



USER GUIDE

Document Number: SSE-0000101061-03

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SECTION 1

1. Knowing your biometric device

This guide provides information on using your biometric device and accessories.

It presents you the necessary information about use, installation, maintenance, safety and security recommendations.



NOTE

Fingerprint sensor is FBI and STQC certified.

Limited Warranty

The device comes with a limited warranty of one year from the date of original purchase.



SECTION 2 DO'S and DON'TS

Do's

Use only the provided cable and charger that came with your device.



Use only microUSB port for charging the device.



Please back-up your files. The manufacturer is not responsible for the deletion of files after damage or repair of the device.



Please keep the device away from excessive moisture and dust.

Always turn the volume down before plugging in the earphones and use only the minimum volume setting necessary to hear your conversation.

Always clean the device with a dry and clean microfiber cloth. Use an appropriate screen cleaner, if required.

1	WARNING	Use only the power supply included with the product to ensure best performance and safety. Maintenance should only be carried out by Morpho authorized technician.
	L	Failure to comply with these instructions will void the manufacturer's responsibility.
<u>.</u>	WARNING	The device is neither waterproof nor water resistant. Please keep it away from water.
	ADVICE	Charging with the standard adapter using AC mains will be faster compared to charging the device using a USB host (for e.g. Personal computer).



Don'ts



Do not put the device in high temperature environment, especially in car parked in the sun with its windows rolled up.



Do not press power button on the device if the device is wet or do not touch adapter or power cord with wet hands. There is risk of electric shock.

Do not drop, bend, puncture, insert foreign objects, or place heavy objects on your device. Sensitive components inside might become damaged.



Do not shake the device violently, especially the Screen part.

Do not disconnect the device from PC when downloading, uploading or formatting.



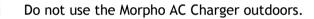
Do not use alcohol, thinner or benzene-chemical to clean the surface of the device.

Do not attempt to open the device, it will void manufacturer's warranty and any additional care pack(s) purchased.



Do not disassemble or attempt to repair the unit or components.

Do not attempt to charge the device from USB Type A port.





WARNING

Fingerprint sensor cover should not be opened. If the Fingerprint sensor doesn't work, please contact Morpho support.



SECTION 3 PRESENTATION

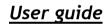
1. Hardware Presentation

Contents of the box

The following pictures present all the components delivered in the box.



Main device



SAFRAN



inte Number : 522-5200 totale -Organi Inue : 2013



<u>Universal Charger kit</u>

- 1) Universal Charging unit with USB Cord
- 2) USB Cord
- 3) Earphones

Disclaimer: Product images are for illustration purposes only. Actual product may differ from the images shown in the user guide. Specifications are subject to change without notice. Morpho may make changes to specifications and product descriptions at any time, without notice.

SAFRAN Morpho Presentation

User Guide

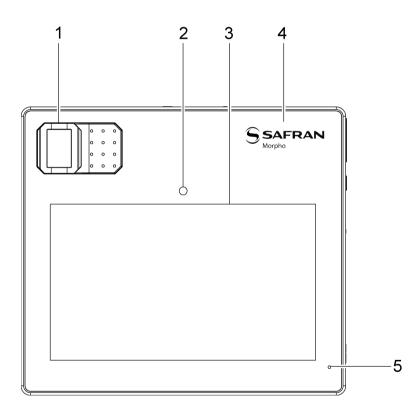


SUGGESTION Keep the packaging in case you would need to re-use it to ship the product back for maintenance or otherwise.

Overview of the device

FRONT SIDE

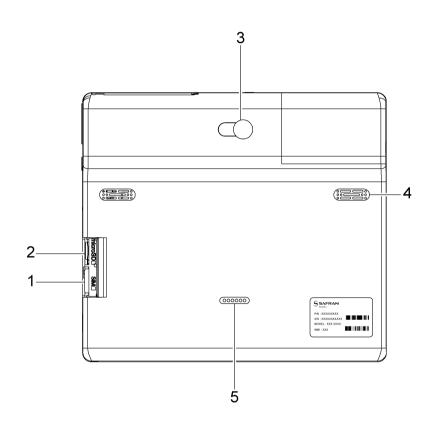
#	Device	Use
1	Biometric sensor	To capture fingerprints.
2	Front camera	To capture pictures and videos.
3	Touch screen	To interact with the device.
4	Contactless reader	To scan various electronic documents.
5	LED charging indicator	To indicate that the device battery is charging or fully charged LED Red color - Charging LED Green color - Fully charged.





