ruggPAD PM-522

10.4" Full Rugged Windows Pad

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Content

Introduction

◉ **RuggON PM-522** is the first and most updated Intel Bay Trail fully rugged tablet which embeds 4:3 aspect ratio 10.4" high brightness display.

◉ To who 4:3 aspect ratio really matters, with PM-522, you'll never have to compromise with old technologies.

◉ On PM-522 you will find the most advanced wireless technology, user friendly capacitive touch screen, worldwide coverage GNSS and various data capture features.

PRODUCT

Outlook

Programmable Button

2 MP Camera

NFC

5 MP Camera

Power Button

Lock Button

RF Button

DC-IN

Windows Button

Ethernet

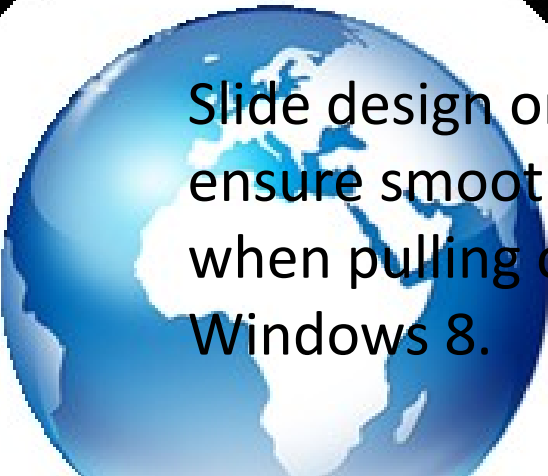Audio-Jack

USB

USB

Docking Connector

Features – Intuitive Touch Control

Support 10-point capacitive touch screen.

Slide design on the bezel to ensure smooth user experience when pulling out charm bars on Windows 8.
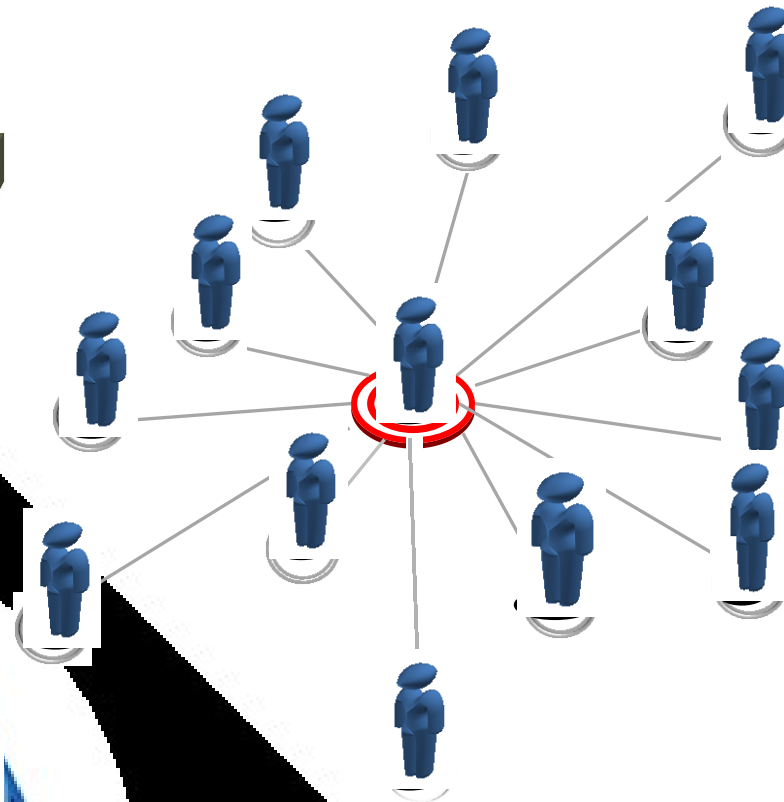
Features – Seamless Connectivity

Features – Wide Coverage GNSS

- Embedded standalone professional GNSS module and internal antenna
- Support GPS, GLONASS and Beidou satellite systems
- Shorter acquisition time
- Accuracy level up to 2m (SBAS enabled)
- Keep same accuracy level under shutter of buildings, bridges, valleys or trees.

