Fingerprint Recognition

Built-in UHF
RFID

Volume Measurement

Mobile Computer

Android   4G   WiFi   Bluetooth   1D Barcode   2D Barcode   NFC   Fingerprint   UHF   Volume Measurement   Camera   GPS

This is a newly-developed rugged handheld computer with large screen and strong extensibility. Based on Android 9.0 / 11.0 OS, it is equipped with Qualcomm octa-core processor for high-speed processing. With 5.5-inch high-definition display, it is integrated with barcode scanning, NFC and other functions. The data collection device supports quick charge and UHF sled for good extensibility, besides, device with Android 11.0 OS offers different optional functions such as built-in UHF, fingerprint recognition and volume measurement that can meet the needs in logistics, warehouse, manufacturing, retail, asset tracking, power patrol inspection,etc.

UHF   UHF Sled Reader   Pistol Grip

Specification

Physical Characteristics

Dimensions	160.0 x 76.0 x 15.5 mm / 6.3 x 2.99 x 0.61 in.
Weight	287 g / 10.12 oz. (device with battery)
Keypad	1 power key, 2 scan keys, 2 volume keys, 1 PTT key
Battery	Removable main battery (normal version:4420 mAh ; Android 11.0 with fingerprint / built-in UHF / volume measurement version: 5200mAh)
	5200 mAh optional pistol battery, support QC3.0 and RTC
	Standby: up to 490 hours (only main battery ; WiFi: up to 470h; 4G: up to 440h)
	Continuous use: over 12 hours (depending on user environment)
	Charging time: 2.5 hours (charge device by standard adaptor and USB cable)
Speaker	Support
Vibrator	Support
Microphone	2 Microphones, 1 for noise reduction
Display	5.5-inch high definition full display (18:9), IPS LTPS 1440 x 720
Touch Panel	Corning Gorilla Glass, multi-touch panel, gloves and wet hands supported
Sensor	Gravity sensor, proximity sensor, light sensor, accelerometer sensor, vibration motor
Indicator LED	Power, charging, status indicator
Card slot	1 slot for SIM card, 1 slot for SIM or TF card
Interfaces	Android 9.0: USB Type-C, USB 3.0, OTG, extended thimble; Android 11.0: USB Type-C, USB 3.1, OTG, extended thimble;

Performance

CPU	Qualcomm 1.8 / 2.0 GHz Octa-core
RAM+ROM	3 GB + 32 GB / 4 GB + 64 GB
Expansion	Supports up to 128 GB Micro SD card

Developing Environment

Operating System	Android 9.0; GMS, 90-day security updates, Android Enterprise, Zero-Touch, FOTA, Soti MobiControl, SafeUEM supported
	Android 11.0; GMS, built-in support for a future upgrade through Android 12 which complies with GMS and Android Enterprise Recommended
SDK	Software Development Kit
Language	Java
Tool	Eclipse / Android Studio

User Environment

Operating Temp.	-4℉ to 122℉ / -20 ℃ to +50 ℃
Storage Temp.	-40℉ to 158℉ / -40 ℃ to +70 ℃
Humidity	5% RH - 95% RH non condensing
Drop Specification	Multiple 1.8 m / 5.91 ft. drops (at least 20 times) to the concrete across the operating temperature range
	Multiple 2.4 m / 7.87 ft. drops (at least 20 times) to the concrete after installed rubber bumper
Tumble Specification	1000 x 0.5 m / 1.64 ft. falls at room temperature
Sealing	IP65 per IEC sealing specifications
ESD	±15 KV air discharge, ±8 KV conductive discharge

Communication

WLAN	Support 802.11 a/b/g/n/ac/d/e/h/i/k/r/v, 2.4G/5G dual-band, IPV4, IPV6, 5G PA;
	Fast roaming: PMKID caching, 802.11r, OKC
	Operating Channels: 2.4G(channel 1~13), 5G(channel36,40,44,48,52,56,60,64,100,104,108,112,116,120,124,128,132, 136,140,144,149,153,157,161,165), Depends on local regulations
	Security and Encryption: WEP, WPA/WPA2-PSK(TKIP and AES), WAPI-PSK—EAP-TTLS, EAP-TLS, PEAP-MSCHAPv2, PEAP-LTS,PEAP-GTC,etc.