BACK SIDE

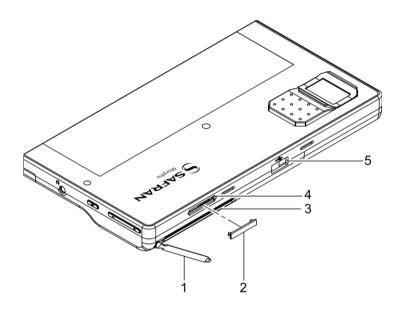
#	Device	Use
1	SIM card slot	To insert or remove the SIM card.
2	microSD card slot	To insert or remove the microSD card.
3	Rear camera (5MP) with LED flash	To capture pictures and videos.
4	Loud speaker	Audio output.
5	USB docking connector	





TOP SIDE

#	Device	Use
1	Cover for Contact Smartcard Reader	
2	Cover for SAM slot	
3	Contact smartcard reader	To read smart cards.
4	SAM slot	To read a SAM card with encryption.
5	USB host	To connect USB peripherals, e.g. keyboard.



RIGHT SIDE

#	Device	Use
1	Microphone	Audio input for the device.
2	MicroUSB	To connect the device to a PC or for battery charging.
3	Audio jack (3.5 mm)	Audio output/input peripheral.
4	Power ON / OFF button	To switch ON / OFF the device.
5	Volume UP / DOWN keys	To increase or decrease the volume.



Display Overview

System bar

lcon	Name	Function
\rightarrow	Back	Return to the previous screen.
\Box	Home	Return to the Home screen.
	Recent Apps	Open the list of recent applications and to close applications running in background.

Indicator icons

lcon	Definition		
(((-	Wi-Fi connected		
*	Bluetooth feature activated		
Ó	GPS-based services in use		
↓ ↓	Connected to computer		
\rightarrow	Airplane mode		



SECTION 4 GETTING STARTED

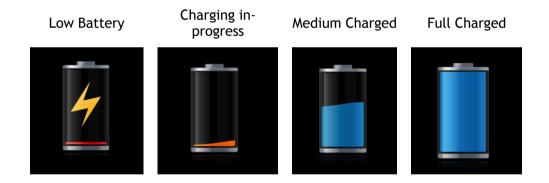
1. Battery

Battery type

• Your device has an internal, lithium polymer rechargeable battery.

Charging indications

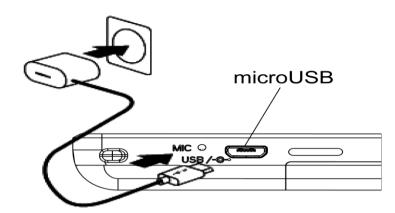
The following pictures present the indications during charging the device at OFF mode:



Charging the battery

- You must fully charge the battery before using the device for the first time. A discharged battery recharges fully in approximately 4-5 hours.
- Use only the provided cable and charger that came with the device.
- Gently insert the microUSB part of the battery adaptor into the microUSB slot on the device, and connect the other side with the power socket.
- Do not force the insertion of the microUSB plug. Make sure that the orientation of the microUSB connector is correct.
- The screen will display the battery charging indicator. It shows the charging process.
- Observe the charging indicator LED on your device to know when it is completely charged. Red LED light - The device is charging Green LED light - Device is fully charged.





1	WARNING	Charging the battery may take longer if you are using the device as it charges.
	NOTE	In order to keep the battery working in the best condition, please pay attention to the following advices:
		 Please do not charge under high temperature.
		• Please make sure to charge the power once per two weeks if you do not use this device for a long time.
	NOTE	If the device is low on power, it may display indicating that it needs to charge for up to 30 minutes before you can use it. Also, in this condition the fingerprint sensor and other interferences line smart card reader and contactless card reader may not function.
	NOTE	It may also charge slowly when you connect it to a USB 2.0 port on your computer.

