Smart-Ex® 02

The Next Generation of Rugged and Intrinsically Safe Smartphones

GERMAN DESIGN AWARD WINNER 2020

The Smart-Ex® 02 is the world's first intrinsically safe smartphone for Zone 1/21 and Div. 1 areas that meets Google's sophisticated Android Enterprise Recommended (AER) validation. In addition, it meets all important global hazardous area and regulatory certifications.

The rugged smartphone has a large, high-resolution display, powerful features, and optimized accessories. Its extended temperature range makes it suitable for even the harshest environments. Designed to support 21 LTE frequency bands, the Smart-Ex® 02 has no SIM lock and can be connected to different networks worldwide. An Android™ 11 operating system enables the intrinsically safe device to work safely, quickly, and efficiently.

The ergonomic design and intuitive user interface enhance the user experience, and optimized accessories and peripherals ensure total compatibility with current and future ecom products. Equipped with the most **powerful replaceable battery** (4,400 mAh) on the market, the device can handle unexpectedly long shifts and runtimes.

The Smart-Ex® 02 also sets new standards when it comes to security. The Android Enterprise Recommended certification and regular security updates prevent unauthorized access to confidential personal and company data.

To ensure unlimited, long-term use of the smartphone, ecom offers a three-year service level agreement. Pepperl+Fuchs' global sales and service network provides excellent customer service around the globe. Support from ecom's system engineers and development teams is also available when software requirements change.

2 Cameras (Front and Rear)
- 12 MP camera with autofocus and LED flash + 5 MP camera

Dedicated Keys
- User-programmable buttons for special functions, e. g., camera, alarms

Memory
- 3 GB RAM, 32 GB ROM
- Up to 128 GB additional memory with microSD

Power
- Powerful replaceable battery, lasts an entire working day (4400 mAh)

Extended Temperature Range
- –20 °C … +60 °C

Operating System
- Android™

Connectivity
- Wi-Fi Standard 802.11 a/b/g/n/ac/e/k/r/h
- Wi-Fi 2.4 GHz and 5 GHz support
- Bluetooth® 4.2 incl. BLE
- GPS/A-GPS/GLONASS/ BeiDou/Galileo/NFC

Band
- Supports 21 LTE frequency bands
- Dual SIM allows flexible integration in business environments

Ports
- Waterproof magnetic USB 2.0 connection

More information:
pepperl-fuchs.com/pf-smart-ex-02

android enterprise recommended

Highlights

World's 1st Android Enterprise Recommended smartphone with ATEX/IECEx Zone 1/21, Div.1

21 LTE frequency bands, no SIM lock, and SIM free for flexible use around the world

Individualized service and support around the globe with faster response times

Ultra-rugged, 5" multitouch display can be operated with gloves

Latest Android™ operating system: quick, safe, and efficient

Ergonomic design and an intuitive user interface: dedicated keys like push-to-talk and volume control can be configured individually

Smart-Ex® 02

Smart-Ex® 02 DZ1 Smart-Ex® 02 DZ2

Extensive Range of Accessories and Peripherals from a Single Source

Components such as remote speaker microphone (RSM) and headsets expand the range of applications for the new Smart-Ex® 02 and are perfectly suited for future IIoT applications.

Accessories

- Travel charger TC S02
- Desktop charger DS S02
- Battery charger DC Ex-BP S02
- USB data cable PC S02

Additional accessories can be found at
pepperl-fuchs.com/pf-mcc-accessories

Compatible Peripherals

SM1P
Bluetooth® Headset

Ident-Ex® 01
Barcode scanner/ RFID reader

RSM-Ex 01
Remote Speaker Microphone

Technical Data: Smart-Ex® 02

Operating system	Android™ Latest available Android firmware release For details, see https://www.ecom-ex.com/products/communication/cell-phones/
Chipset	Qualcomm Snapdragon 450 platform
Band	Cellular frequency bands: 4G LTE FDD: B1, B2, B3, B4, B5, B7, B8, B11, B12, B13, B20, B21, B25, B26, B28, B66, B71 4G LTE TDD: B38, B39, B40, B41 3G UMTS: 850/900/1,700/1,900/2,100 MHz 2G GSM: 850/900/1,800/1,900 MHz
Wi-Fi	Wi-Fi 2.4 GHz and 5 GHz support Wi-Fi Standard 802.11 a/b/g/n/ac/e/k/r/h
Memory	3 GB RAM, 32 GB ROM
User memory	SD card up to 128 GB
Applications	Google Play Store certified
Bluetooth® **SMS, MMS (text, image, audio, video)**	Bluetooth® 4.2 incl. BLE (Bluetooth® Low Energy) Support SMS and MMS
GPS, NFC	GPS/A-GPS/GLONASS/BeiDou/Galileo/NFC
Email client	EAS, Gmail, POP3, IMAP
Power	Li-ion 3.7 V/4,400 mAh/16.28 Wh
Operating temperature	–20 °C … +60 °C
Protection class	IP68, MIL-STD-810G
Size	163 × 82 × 22 mm
Weight	Approx. 380 g
Dedicated keys	Alarm/power/multifunction/volume/hardware buttons for Android features
Ports	3.5 mm jack connection with special ecom mounting solution Waterproof magnetic USB 2.0 connection
Display size	12.7 cm (5.0 in)
Display type	Extreme shock- and scratch-resistant Gorilla® Glass with glove touch and wet mode
Microphone	Dual mic solution with three selectable background noise suppression options
Speaker	Loudspeaker with GORE® Protective Vents
Camera	12 MP rear with autofocus and LED flash with flashlight function/5 MP front (optional)
Video streaming	Support MP4, M4V, 3GP, 3G2, TS, WMV, ASF, AVI, FLV, MKV, WEBM
LED flashlight	Yes

Ex-Handy 10

The Next Generation of Rugged and Intrinsically Safe Feature Phones

Ex-Handy 10—
Flexible Communication in Hazardous Areas

Simple, rugged, and practical: the Zone 1/21- and Div. 1-certified 4G/LTE feature phone is ideal for a wide range of applications—from pure communication to lone worker protection and innovative Industry 4.0 applications.

