

The accessible, rugged device for
Enterprise Mobility based on 5G

S20



Industry & Applications



Retail – Store associates

- Price/Inventory checks
- Item locator
- Line busting
- Assisted selling
- Task management
- Front of store replenishment
- Price management
- Inventory/cycle counts



Retail – Store managers

- Fleet Management
- Planogram management
- Promotion compliance
- Merchandising
- Back of store management



Field Service Technicians

- Invoicing & Asset management
- Staff Communication



Postal Carriers/Courier Drivers

- Location services & Proof of Delivery
- Asset & Fleet management
- Packing, Staging, and Invoicing
- Work Order Validation



Entertainment / Restaurant Workers

- Staff Communication
- Access & Asset & Staff ID & Counter / Front Task Management
- Loyalty, Membership, and Gift Cards
- Security & Validating Tickets

BOS™ Solutions & Software

- BOS™ Provisioning; Staging; Kiosk; Virtual Key; BOS™ Keyboard
- BOS™ VoIP
- BOS™ PTT, PTT Essential
- BOS™ Wi-Fine™ (WiFi analyze application)
- BOS™ EMM
- BOS™ OTA
- BOS™ OemConfig

Third Party Solutions Integration

- EMM: Airwatch, MobileIron, Mobicontrol, IBM Mass360, XenMobile
- PTT: ESChat, Zello, IMPTT, EveryTalk, AirPTT, RealTalk

✓ Introducing the all-new, next-generation Bluebird S20. Experience exceptional performance with its brilliant specifications, lightweight design, and the latest Android 13 OS, upgradeable to Android 17. The S20's slim, light, and ergonomic form factor ensures a comfortable and secure grip, fitting a wide range of hand sizes. This compact device is an ideal choice for users seeking advanced features at a competitive price point.

Key Features

BEST-IN-CLASS FEATURES AND POWERFUL PERFORMANCE

Speed upgrade to another level

Increase your work efficiency with the Qualcomm® 4490 octa-core processor, featuring up to 8GB of RAM, 128GB of Flash, and a 2TB MicroSD card slot..

Fast and Stable Network

Experience rapid business speed with Wi-Fi 6E and 5G connectivity. Maintain fast and stable performance, even in large facilities, using CBRS private LTE networks.

6-inch display with best-in-class outdoor readability

The S20 is waterproof and dustproof, and its screen provides a clear display view under bright sunlight. Bluebird's multi-touch technology supports glove and stylus input.

Robust & Slim Design

S20 has the improved durability and ergonomic design and which makes it thinner, larger & stronger. If you drop it from a height of 1.5m / 5ft, or drop it 550 times from a height of 0.5m / 1.6ft, it still works. It applied Gorilla Glass on the Touch Pannel and Imager.

Key Features

BEST-IN-CLASS FEATURES AND POWERFUL PERFORMANCE

Cutting-edge Battery technology

Bluebird's BOS™ Power Manager optimizes the performance of the standard 4000 mAh and extended 6000 mAh batteries, offering significant power supply and extended device working hours.

High-Resolution Camera

Capture high-quality images with the integrated 16 MP autofocus camera and flash LED.

Scan your data with 2 kind of scanning range

If you want to scan in standard range, you can use SE4710/SE4100/4720 1D/2D scan engine or SE55 1D/2D scan engine for advanced scan range.

Supportive microphone and speaker

Featuring two microphones and a speaker to improve communication with your co-workers.

CONVENIENT CONNECTION & COMMUNICATION

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.

Simply check your boxes by pressing a button

S20 supports Time of Flight (ToF) sensor to check parcel dimensions quickly and easily to save you time.

World-Class RFID Reader

Experience fast and safe operation with Bluebird's world-class handheld UHF RFID readers, the RFR900 and the next-generation RFR901. These readers offer impressive performance, with the RFR900 reading up to 900 tags per second and the RFR901 achieving an even faster 1,200 tags per second. Reliable data management between the reader and your mobile computer is ensured through seamless connection via Bluebird's adapter mount, Bluetooth, NFC, and Wi-Fi 6E.

MANAGE YOUR WORK EFFICIENCY WITH BOS™ OF BLUEBIRD

Easy application performance and data management

You can use the BOS SDK, a custom development tool for enterprise applications. This enables rapid application development and provides a custom toolkit that is fast, efficient, and optimized. You can also easily manage bar code data using the Data Wedge API.

Reliable Security system

BOS™ SecureCare for Android™ can protect your devices safely. With BOS Kiosk, you can restrict and protect apps and device features.

Increase work efficiency with the device

With Terminal Emulation and BOS™ Keyboard, you can get the touchscreen & keyboard you need for managing data. BOS one scan functionality can help you select the barcodes, and OCR can help you capture standardized data.

Manage your device easily

Streamline device deployment and management with Bluebird Zero-Touch, allowing you to configure many devices simply by scanning. BOS Wi-Fi Fine helps ensure stable Wi-Fi connectivity. Gain control over Google Services with Non-GMS OS Control. Additionally, BOS one scan functionality enables remote device management and diagnostics, potentially reducing the need for repairs.

