

M3 SM20 X | F

Rugged Full-Touch Mobile Handheld Computer



- Android 11 GMS/AER (support up to 13)
- Adreno 610 GPU (Enhanced Processing Performance)
- Fast Wi-Fi and BT V5.1
- Anti-fog technology keeps the screen clear and visible (F Ver.)
- Extremely easy data capture
- Smart Battery / Hot Swap
- 16 MP Auto Focus Camera
- Smart Focus Scanner

M3 Mobile's SM20 series is an innovative mobile handheld computer that runs on Android 11. It features a full-touch, rugged design, a high-performance CPU, a custom-optimized display, and a 16MP rear camera to improve work efficiency. With over 20 accessory options and the M3 SPEEDPACK, this device is designed for both indoor and outdoor use. The SM20 series also offers robust security features and multiple scanning options, as well as a smart battery and user-friendly design to maximize productivity.

The SM20F model revolutionizes cold weather operations with its anti-fog technology and low-temperature battery technology, providing seamless and efficient performance that sets a new standard in its class.

Advanced Android platform

The SM20 series is an advanced Android platform equipped with advanced processors and the latest Android version. It's the industry's first to introduce Android 11, providing the best platform support performance. The device also supports up to Android 13, enabling users to prepare for the future with a single SM20 device. M3 Mobile provides security updates to protect the device from the operating system, ensuring its longevity and safety.

Smart Power Systems

Our intelligent battery system utilizes advanced battery management techniques to mitigate performance degradation caused by aging batteries. It enables active management of battery usage, providing up to 8-10 hours of battery time.

Make it easier to use

By utilizing over 20 available accessories, the device can be transformed into a fully functional handheld computer, thereby enabling workers to maximize their productivity. Furthermore, the long-range trigger handle allows for convenient scanning of barcodes from a distance of up to 15 meters.

Fast Wi-Fi and Bluetooth 5.1

The SM20 is equipped with IEEE 802.11ax and 802.11ac Wave, enabling increased speed, capacity, and support for next-generation applications, while providing greater efficiency, flexibility, and scalability to both new and existing networks. Additionally, it supports Bluetooth 5.1, which improves the device's application flexibility for peripherals, reduces power consumption, and extends battery life.

Best application solution, M3 SPEEDPACK

M3Mobile has developed an application solution called the M3 SPEEDPACK, which provides full device management capabilities. By utilizing the StartUp tool in M3 SPEEDPACK, users can easily customize and set up thousands of devices at once by scanning a few barcodes on both their PC and device. Additionally, various application tools within M3 SPEEDPACK can further enhance productivity and efficiency.

NEW Smart Focus Scanner

The Smart Focus Scanner offers scanner operating distances ranging from a minimum of 5.6 cm to a maximum of 12.2m, making it suitable for use in various environments without requiring additional accessories for reading long-distance barcodes. Furthermore, it incorporates a 4MP high-resolution sensor, along with a green laser aimer that enhances visibility and enables quick and accurate barcode reading under different lighting conditions, thereby improving operator efficiency.

Anti-fog technology & low-temperature battery (F Ver.)

M3MOBILE's low-temperature technology design allows the SM20F to operate with a clear, non-fogging screen even at temperatures as low as minus 30 degrees, making it an indicator in the cold chain industry. In addition, the device's special batteries are designed to provide ample working time in low temperatures, enabling it to perform well in even the most extreme environments.

Specification

Physical Characteristics

Dimensions	76.4 x 154.6 x 22 mm
Weight	266 g (including standard battery)
Display	5.0" HD IPS, 1280 x 720 pixels
Touchpanel	Corning Gorilla Glass touch panel supports dual input mode with finger, gloved finger and stylus (conductive stylus sold separately)
Backlight	LED backlight display
Expansion Slot	User accessible MicroSD with 32GB SDHC and up to 512GB SDXC
SIM Slots	1 Mini SIM. 1 eSIM
Network Connections	USB 2.0 High Speed OTG (host/client), WLAN, Bluetooth and WWAN
Notification	Audible tone, multi-color LEDs, vibration
Keypad	Volume + / - key, Camera key, Power key 2 Scanner keys (Left, Right), 4 Bottom keys (Home, Back, Menu, Enter (Scan))
Voice	Internal speaker, Two microphone with noise cancellation; vibrate alert and Bluetooth wireless headset support; High quality speaker phone;
Audio	Built-in speaker and microphone

Performance Characteristics

CPU	Qualcomm® Snapdragon™ 662 (SM6115) Octa core processor 2.0Ghz With Adreno 610 GPU
Operating System	Android 11(Up to Android 14) with M3 Mobile's StartUp for control over GMS and other services; will support future Android releases committed support for Android 14 and Android 15, pending feasibility.
Memory	DDR4 4GB/64GB UFS Flash
Power	All models ship with rechargeable Li-Ion, 3.8V, 4,100mAh smart battery, hot swap support with temporary WWAN/WLAN/Bluetooth session persistence, 6,150mAh Extended batteries(optional) Low temperature battery 4100mAh/6150mAh (Optional)