How to save battery

- 1. By ensuring un-used communication features or radio links are 'OFF'.
- 2. Use Auto-brightness.
- 3. Usage of sleep mode.



2. Switching on/off and Unlock the device

Switch On and Unlock

NOTE

Press and hold the "Power" key for 3 seconds to switch ON the device, and in about 20 seconds the device will display the home screen.

When the device is locked, please press and pull the icon \square to touch the circle line. The lock icon change into the unlock \square icon.





Different screen/device unlocking mechanisms can be configured through the Settings menu. Go to Settings → Security

The different screen unlock mechanisms are Slide, Pattern, PIN and Password.



Power Saving Mode and Lock Screen

- Pressing the "POWER" key shortly after starting up, system will enter in standby mode.
- Pressing the "POWER" key, system will recover from standby mode.



NOTE If the device does not start, the battery might be low. Make another attempt after recharging the battery.

Switch Off

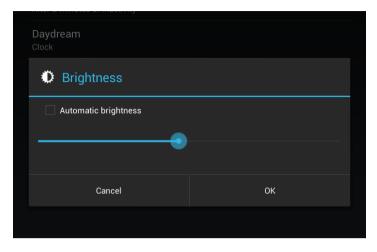
• When the device is ON, press and hold the "POWER" key for 3 seconds to shut it down.

3. Definition for the icons of the Functions

lcon	Function
\mathbf{D}	Back to main menu
	Show current power status
Ĵ	Back
8	Google search
A	Notifications
	Menu
*	Note when the system finds new devices
	Menu for Functions Block
Ŷ	Speech to text
8 😴 🖉 🖿 17:38	Bluetooth, Wi-Fi, EDGE/3G, Power, Time
↓	Status Bar



4. Touch Screen



The touch screen is a 7" capacitive touch screen. In appropriate applications, one can use up to five fingers at the same time to interact with your device.

Its brightness can be modified in Settings \rightarrow Display \rightarrow Brightness as well as the Sleeping timeout. Use the best configuration in order to save the battery.



The touch screen is equipped with a screen guard protecting the screen from scratches and marks. In case the screen guard is damaged, please contact Morpho support for the replacement of screen guard.

5. Installing Modules

NOTE

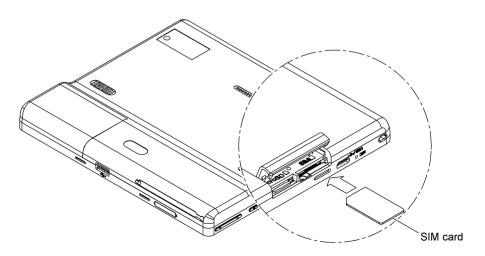
SIM CARD:

Turn the device OFF pressing the "POWER" key until a dialog box appears asking the authorization to Power Off.

Put the device screen down on a flat and clean surface like a white sheet of paper or a soft and clean tissue.

Open the SD and SIM Card Cover at the rear.

Introduce the SIM card with the golden contacts down, and as shown on the figure below.





The USB cable should be removed from the device during installing modules



The slot is a push-push connector: push to insert, push to extract. Push the SIM card completely and release your finger, the SIM must remain into the slot and appear about 1 mm out. To extract it, if it is necessary, you will have to push it back and release your finger again.

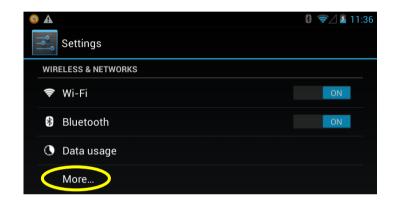
You can now gently close the SD & SIM Card Cover and Power ON your device.

You must configure the Settings of the Mobile Communications in conformity with your local telecom operator.



ADVICE

Radio links like Wi-Fi will drain more battery reducing battery time in low network areas.