GPS
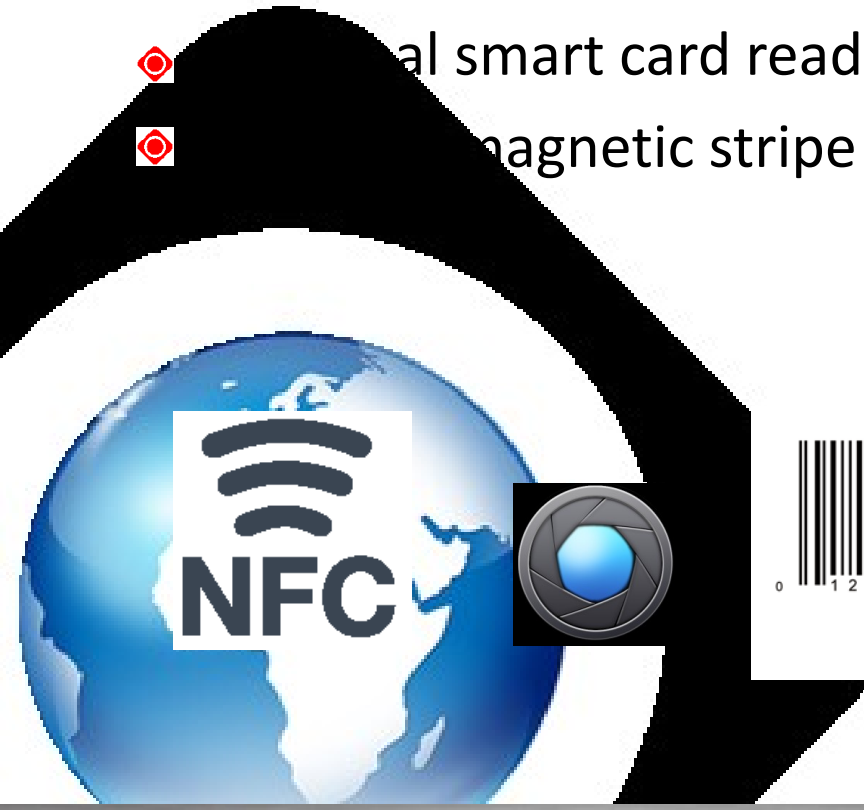
GLONASS

2m

Beidou

By request

Features – Various Data Capture

- Built-in NFC
- Built-in 2M pixels front webcam
- Built-in 5M pixels rear camera
- Optional 1D/2D barcode reader
- smart card reader
- magnetic stripe reader

Features – Uncompromising Ruggedness

- ◉ IP65

- ◉ Drop resistant
  - 6ft drop with rubber bumpers
    * 4ft drop with external 2nd battery

- ◉ Wide Temperature
  - g: -20ºC to 50ºC
  - ºC to 60ºC

- ◉ Shock
  - MIL-STD-810G   d 516.6 Procedure 1
    • Sawtooth wa   . peak value: 40g / 11ms duration

- ◉ Vibration
  - MIL-STD-810G Method   ory 4
    • Fig 514.6C-1 Com   US highway truck)
    • Fig 514.6C-2 Com   wheeled trailer
    • Fig 514.6C-3 Con   eeled vehicle
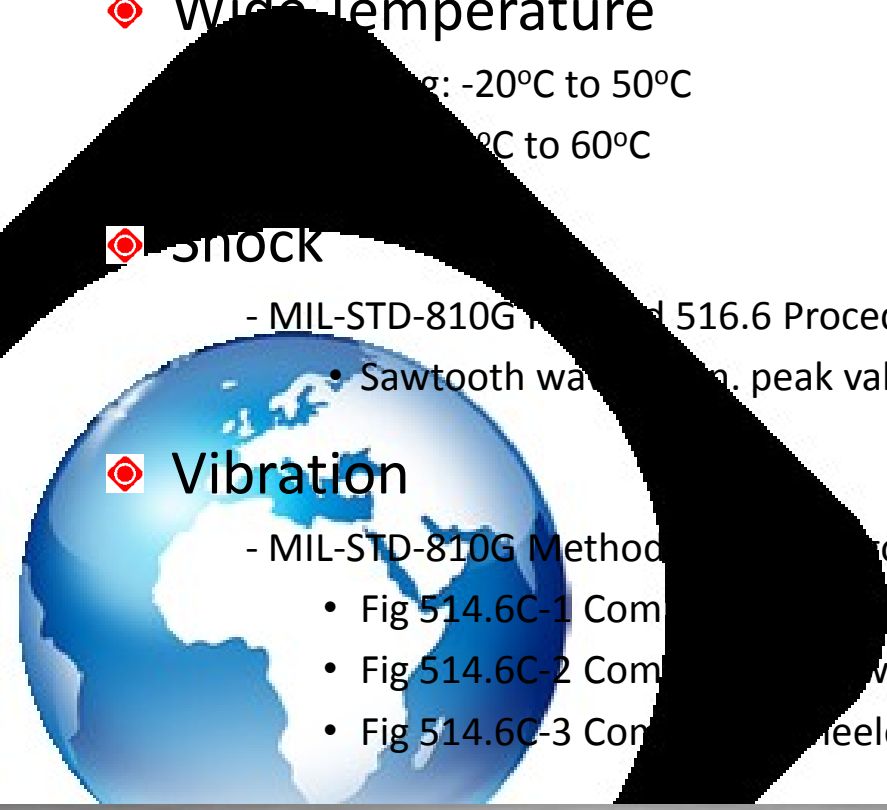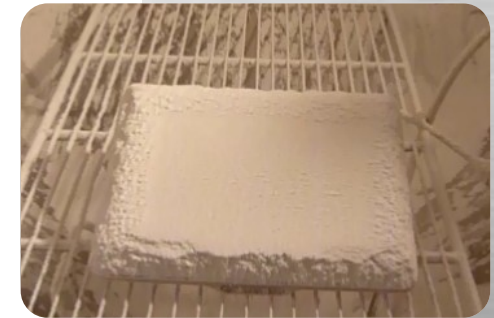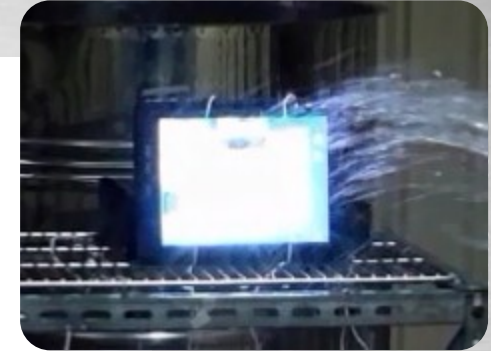
Features – User Friendly