The Ex-Handy 10 is suitable for global 4G communication, supports 21 LTE bands, and offers both keypad and touch-screen operation. The display is made of extremely durable, scratch-resistant Gorilla® Glass (IP68-rated) and can even be operated with gloves. The Ex-Handy 10 is designed for the harshest environments—it is operable in temperatures from –20 °C to +60 °C and provides good readability in direct sunlight.

The feature phone has an optional 8 MP camera, which includes autofocus, LED flash, and flashlight. An advanced rechargeable battery and energy management provide outstanding operating times.

The Android™ operating system offers regular patches and security updates. To ensure unlimited, long-term use of the feature phone, ecom offers a three-year service level agreement. Pepperl+Fuchs' sales and support network provides excellent customer service around the globe. Support from ecom's system engineers and development teams is also available when software requirements change.

Operating System
- Android™

Connectivity
- Wi-Fi 2.4 GHz and 5 GHz support
- Wi-Fi standard 802.11 a/b/g/n/e/k/r/h
- Bluetooth® 4.2 (incl. BLE)
- NFC
- GPS/A-GPS/GLONASS/ BeiDou

LTE
- Supports 21 LTE bands

Ports
- Waterproof magnetic USB 2.0 connection

Camera
- 8 MP camera with autofocus, LED flash, and flashlight function

Dedicated Keys
- User-programmable buttons for special functions, e. g., alarms

Memory
- 2 GB RAM + 16 GB ROM
- SD card up to 128 GB

Power
- Powerful battery lasts an entire working day

android

More information:
pepperl-fuchs.com/pf-ex-handy-10

Highlights

Global approvals for Zone 1/21, Div. 1 and Zone 2/22, Div. 2

Supports both keypad and touch-screen operation

Powerful battery lasts an entire working day

Extremely rugged dust- and waterproof housing with a scratch-resistant display

Supports 21 LTE frequency bands and has no SIM lock for use around the world

Made for use in operating temperatures from –20 °C ... +60 °C

Ex-Handy 10

Ex-Handy 10 DZ1

Ex-Handy 10 DZ2

Extensive Range of Accessories and Peripherals from a Single Source

Components such as remote speaker microphone (RSM) and headsets expand the range of applications for the new Ex-Handy 10 and are perfectly suited for future IIoT applications.

Accessories

- Leather case LC H10
- Leather holster LH H10
- Cradle CR-Ex H10

Additional accessories can be found at
pepperl-fuchs.com/pf-mcc-accessories

Compatible Peripherals

SM1P

Bluetooth®
Headset

Ident-Ex® 01

Barcode scanner/
RFID reader

RSM-Ex 01

Remote Speaker
Microphone

Technical Data: Ex-Handy 10

Operating system	Android™ Latest available Android firmware release For details, see https://www.ecom-ex.com/products/communication/cell-phones/
Chipset	Qualcomm Snapdragon MSM8909 platform
Band	Cellular frequency bands: 4G LTE FDD: B1, B2, B3, B4, B5, B7, B8, B11, B12, B13, B20, B21, B25, B26, B28, B66, B71 4G LTE TDD: B38, B39, B40, B41 3G UMTS: 850/900/1,700/1,900/2,100 MHz 2G GSM: 850/900/1,800/1,900 MHz
Wi-Fi	Wi-Fi 2.4 GHz and 5 GHz support Wi-Fi Standard 802.11 a/b/g/n/e/k/r/h
Memory	2 GB RAM + 16 GB ROM
User memory	SD card up to 128 GB
Applications	Google Play Store certified
Bluetooth® **SMS, MMS (text, image, audio, video)**	Bluetooth® 4.2 incl. BLE (Bluetooth® Low Energy) Support SMS and MMS
GPS, NFC	GPS/A-GPS/GLONASS/BeiDou/NFC
Email client	EAS, Gmail, POP3, IMAP
Power	Li-ion 3.7 V/4,400 mAh/16.28 Wh
Battery life	Up to 600 hours standby
Operating temperature	–20 °C … +60 °C
Protection class	IP68, MIL-STD-810G
Size	148 × 67 × 24 mm
Weight	Approx. 330 g
Dedicated keys	Power/multifunction/volume/hardware buttons for Android features
Ports	3.5 mm jack connection with special ecom mounting solution Waterproof magnetic USB 2.0 connection
Display size	6.6 cm (2.6 in)
Display type	Extreme shock- and scratch-resistant Gorilla® Glass with glove touch and wet mode
Microphone	Dual mic solution with three selectable background noise suppression options
Speaker	Loudspeaker with GORE® protective vents
Camera	8 MP rear camera with autofocus and LED flash (optional)
Video streaming	Support MP4, M4V, 3GP, 3G2, TS, WMV, ASF, AVI, FLV, MKV, WEBM
LED flashlight	Yes