Please note that your telecom operator may charge extra or according to current bill plan on 2G or 3G connection.

microSD Memory Card:

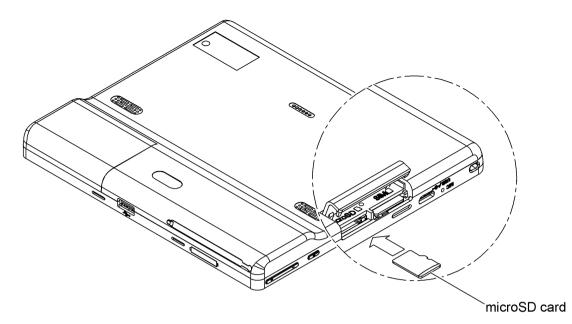
To insert or remove a microSD Memory Card, proceed as follows:

Be sure to insert the card in the correct direction and orientation. To take it out, just push the micro-SD card, and then the slot releases the card and pops it out automatically.



WARNING Do not pull out the card when operating (reading, copying), or it may cause data error. Do not use the microSD card under high temperature condition. Keep the microSD card far from liquid and erosive materials.





SAM:

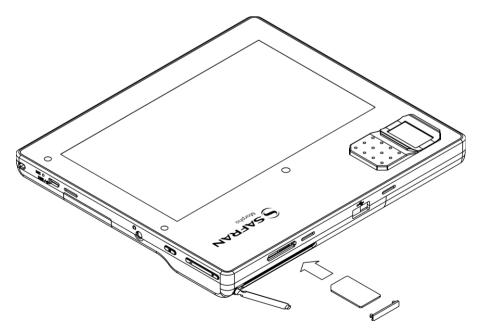
Turn the device OFF pressing the "POWER" key until a dialog box appears asking the authorization to Power Off the device.

Put the device screen down on a flat and clean surface like a white sheet of paper or a soft and clean tissue.

Open the cover for SAM slot at the top of the device.

Introduce the SAM card with the gold contacts facing down as shown on the figure below. Push the SAM card into the slot until it clicks into the place.

To remove the SAM card, push it gently into the slot. Release your finger when SAM card clicks out of place.





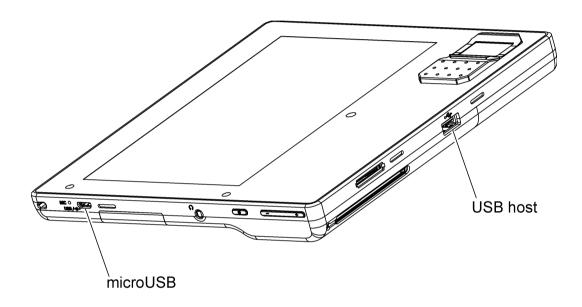
6. Interfaces available on the device

(1) USB Host Type A connector

The USB connector on the device is used as USB Host.

(2) MicroUSB Type B 2.0 OTG connector

The micro USB connector on the device is used as USB Host and Slave.

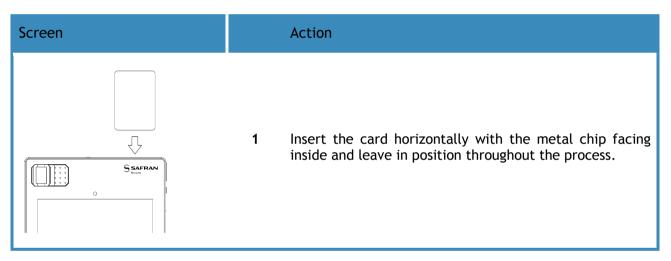




SECTION 5 INSTRUCTIONS FOR USE

1. Scanning cards

Contact Smartcard Reader: To scan the card through smart card proceeds as follows:



2. Contactless scanning

Contactless: To scan the card through contactless, proceed as follows:

Screen			Action
		1	 Flash the card on or closer to SAFRAN Morpho logo. Note: The types of NFC tags which can be read by the contactless sensor are given below. 1) Type 1 & 2 (based on ISO/IEC 14443-A) 2) Type 3 (based on JIS 6319-4, FeliCa) 3) Type 4 (based on ISO/IEC 14443 standard series, Comm Interface A or B)
	the fro	ont face	rd reader antenna is located below the product logo on of your device. Flashing electronic document in this area results.
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3. USB Host Type A connector