WWAN (Europe, Asia)	2G: 850/900/1800/1900 MHz
	3G: CDMA EVDO: BC0
	WCDMA: 850/900/1900/2100MHz
	TD-SCDMA: A/F(B34/B39)
	4G: B1/B3/B5/B7/B8/B20/B38/B39/B40/B41
WWAN(America)	2G: 850/900/1800/1900 MHz
	3G: 850/900/1900/2100 MHz
	4G: Android 9.0: B2/B4/B5/B7/B12/B17/B38 Android 11.0: B2/B4/B5/B7/B12/B13/B17/B28A/B28B/B38
Vo-LTE	Support Vo-LTE HD video voice call
Bluetooth	Android 9.0: Bluetooth 4.2/4.1+HS/4.0/3.0+HS/2.1+EDR Android 11.0: Bluetooth 5.1
GNSS	GPS/AGPS, GLONASS, BeiDou, Galileo, internal antenna

Data Collection

Camera

Rear Camera	Rear 13MP Autofocus with flash

NFC

Frequency	13.56 MHz
Protocol	ISO14443A/B, ISO15693, NFC-IP1, NFC-IP2, etc.
Chips	M1 card (S50, S70), CPU card, NFC tags, etc.
Range	2-4 cm

Barcode Scanning (optional)

2D Scanner	Zebra: SE4710/SE2100; Honeywell: N6603; E3200; IA166S
1D Symbologies	UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, Discrete 2 of 5, Chinese 2 of 5, Codabar, MSI, RSS, etc.
2D Symbologies	PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode; Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal (KIX),etc.

UHF1 (Optional)

Engine	Based on Impinj Indy R2000; Based on Impinj E710 (coming soon)
R/W range	Up to 15 m (open outdoors, Impinj MR6 tag)

*For detailed specification, please check UHF part

UHF2 (Optional)

Engine	Based on Impinj Indy R2000; Based on Impinj E710 (coming soon)
R/W range	Up to 10 m (open outdoors, Impinj MR6 tag)

*For detailed specification, please check UHF part

UHF3 (Android 11.0 Optional, Built-in UHF; coming soon)

Power	1 W (+19 dBm to +30 dBm adjustable)
R/W range	3 m

*For detailed specification, please check UHF part

Fingerprint (Android 11.0 Optional)

Sensor	Capacitive TCS1

* For detailed specification, please check Fingerprint part

Volume Measurement (Android 11.0 Optional)

Measured distance	40m-4m

* For detailed specification, please check Volume Measurement part

Optional accessories(See details in Accessory Guide)

Separate handle with one button；Handle + battery (handle battery 5200 mAh, one button) ;

UHF back clip + handle (5200 mAh, one button) ; Wrist Strap; Rubber Bumper; Charging Cradle

Specification

UHF1
UHF Back Clip

UHF2
UHF Sled

UHF3
Built-in UHF

UHF1 (Optional)

Engine	Based on Impinj Indy R2000; Based on Impinj E710 (coming soon)
Frequency	865-868 MHz / 920-925 MHz / 902-928 MHz
Protocol	EPC C1 GEN2 / ISO18000-6C
Antenna	Circular Polarized Antenna (4 dBi)
Power	1W (30 dBm, +5 dBm to +30 dBm adjustable)
	2W Optional (33 dBm, for Latin America, etc.)
R/W range	Up to 15 m (open outdoors, Impinj MR6 tag)
Fastest Read Rate	900+ tags/sec
Communication Mode	Pin Connector

UHF2 (Optional)

Engine	Based on Impinj Indy R2000; Based on Impinj E710 (coming soon)
Frequency	865-868 MHz / 920-925 MHz / 902-928 MHz
Protocol	EPC C1 GEN2 / ISO18000-6C
Antenna	Circular Polarized Antenna (3 dBi)
Power	1W (30 dBm, support +5~+30 dBm adjustable)
	2W Optional (33 dBm, for Latin America, etc.)
R/W range	Up to 10 m (open outdoors, Impinj MR6 tag)
Fastest Read Rate	900+ tags/sec
Communication Mode	Pin Connector / Bluetooth

UHF3 (Android 11.0 Optional, Built-in UHF; coming soon)

Frequency	865-868 MHz / 920-925 MHz / 902-928 MHz
Protocol	EPC C1 GEN2 / ISO18000-6C
Antenna	Circular polarization (1 dBi)
Power	1 W (+19 dBm to +30 dBm adjustable)
R/W range	3 m

*Ranges and rates depend on tags and environment, built-in UHF version does not support pistol

Fingerprint

Fingerprint (Android 11.0 Optional)

Sensor	TCS1
Sensing Area (mm)	12.8 × 18.0 ; 10.4 x 14.4
Resolution (dpi)	508 dpi, 8-bit greylevel
Certifications	FIPS 201, STQC
Format Extraction	ISO 19794, WSQ, ANSI 378, JPEG2000
Fake Finger Detection	Support by SDK
Security	AES, DES key encryption of the host communication channel

*Fingerprint version does not support pistol

Volume Measurement

Volume Measurement (Android 11.0 Optional)

Sensor	IRS1645C
Measurement Error	<5%
Module	MD101D
Field of view Angle	D71°/H60°/V45°
Measurement speed	2s/ piece
Measured distance	40cm-4m

*Volume Measurement version does not support pistol