Installation Manual

IM300

ENCRYPTED PIN PAD

PAX TECHNOLOGY LIMITED

PAX TECHNOLOGY LIMITED reserves the right to change product specifications without prior notification.

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1. Product Description

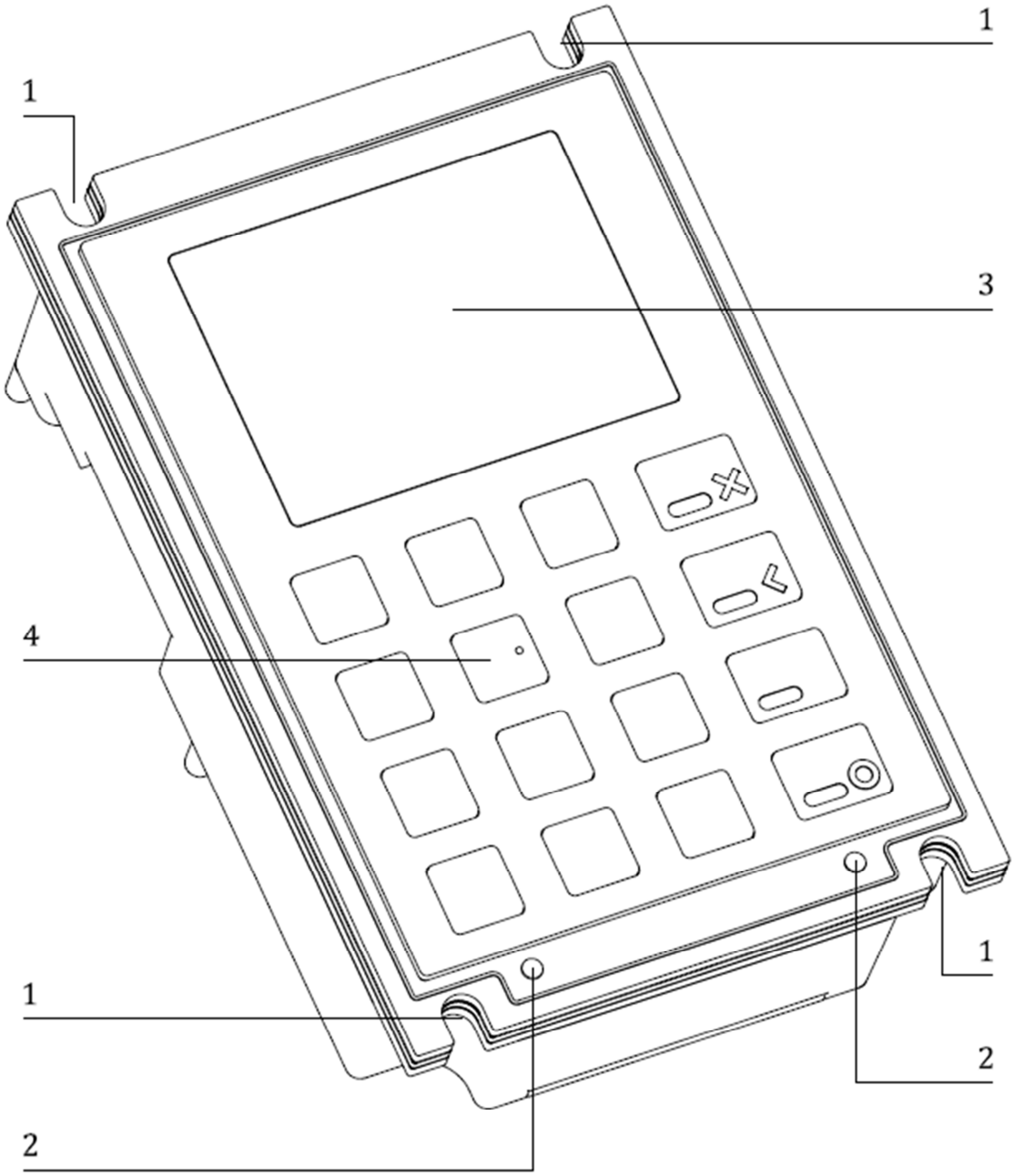

Figure 1: Front view

1. Mounting Points
2. Tamperproof Switches
3. Protective Lens & LCD Screen