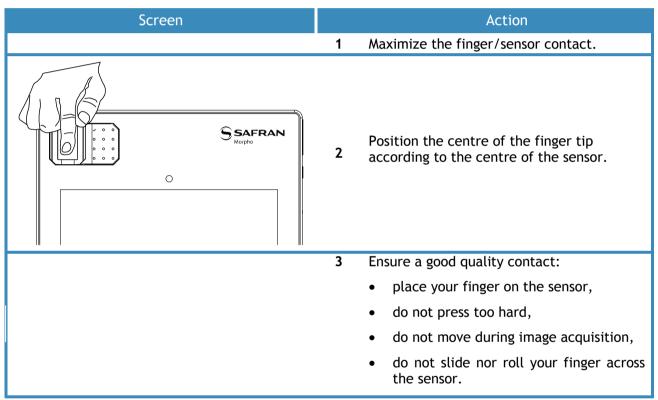
You can connect the USB peripherals, e.g. keyboard, to your device. You can also Plug the external disk into the HOST port. Use the file manager to navigate into your files. Go to "Settings/Storage" to unmount the disk before unplugging it.

4. MicroUSB Type B 2.0 OTG connector

You can use it to connect your device to a PC or for battery charging.

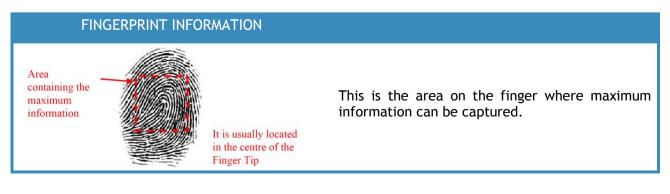
5. Capturing Fingerprints

To get a good quality of image, one needs to



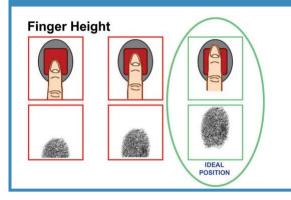
Placement of Finger on the biometric sensor of the device:

Place the finger on the fingerprint sensor of your device as follows:



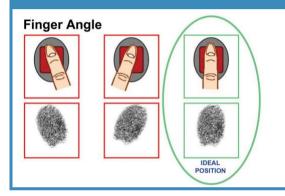


FINGER POSITIONING - FINGER HEIGHT



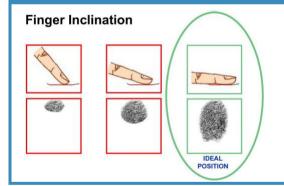
To get maximum information, keep your finger in the ideal position on the sensor.

FINGER POSITIONING - FINGER ANGLE



To get maximum information, keep your finger in the ideal position on the sensor.

FINGER POSITIONING - FINGER INCLINATION



To get maximum information, keep your finger in the ideal position on the sensor.

FINGER POSITIONING - FINGER ROTATION Finger Finger

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SECTION 6 RECOMMENDATIONS

1. Safety

Powering down the device

Switch off the device by pressing power ON/OFF button for 3 seconds.

Battery

Your device is fitted with an internal Lithium-Polymer (Li-Po) which should only be accessed by a qualified Morpho authorized technician.

The device is fitted with battery specially designed for the operation.

- Only use the appropriate chargers and batteries listed in the Morpho's catalogue.
- Do not disassemble.
- Batteries in "end of life" must be disposed of at the appropriate sites.

The lifespan depends on:

• Features

WARNING

- Cycle number of charge and discharge
- The maximum operating temperature is 40°C



- There is a risk of explosion if the battery is incorrectly replaced.
 - Never place the battery or the device next to a warm source or in fire.