User Environment

Operating Temp.	SM20 : -4° F to 140° F / -20° C to 60° C SM20F : -22° F to 140° F / -30° C to 60° C
Storage Temp.	SM20 : -22° F to 176° F / -30° C to 80° C SM20F : -40° F to 176° F / -40° C to 80° C
Humidity	5% to 95% RH (Non-condensing)
Drop Specifications	1.2m / 1.8m (with bumper boot)
Tumble Specification	0.5M/1000Cycle, 1M/500Cycle (with Boots)
Sealing	IP65 / IP67 (Optional)
Vibration	Sine: 4g's peak, 5hz to 2khz, Random: .04g ² /hz, 20hz to 2khz
Thermal Shock	-40° F to 158° F / -40° C to 70° C
Electrostatic Discharge (ESD)	+/- 15kV air, +/-8kV contact discharge +/-8kV indirect contact discharge

Interactive Sensor Technology (IST)

Light Sensor	Automatically adjusts the brightness of the display
Magnetometer sensor	eCompass automatically detects direction and orientation
Motion Sensors	Gyro Sensor, Accelerometers: for X,Y, and Z movement, and gyroscopes for measuring the extent and rate of rotation in space
Proximity Sensor	Detect the presence of nearby objects without any physical contact, during a telephone call, proximity sensors play a role in detecting accidental touchscreen taps

Data Capture

Scanning	SE4710, SE55
Rear Camera	Front CAM : 5M pixels, Rear CAM16 M pixels auto-focus (PDAF)
NFC	ISO 14443 A/B, ISO 15693, Mifare, P2P mode and Card Emulation via Host (HCE) support

Wireless WAN Data AND VOICE COMMUNICATIONS (X model only)

Radio Frequency Band	Support VoLTE LTE FDD: 800/850/900/1800/2100/2600 (1/3/5/7/8/20); LTE TDD: 2600/2300/2500 (38/40/41); UMTS/HSDPA/HSPA+: 850/900/2100(1/5/8); GSM/GPRS/EDGE: 850/900/1800 (3/5/8);
GPS	GPS/Glonass/BeiDou/Galileo/QZSS/SBAS/NavIC(IRNSS)

Wireless LAN

Radio	IEEE 802.11 a/b/g/n/ac/d/e/h/i/k/r/w, ax-ready, ac Wave 2
Data Rates	Support VoLTE LTE FDD: 800/850/900/1800/2100/2600 (1/3/5/7/8/20); LTE TDD: 2600/2300/2500 (38/40/41); UMTS/HSDPA/HSPA+: 850/900/2100(1/5/8); GSM/GPRS/EDGE: 850/900/1800 (3/5/8);
Operating Channels (depending on Regulatory)	Channel 1-13 (2412-2472 MHz): 1,2,3,4,5,6,7,8,9,10,11,12,13 Channel 36-165 (5180-5825 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 Bandwidth: 20, 40, 80 MHz Actual operating channels/ frequencies and bandwidths depend on regulatory rules and certification agency.
Security and Encryption	WEP (40 or 104 bit); 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 and EAP-PWD; WPA3 Enterprise 192-bit Mode (GCMP256) — EAP-TLS; Enhanced Open (OWE)
Fast Roam	PMKID caching; Cisco CCKM; 802.11r; OKC

Wireless PAN

Bluetooth	Bluetooth 5.1 Bluetooth Low Energy (BLE) Support
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Regulatory

EMI/EMC	EN 301 489-1; EN 301 489-3; EN 301 489-17; EN 301 489-19; EN 301 489-19; EN 301 489-52;
Electrical Safety	IEC 62368-1, EN 62368-1
RF Exposure	EN 50566; EN 50360

Environmental Compliance

Directive 2011/65/EU, Directive(EU)2015/863

Warranty

Subject to the terms of M3 Mobile's hardware warranty statement, the SM20 series are warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement.

Recommended Services

M3 Mobile speed care Essential and Select: Maximize M3 Mobile device availability, device value and operational efficiency with these fully-featured support services that set the industry bar for support.

Footnotes

Feature available Q3 2022

M3 Speedpack

"M3 Speedpack 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 M3 Mobile-only feature."

Application user manual / Startup PC for SOTI / Startup PC User Manual

<http://www.m3mobile.net/en/products/solution-support/m3-speedpack>

M3 Speedpack is available on Android only. Features may vary by model and a Support Contract may be required.

Service Center

Chun-ui Techno Park 201-610, 202, Chunui-dong, Wonmi-gu, Bucheon, Gyeonggi-do, 420-857, Korea Tel: +82 32 623 0037 Fax: +82 70 4015 6323

Web site <http://itc.m3mobile.net>

E-mail Information Technology Team: it@m3mobile.co.kr

Customer Service Team: cs@m3mobile.co.kr

Accessories

(Appearance can be changed.)



**2 slot charging /
ethernet /
HDMI cradle**



**USB Charging Snap on
/ UHF Snap on**



**8 slot charging /
ethernet cradle**



**Trigger Handle /
UHF GUN**



Holster



Arm Band



Vehicle cradle

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