Specifications

PERFORMANCE CHARACTERISTICS

CPU	Qualcomm Snapdragon™ QC4490 octa-core, 2.4 GHz
Operating System	Android 13; Upgradeable to Android 17
Memory	6GB RAM / 64GB UFS Flash 8GB RAM / 128GB UFS Flash (Optional)

PHYSICAL CHARACTERISTICS

Dimensions (L x W x D)	165 × 76.9 × 12.5 mm
Weight	243 g
Display	6" FHD+ (1080×2160)
Imager Window	Corning® Gorilla® Glass 5
Touchpanel	Multi-mode capacitive touch with bare or gloved fingertip input or conductive stylus (sold separately), Corning Gorilla Glass; water droplet rejection; fingerprint resistant anti-smudge coating
Backlight	LED backlight
Power	Rechargeable Li-Polymer, BOS™ PowerManager for realtime battery management Standard capacity 4000mAh / 15.4 Watt hours; Extended capacity 6000mAh / 23.1 Watt hours; (Optional) Hot Swap battery mode BLE Beacon Battery 4000mAh
Hot swap	Supported
Expansion Slot	User accessible MicroSD; supports up to 2TB
SIM / SAM	WWAN SKU Only: 1 Nano SIM; 1 eSIM
Interface	Rear: 8-pin communication connector Bottom: USB-C 3.1 OTG w/ DP mode 2-pin Charging Connector
Notification	Audible tone; multi-color LEDs; Scan LED; vibration; Haptic Feedback, multi-color LEDs (Top)
Keypad & Button	On-screen keypad and BOS™ Keyboard; power button; Volume up/down buttons; Dual-action side scan buttons; Dedicated PTT Button; button of trigger handle via Back I/O.; Top alert Button
Voice and Audio	Dual noise-cancelling microphones; Vibrate alert; High-quality Dual speaker phone (100dB); PTT headset USB-C Type support; Bluetooth wireless headset support, SWB & FB audio cellular circuit switch voice; HD voice
PTT Hot Key	Support Dedicated PTT Button

WIRELESS WAN DATA AND VOICE COMMUNICATIONS

Radio Frequency Band	Rest of World 5G FR1: n1/3/5/7/8/20/26/28/38/39/40/41/48/77/78/79 4G: B1/3/5/7/8/18/19/20/26/28/34/38/39/40/41/42/43/48 3G: B1/3/5/8/9/19 2G: 900/1800/850/1900 America (NA+SA) 5G FR1: n2/5/7/12/13/14/25/26/28/29/38/41/48/66/71/77/78/79 4G: B2/4/5/7/8/12/13/14/17/25/26/28/29/38/41/42/43/48/66/71 3G: B2/4/5/8 2G: 900/1800/850/1900
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; 2×2 Mu-MIMO; Wi-Fi™ 6E (801.11ax); Wi-Fi certified; Wi-Fi™ 6E Certified; Dual Band Simultaneous; IPv4, IPv6
Data Rates	6GHz: 802.11ax - 20MHz, 40MHz, 80MHz, 160MHz — up to 2402 Mbps; 5GHz: 802.11a/n/ac/ax — 20MHz, 40MHz, 80MHz, 160MHz — up to 2402 Mbps; 2.4GHz: 802.11b/g/n/ax — 20MHz 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 within BLE battery
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WIRED LAN

Ethernet	Support (w/ Ethernet Cradle - 1GHz)
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* Android version is subject to change depending upon Qualcomm's roadmap.

* Please be informed that Bluebird warranty program should be purchased to get Android upgrade service.

Specifications (Continued)

COMMUNICATION AND MESSAGING

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DATA CAPTURE

Scanning	(Default) SE4710 1D/2D Scan Engine (Optional) SE4100 SE4720 (White Illumination, Green Aimer) SE55 1D/2D Advanced Range Scan Engine
Camera	Rear – 16 MP AutoFocus; flash LED, PDAF, Torch mode+HDR; better low light performance; Front – 8MP fixed 5MP fixed (Optional) AR Core Certification
NFC	ISO 14443 Type A and B; FeliCa and ISO 15693 cards; Card Emulation via Host; Contactless payment support, (Optional) ECP1.0 and ECP2.0 polling support, Apple VAS certified

SENSOR

Light Sensor	Ambient Light Automatically adjusts display backlight brightness
Other Sensors	Proximity, accelerometer, Gyroscope, Pressure (WWAN only) eCompass (not available in the base LAN model)

USER ENVIRONMENT

Operating Temp	-20°C to 50°C / -4°F to 122°F
Storage Temp	-40°C to +70°C / -40°F to +158°F
Humidity	5% to 95% non-condensing
Drop Spec	Multiple 5 ft./1.5 m drops to tile over concrete across operating temp (-10°C to 50°C/14°F to 122°F) per MIL-STD 810H Multiple 5.25 ft./1.6 m drops to concrete over operating temp (-10°C to 50°C/14°F to 122°F) with protective boot per MIL-STD 810H
Tumble Spec	550 1.6 ft./0.5 m tumbles (Rugged boot) 550 3.3 ft./1.0 m tumbles optional protective boot
Sealing	IP68 and IP65, with battery per applicable IEC sealing specifications
Vibration	4 g's PK Sine (5 Hz to 2 kHz); 0.04g2/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
Electrostatic Discharge (ESD)	+/-15kv air discharge +/-8kV direct discharge +/-8kV indirect discharge

SOFTWARE SOLUTIONS

BOS™	BOS™ • Provisioning; • Staging; • Kiosk; • Virtual Key; • BOS™ Keyboard; • VoIP; PTT; PTT Essential • EMM; • Wi-Fine (WIFI analyze application) • Secure ID (Secure management solution)
3rd Party Solutions Integration	EMM: Airwatch, MobileIron, Mobicontrol, Mass360, XenMobile PTT: ESChat, Zello, IMPTT, EveryTalk, AirPTT

* Specifications are subject to change upon manufacturer's condition.



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