4. Stainless Steel Keys

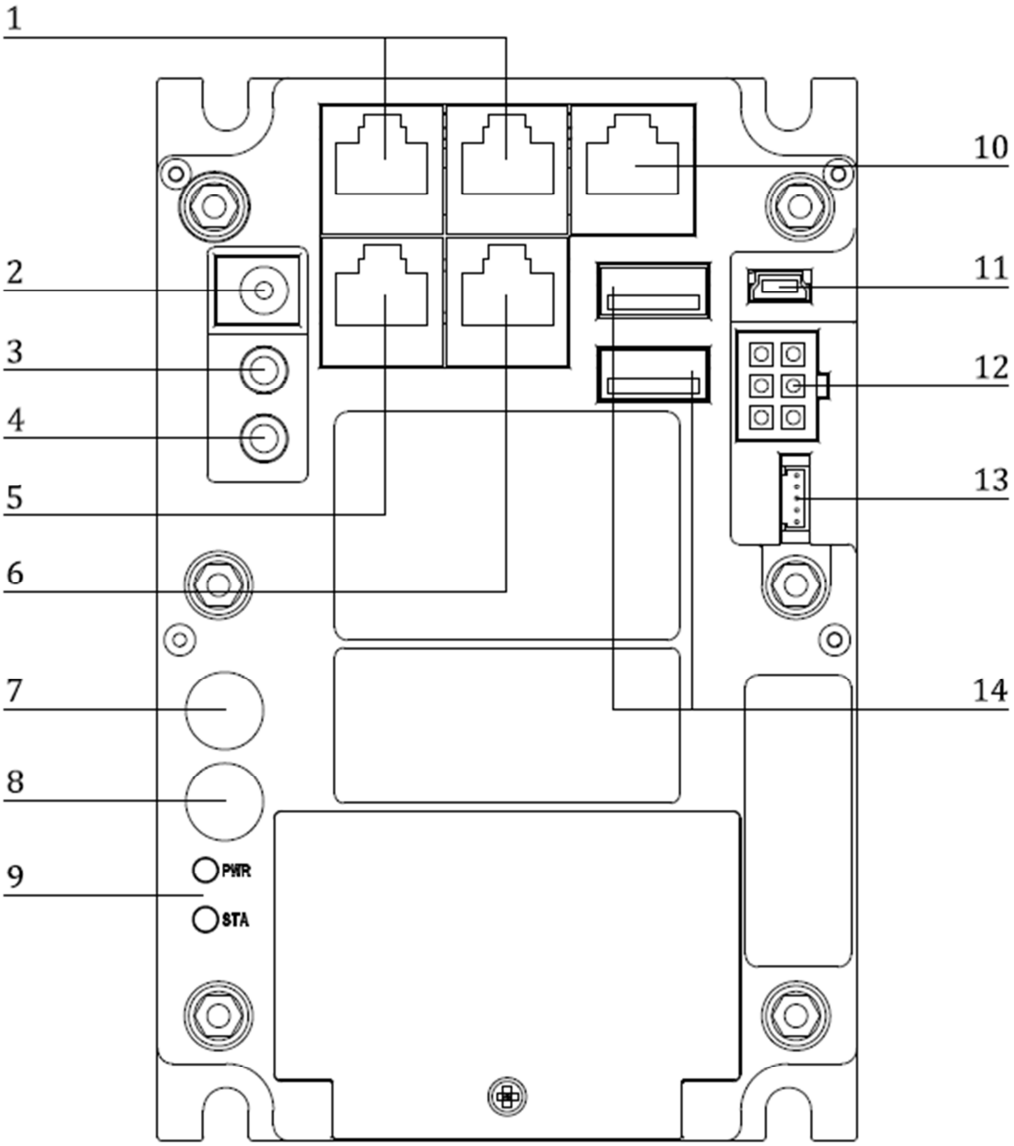

Figure 2: Back view

1. RJ45 ports (RS232)
2. 6.3mm DC power jack (12VDC-Output)
3. Microphone jack
4. Earphone jack
5. Ethernet port
6. RJ45 port (RS232)
7. SMA connector
8. WIFI/BT antenna connector
9. LED indicators
10. RJ45 port (RS232)
11. USB 2.0 Mini-B
12. MDB port
13. Temperature control (reserved)
14. USB 2.0 Type-A