In case of battery issue:

- It is strictly forbidden to ship by air a product with a defective battery (swollen battery). It is only possible to ship it by land or sea transportation,
- Do not group the defective product together (not more than a few products together),
- Isolate and store defective products in a aerated area, in metallic barrels or metal container,





Recommendations

- Do not manipulate the defective product (e.g. do not try to extract the battery of the product),
- Recycle all defective products,
- Isolate the product in case of abnormal heat, or erratic charging behavior (the charge indicator does not increase in the time)

Charging considerations:

Charging devices might become warm during normal use. Ensure that you have adequate ventilation around the charging device. Unplug the charging device if any of the following occurs:

- The charging device has been exposed to rain, liquid, or excessive moisture.
- The charging device shows signs of physical damage.
- You want to clean the charging device.
- Do not charge the device near dangerous material, explosive or inflammable product

Morpho is not responsible for the performance or safety of products not manufactured or approved by Morpho.

NOTE

The optimal conditions for battery charging are as follows:

- Charge the device away from any external heat source (radiator, sun, enclosed area...)
- The optimal temperature is between +0°C (32°F) and +35°C (95°F)

If the internal temperature of the device exceeds the recommended charging temperature, you may see an alert on screen and charging may stop. The charging will resume when temperature is within the optimal range.

This behavior doesn't affect the device operation and safety for the end user.

Head phone Jack

NOTE

The head phone jack must comply with standards and regulations in the country where used.



Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphone and headphone output voltage and the sound pressure level. Therefore, to protect your hearing, adjust the equalizer to an appropriate level.

On airplanes

The device must be switched off. In case you use the device, make sure that all radio links or other communication links are OFF.

Non-compliance with these safety rules may result in legal action and/or a ban on later access to cellular network services.

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Explosion areas

Some regulations restrict the use of radio equipment in chemical plants, fuel depots and any site where blasting is carried out. You are urged to comply with these regulations.

Electronic health appliances

This device is a radio transmitter which may interfere with health appliances, such as hearing aids, pacemaker, hospital equipment, etc.

Your device contains small parts that can be a choking hazard to small children. Additionally, the glass screen can break or crack if dropped on or thrown against a hard surface.

When your device is turned on or the battery is charging, some parts might become hot. The temperature that they reach depends on the amount of system activity and the level of charge in the battery. Extended contact with your body, even though clothing, could cause discomfort or even a skin burn. Avoid keeping your hands, your lap, or any other part of your body in contact with a hot section of the device for any extended time.

In case of a medical emergency, please consult a physician or seek an appropriate medical aid for an appropriate advice.

2. Batteries

Do not throw your device in municipal waste. This product has been designed to enable proper reuse of parts and recycling. The symbol of the crossed out wheeled bin indicates that the product should not be placed in municipal waste. Check local regulations for disposal of electronic products.

3. FCC conformity declaration

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.



NOTE

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.



NOTE This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



FCC RF Exposure Information and Statement

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue. Device types: E110B (FCC ID: 2ACJ8E110B) has also been tested against this SAR limit. The highest SAR value reported under this standard during product certification for properly worn on the body is 0.707W/kg. This device was tested for typical body-worn operations with the back of the handset kept 0 mm from the body. To maintain compliance with FCC RF exposure requirements, use accessories that maintain a 0 mm separation distance between the user's body and the back of the handset. The use of belt clips, holsters and similar accessories should not contain metallic components in its assembly.

The use of accessories that do not satisfy these requirements may not comply with FCC RF exposure requirements, and should be avoided

This device was tested for typical body-worn operations. To comply with RF exposure requirements, a minimum separation distance of 0 mm must be maintained between the user's body and the handset, including the antenna. Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.



SECTION 7

TECHNICAL SPECIFICATIONS

-	Technical Specifications		
PHYSICAL CHARACTERISTICS	PHYSICAL CHARACTERISTICS		
 Weight (with Smart card, Finger Print sensor and battery) 	• ~500 g.		
2. Dimensions (L x W x H)	 170 x 190 x 15 mm (H = 20 mm at the top). 		
3. Display	• 7". Scratch resistant glass WSVGA, Resolution - 1024 X 600 IPS technology (wide readability).		
4. Touch Panel	Capacitive multi-touch.		
5. Connectivity	 Two USB interfaces a) 1 microUSB Type B 2.0 OTG connector. b) 1 USB Host Type A connector. 		
6. Battery Pack	Rechargeable Li-Polymer 5400 mAH.		
7. Notifications	LED, Audio, Vibration.		
8. Audio	Stereo speakerMicrophone		
	• Headset connector (3.5 mm jack).		
9. Video Format Support	• H.263, H.264, MPEG-4, OGG (High Definition image and video hardware accelerator).		
10. Keypad Options	On-screen keyboard.		
PERFORMANCE CHARACTERISTICS			
1. Processor	• Dual Core Cortex A9 1 GHz with NEON support.		
2. Operating System	Android 4.1.2, enhanced with enterprise functionality.		
3. Memory	 1GB RAM, 8GB Flash, user accessible microSD card slot (supports up to 32GB). 		



