs. If you already use the HF550X, there's no need to buy new accessories for the X40.

Ergonomic Grip & Light Weight

The X40's ergonomic grip and suitably sized body make one-handed use easy. The grip reduces strain on users and supports barcode scanning through side buttons for a more convenient work environment.

Supporting Biometrics

X40 supports biometrics which is capable of verifying user identity in various fields through fingerprint recognition.

Advanced Rear & Front Camera

X40 features a 50MP PDAF rear camera and an 8MP front camera for clear, high-quality images.

High Durability

X40 is a durable device, tested for drops, tumbles and sealing. It keeps working from -20°C to 50°C (-4°F to 122°F) or after a 1.2m (4 ft.) fall.

Location-Free Two-Way Communication

If you use BOS™ PTT, a subscription-type Push-to-Talk (PTT) Essential service, you can communicate regardless of location. BOS™ PTT helps you send and receive calls and messages over a WiFi network.

Stable Connection to 5G/WiFi 6E/Bluetooth 5.3/Dual GPS

X40 supports 5G, WiFi 6E, Bluetooth 5.3 and Dual GPS. With X40, you can boost efficiency with faster data speeds, and navigate with precise location tracking.

Simply find your lost device

You can find lost device quickly with BOS Device Tracker and UWB, even the battery is discharged or off.

Easy initial device setup & security provisioning for hardware

BOS™ Provisioning is designed to make the installation process faster and simpler, allowing customers to have all their devices ready for use as easy as possible. Once you create a staging file with all the required configurations, device settings and applications, devices will automatically configure themselves whether you connect devices to PC or simply scan a QR code without manual procedures.

Reliable Security

BOS™ NEST delivers visibility and lets IT admins stay in control of multiple mobile devices in their system, regardless of device type or operating systems, all from a single dashboard– enabling access control for shared devices and managing user ID and device groups. From deployment to retirement, BOS™ NEST makes it easy to manage mobile devices and mobilize the workforce to gain competitive advantage, while maintaining corporate data security.

BOS™ Solutions & Software

- Dr. Device (Devcheck)
- Provisioning
- Kiosk
- Nest
- OTA Update
- DeviceFinder
- IP Wedge
- Logger
- PowerManager
- WiFine
- PTT
- PTT Essential
- VOIP
- FastRead
- Barcode Test / Bbsettings
- eSIM LPA

Third Party Solutions Integration

- EMM: Airwatch, MobileIron, Mobicontrol, 42Gears, Scalefusion
- RFID : Nedap, checkpoint, sensormatic, Mojix

X40 Specifications

Performance Characteristics

CPU	Qualcomm Snapdragon™ QC6490 octa-core, 2.7GHz
Operating System	Android 14 Planned to be upgraded to Android 16, 18
Memory	6 GB LPDDR5 RAM / 128 GB UFS 3.1

Physical Characteristics

Dimensions (L x W x D)	155.2 x 74.2 x 12mm
Weight	199g
Display	6.11 inches 1080 x 2340, AMOLED Brightness : 400 nits / Outdoor Mode: 600 nits
Imager Window	Corning® Gorilla® Glass 5
Touchpanel	Multi-mode capacitive touch with bare or gloved fingertip input or stylus (sold separately), Corning Gorilla Glass; water droplet rejection; fingerprint resistant anti-smudge coating
Power	User replaceable battery Standard capacity 3.87V 4320mAh / 16.72Wh BOS™ Power Manager
Hot swap	Warm Swap
Quick Charging	Support
Expansion Slot	User accessible MicroSD supports up to 2TB
SIM / SAM	(only on WWAN SKUs) 1 Nano SIM / e-SIM Dual SIM/Dual Standby
Interface	Rear : 8-pin communication I/O Bottom : USB-C 3.1 OTG, 2-pin Charging Connector Side : 2-pin Charging Connector
Notification	Audible tonevibration
Keypad & Button	On-screen keypad and Enterprise Keyboard; power button; volume up/down buttons; dual-action side scan buttons; Dedicated PTT Button;
Voice and Audio	Three noise-cancelling microphones; vibrate alert; High-quality Single Speaker PTT headset USB-C support; Bluetooth wireless headset support, SWB & FB audio cellular circuit switch voice; HD voice;
PTT Hot Key	Supports Dedicated PTT Button