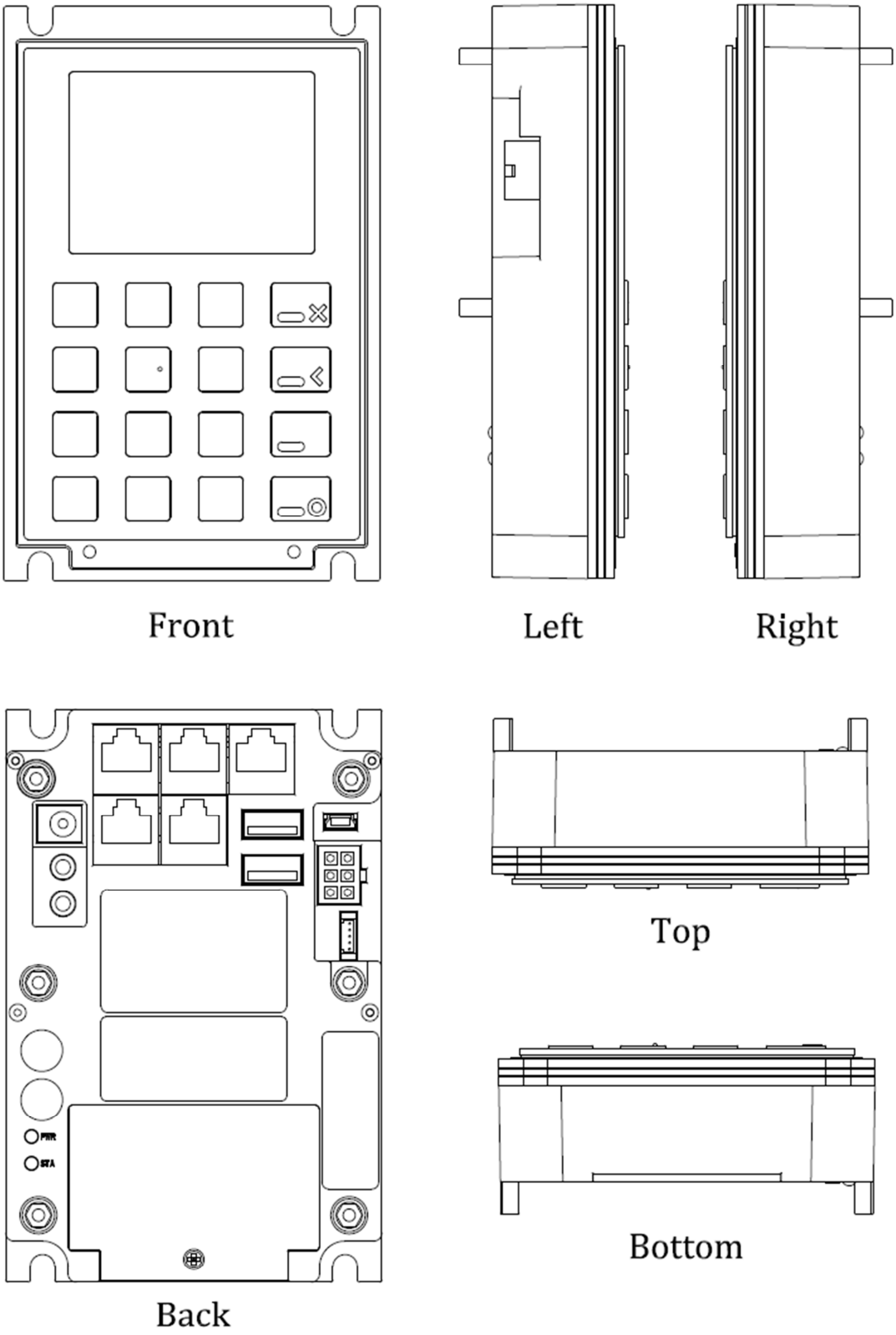

Figure 3: View from all angles

2. Installation

1) SAM& SIM Cards

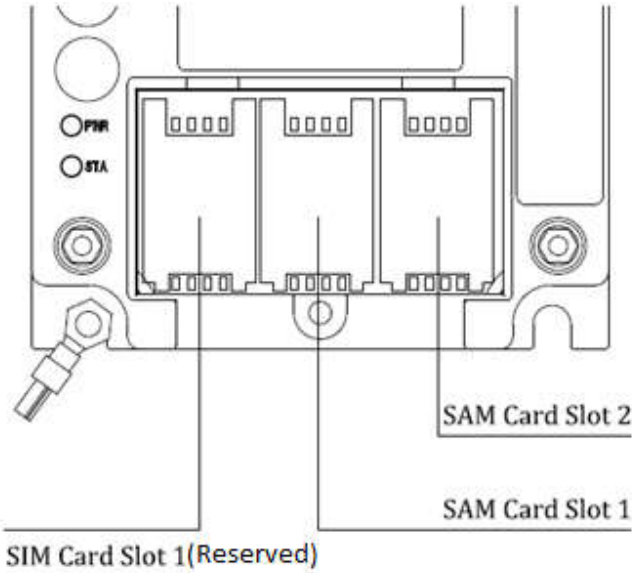

Figure 4: SAM and SIM(Reserved)card mounts

Unscrew the SAM card cover to remove it. Open the mount and insert the card into the slot with the contacts facing downwards and the clipped corner of the card to the upper right, then lock the mount with the card inside and replace the cover.