		Technical Specifications			
WIREL	ESS CONNECTION				
1.	Wireless	• SIM slot supports 2G and 3G network (voice and data).			
		• Wi-Fi 802.11 b/g/n and Low Energy BT 4.0.			
2.	Datalinks	• GPRS, EDGE, UMTS, HSPA (HSDPA and HSUPA).			
3.	GPS	GPS/QZSS/SBAS -165 dBm tracking sensitivity.			
		• A-GPS and EPO (Extended Prediction Orbit 30 Days).			
DATA	CAPTURE				
1.	Front facing Camera	• 1.3MP.			
2.	Rear facing Camera	• 5.0 MP Auto Focus with LED Flash.			
3.	Signature Capture	• Pen stylus support (Capacitive).			
SENSO	RS				
1.	Gyroscope	 Maintains orientation based on principles of conservation of angular momentum. 			
2.	Ambient light sensor	• Automatically adjusts display brightness, keypad and display backlight.			
3.	Vibration Sensor/Motor	Enables to keep the device in vibration mode.			
4.	Accelerometer	Enables motion-sensing apps.			
5.	Fingerprint sensor	• Optical, 500 dpi, 256 grayscale, 14x22 mm capture area.			
		FBI PIV IQS and STQC certified.			
CARD	INTERFACES				
1.	Contact Card	• ISO 7816 USB interface.			
2.	Contactless/NFC	• EMV Contacless ISO 14443 A/B Reader.			
		 NFC: all 4 types of tags (Integrated) ISO/IEC 18092 Reader/Writer. 1) Type 1 & 2 (based on ISO/IEC 14443-A) 2) Type 3 (based on JIS 6319-4, FeliCa) 3) Type 4 (based on ISO/IEC 14443 standard series, Comm Interface A or B). 			
		Contactless: Supports MIFARE Classic - Ultra Light DESFire.			
3.	SAM Slot	• Enhances the security and cryptography performance. Enables to perform secure transactions.			
SECUR	SECURITY				
1.	Security Element	Tamper resistant secure element.			
2.	Crypto-processor	• H/W based security schemes - 2048 bit PKI, 256 bit AES, Base64, SHA 256, 3DES.			
3.	Fingerprint sensor	On-board as per CBM E2 standards.			



Annex

SECTION 8

Accessories list

Universal adapter with USB Cord



Earphones





USB Cord

Annex



Protective Screen Guard



1		
	V	
	4	

ADVICE

Make sure that the Screen Guard is intact on your device. The Screen Guard protects the touch screen of the device from scratches and marks.









NOTE

The protective sleeve is not part of the standard equipment.



Glossary

SECTION 9 GLOSSARY

1. Abbreviations

Abbreviations		
EDGE	Enhanced Data rates for GSM Evolution	
FBI	Federal Bureau of Investigation	
GB	Giga bytes	
GPRS	General packet radio service	
HSPA	High Speed Packet Access	
IEC	International Electrotechnical Commission	
ISO	International Organization for Standardization	
LED	Light Emitting Diode	
MP	Mega Pixel	
MPEG	Moving Picture Experts Group	
NFC	Near Field Communication	
OTG	On-The-Go	
PC	Personal computer	
RAM	Random Access memory	
SAM	Secure Access Module	
SD	Secure Digital	
SIM	Subscriber identity module	
STQC	Standardization Testing and Quality Certification	
UMTS	Universal Mobile Telecommunications System	
USB	Universal Serial Bus	

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