Wireless Wan Data and Voice Communications

Radio Frequency Band	(only on WWAN SKUs) Worldwide 5G FR1 : n1/2/3/5/7/8/12/13/14/20/25/26/28/ 29/38/40/41/48/66/71/77/78/79 4G : B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/ 28/38/39/40/41/42/43/48/66/71 3G : B1/B2/B4/B5/B8/B19 2G : 900/1800/850/1900 Dual SIM/Dual Standby, VoLTE, Gigabit LTE-A, 5G NR Sub-6 (NSA, SA), LTE/NR Carrier Aggregation, supports private networking (LTE/5G)
GPS	(only on WWAN SKUs) GPS, GLONASS, Galileo, BeiDou, QZSS Dual-Band GNSS (Optional) GPS, GLONASS, Galileo, BeiDou, QZSS Dual-Band GNSS — concurrent L1/G1/E1/B1 (GPS/QZSS, GLO,GAL, BeiDou) + L5/E5a/BDSB2a (GPS/QZSS, GAL, BeiDou); a-GPS; Supports XTRA

Wireless Lan

Radio	IEEE 802.11 a/b/g/n/ac/d/h/i/r/k/v/w/mc/ax; 2x2 MU-MIMO; Wi-Fi™ 6E (801.11ax); Dual Band Simultaneous; IPv4, IPv6 Wi-Fi™ 6E Certified
Data Rates	6 GHz : 802.11ax — 20 MHz, 40 MHz, 80 MHz - up to 1200 Mbps 5 GHz : 802.11a/n/ac/ax — 20 MHz, 40 MHz, 80 MHz - up to 1200Mbps 2.4 GHz : 802.11b/g/n/ax — 20 MHz up to 286.8 Mbps
Security and Encryption	WEP (40 or 104 bit); Enhanced Open (OWE); WPA/ WPA2 Personal (TKIP, and AES); WPA3 Personal (SAE); WPA/WPA2 Enterprise (TKIP and AES); WPA3 Enterprise (AES) - EAP-TTLS (PAP, MSCHAP, MSCHAPv2), EAP-TLS, PEAPv0-MSCHAPv2,PEAPv1-EAP-GTC, LEAP, EAP-PWD; WPA3 Enterprise 192-bit mode (GCMP256) - EAP-TLS; WWAN models only: WPA3 Enterprise EAPSIM,EAP-AKA, EAP-AKA Prime

Wireless Pan

Bluetooth	Class 2, Bluetooth v5.3 and Secondary BLE for beaconing

Wired Lan

Ethernet	Support (w/ Ethernet Cradle)

Communication and Messaging

VoIP / PTT



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Contact your TSC sales representative for specific information.
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Data Capture

Scanning	Camera Based Scanning - 8MP autofocus; PDAF - Aiming Green LED; Illumination 50 degree LED AR Core Certification
Camera	Rear : 50MP autofocus; flash LED, PDAF; Torch mode; better low light performance; OIS Front : 8MP Fixed AR Core Certification
NFC	ISO 14443 Type A and B; FeliCa and ISO 15693 cards; Card Emulation via Host; EMV Contactless L1 RR2 ECP1.0 and ECP2.0 polling support, Apple VAS certified, Google Smart Tap ready, CPoC Compliant
RFID	Built-In UHF RFID / HF (Optional) - Read Range : ~ up to 1.2m - Read Rate : 50 tags/s
UWB	UWB Support (Optional)
Biometrics	On-device Fingerprint into the Side (Optional) Face biometrics (OOB - Out-Of-Band)

Payment

Contactiess	EMV Contactlesss Level 1 RR2

Sensor

Light Sensor	Ambient Light
Other Sensors	Proximity, Accelerometer, E-Compass, Gyro, Pressure

User Environment

Operating Temp	-20°C to 50°C / -4°F to 122°F
Storage Temp	-40ºC to +70ºC / -40ºF to +158ºF
Humidity	95% non-condensing
Drop Spec	1.5m/4.9ft drop to tile over concrete, operating temp (-10°C to 50°C/14°F to 122°F) per MIL-STD 810H 1.8m/5.9ft drop to tile over concrete (with Rugged Case)
Tumble Spec	300 tumbles at 0.5m/1.6ft, room temperature (without Rugged Case) 600 tumbles at 0.5m/1.6ft, room temperature (with Rugged Case)
Sealing	IP68
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° C to 70° C / -40° F to 158° F rapid transition 10 cycles (1 cycle = 1.25 hours at -40°C and 1.25 hours at 70°C)
Electrostatic Discharge (ESD)	+/-15kVdc air discharge +/-8kVdc direct discharge +/-8kVdc indirect discharge

Software Solutions

BOS™	• Dr. Device(Devcheck) • Provisioning • Kiosk • Nest • OTA Update • DeviceFinder • IP Wedge • Logger	• PowerManager • WiFine • PTT • PTT Essential • VOIP • FastRead • Barcode Test / Bbsettings • eSIM LPA
Third Party Solutions Integration	EMM : Airwatch, MobileIron, Mobicontrol, 42Gears, Scalefusion RFID : Nedap, checkpoint, sensormatic, Mojix	

*Subject to the terms of TSC hardware warranty statement, the X40 is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment.



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