2) Recommended Device Connection

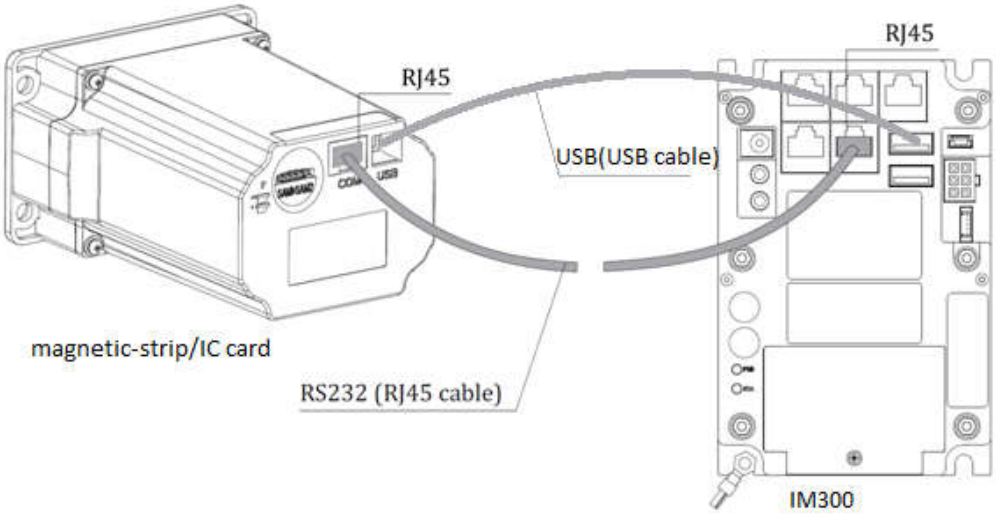

Figure 5: Connecting the IM300 to amagnetic-strip/IC card reader

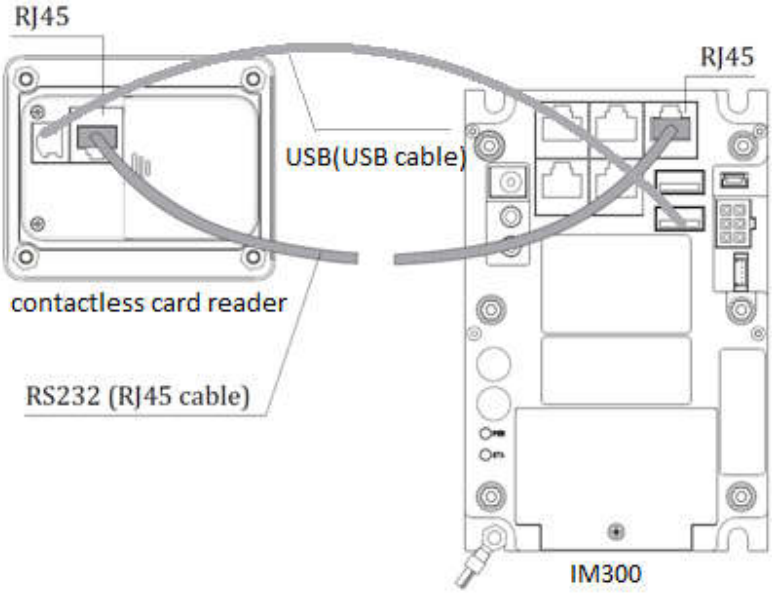

Figure 6: Connecting the IM300 to a contactless card reader

The IM300 can be connected to a magnetic-strip/IC card reader(IM500 of PAX is recommended) as well as a contactless card reader (IM700 of PAX is recommended) through the use of RS232 serial ports using a RJ45 cable as indicated in Figure 5 and Figure 6. The IM300 both controls and powers the magnetic-strip/IC card and contactless card reader. If the IM300 is used to link to devices aside from the IM500 and IM700, the user must first confirm that the software and hardware for the connection is suitable.

3) This product needs to be installed in a professional way:
   a) Antenna installation for WIFI/BT:

NO.8 SMA connector is for the WIFI/BT antenna connection. The user must follow the antenna parameter if they want install WIFI/BT antenna to IM300 :

Frequency： 2.400 GHz ~ 2.497 GHz

Gain： 2.400 GHz ~ 2.497 GHz 0dBi

Antenna radiation efficiency： 2.400 GHz ~ 2.497 GHz >50%

Polarity： vertical

VSWR: 2.400 GHz ~ 2.497 GHz <2.0

Directivity： 2.400 GHz ~ 2.497 GHz <5

Connector： SMA (Male & gold plated)

If the above parameters are satisfied, the user can use the antenna that satisfies the condition with the IM300.

Note: WIFI/BT antenna information used for the test collocation is as follow:

Brand name: GUOXU;

Model name: GX086S;

Antenna type: Monopole

Antenna Gain: 0 dBi

b) Special used for industrial and commercial purposes:
   It should be sold to the dealers authorized by PAX and installed by the professional person;
   It should be used in the unattended machine and cannot be available to average consumer because of its security and applicability;
   This device has got the PCI 5.X certification and is provided with Anti-Remove function which means the necessity of professional installation.

c) Other professional installation requirements:
   NO.8 SMA connector is designed for the WIFI/BT antenna connection. The user can connect the antenna to IM300 via the port. The antenna should be installed as high as possible on the unattended machine.
   Installation requires the special training that PAX can provide including programming, access to keypad, field strength measurements made and so on.

3. Instructions

1) Switching the IM300 on and off

Switch on: Connect the IM300 to an appropriate power terminal either via the power cable or the MDB cable (make sure to have the appropriate voltages and pinouts).

Switch off: Disconnect the IM300from whatever power terminal it is connected to.

2) Using the Keypad

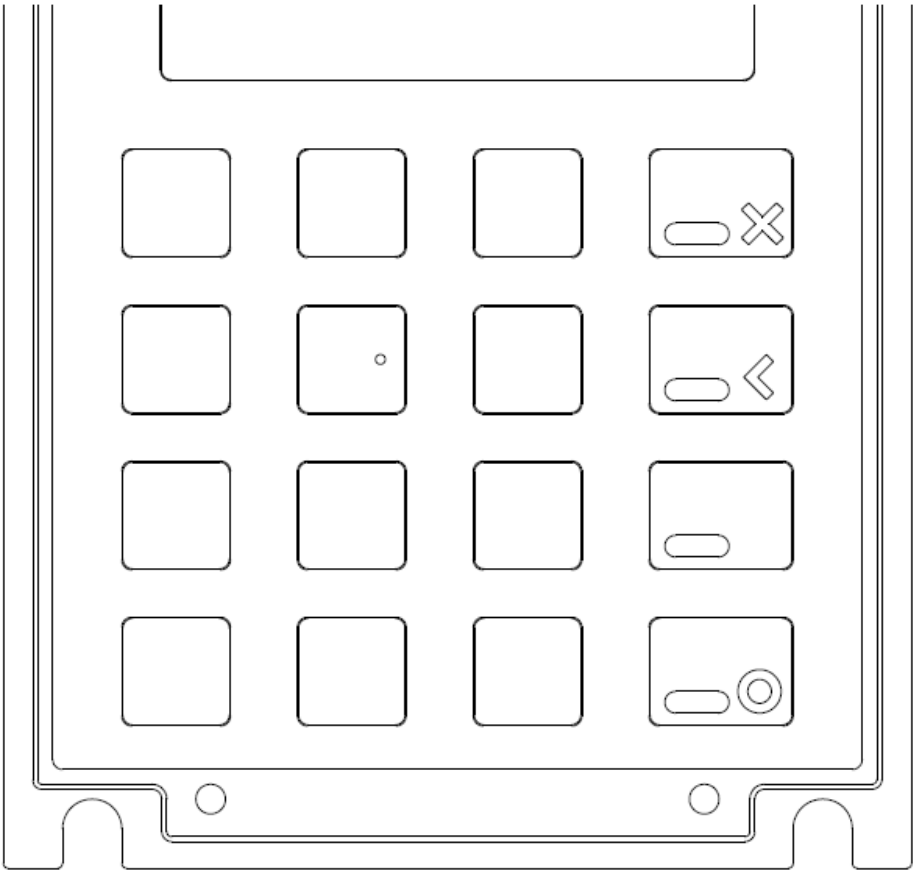

Figure 7: IM300 keypad

The IM300 contains a standard numeric keypad; 1 through 9 incrementing through three rows, with 0 being in the bottom

center fourth row (center-left in Figure 7 because of the functional keys in the last column). The functional keys from top to bottom are: cancel, clear, help, and enter. The two up and down navigational keys are respectively on the bottom center-right and the bottom far-left. Specific actions performed by the keys are context specific should be intuitive given whatever is shown on the screen.

4. Specifications

CPU:	1 GHz Application Processor
Operating System:	Linux
Memory:	4Gb DDR3 4Gb NAND Flash
Display:	2.8" TFT color display 320 x 240 pixels
SAM Slots:	2 slots, ISO/IEC 7816
Peripheral Ports:	4 RS232 (RJ45) 1 Ethernet (RJ45, 100Mb/s) 2 USB 2.0 (USB Type-B) 1USB 2.0 (USB Mini-B) 1 MDB port 1 microphone jack 1 earphone jack 1 1.25mm 5 pin socket
WIFI:	2.4GHz 802.11 b/g/n
Bluetooth:	Bluetooth V4.0
Battery:	1 Nickel button battery, 600mAh, 3.0V
Power Supply:	Input: 9VDC~42VDC (MDB) Output: 5VDC (USB2.0 Type-A) x 2 12VDC (RS232 via RJ45) x 2

Buzzer:	≥80dB
Operating Temperature:	-20°C~70°C
	-4°F ~158°F
Storage Temperature:	-30°C~70°C
	-22°F ~158°F
Relative Humidity:	5%~95% (without condensation)
Dimensions:	92mm x 33.8mm x 140mm

5. Maintenance and Usage

1) Do not damage any of the cables; if a cable becomes damaged, immediately discontinue its use and seek a replacement.
2) Make sure the terminals the power or MDB cables connect to provide the appropriate voltages at the proper pins.
3) Do not insert unknown materials into any port on the IM300, this may cause serious damage to the device.
4) If the IM300 becomes defective, please contact a professional technician for repairs instead of attempting them on your own.
5) The IM300 contains hardware tamper-proofing measures; disassembly of the device will trigger the tamper circuits, at which point it will have to be rearmed by qualified personnel before the device is ready to resume operation.
6) When mounting the IM300 into its enclosure, ensure that the tamperproof switches are fully depressed against the mounting panel.
7) The IM300 is designed for outdoor use; however, during normal use its surface should still be kept clear of dirt and possible liquid contaminants.
8) While the IM300 is designed to resist ingress of dust and liquids from the front face, it is not designed to resist pressurized liquids such as water hoses. Keep the back of the device away from dust and liquids as much as possible.

6. FCC Compliance Statement

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.

FCC WARNING

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 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 CAUTION

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

RF Exposure Information

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm (8 inches) during normal operation.