◉ Easy to use

- 700 nits high brightness sunlight readable display
- Elegant, easy-to-use multi-finger capacitive touch screen
- User programmable function buttons
- Hot swappable external 2nd battery
- Long battery life
  - Internal battery: 3.6 ~ 5 hrs
  - Internal + external 2nd batteries: 7 ~ 10.5 hrs

◉ ___ rate

- Indu___ ___dard Microsoft Windows OS
- 4:3 display ___ily compatible with original software

◉ Easy to carry

- Hand strap
- Shoulder strap
- Carry bag (optiona___ ___)
- Vehicle dock (opti___ ___sory)
- Side handle (opti___ ___essory)
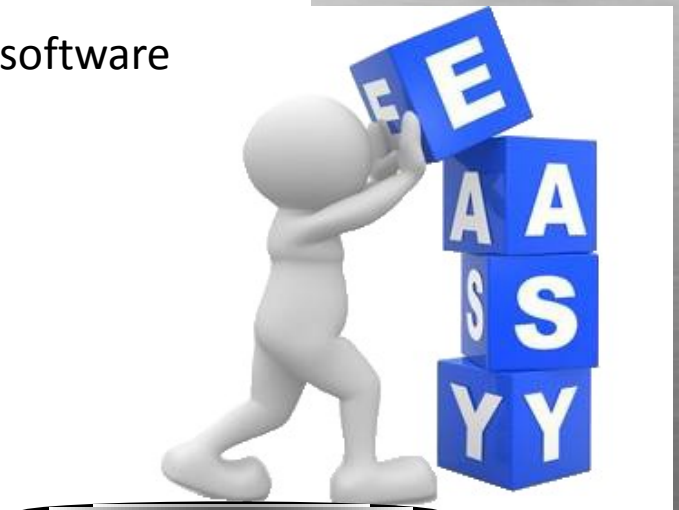
Specification

- ➤ **System**
  - CPU: Atom E3827; 1.75GHz
  - OS: Win8, Win7
  - 4GB RAM
  - 64GB SSD (Optional for 128GB/256GB)

- ➤ **Display**
  - 10.4" 1024x768 XGA
  - 700 nits
  - 10-finger Capacitive Touch

- ➤ **Wireless**
  - Bluetooth 4.0
  - Wi-Fi 802.11 a/b/g/n/ac
  - Optional 3.5G or 4G LTE

- ➤ **I/O**
  - USB 3.0 x1
  - USB 2.0 x1
  - RJ45; via adapter
  - Docking connector x1
  - Audio jack x1
  - DC-in jack x1

- ➤ **Data Capture**
  - GNSS (GPS/GLONASS/Beidou)
  - NFC
  - 2M front webcam / 5M rear camera
  - Snap-on 2D Barcode Reader
  - Snap-on Magnetic Stripe Reader

- ➤ **Ruggedness**
  - IP65
  - 6ft drop
  - -20ºC to 50ºC operating temperature
  - -30ºC to 60ºC storage temperature
  - Drop & Vibration resistant

- ➤ **Dimension & Weight**
  - 275.4 x 203.6 x 26.5 mm
  - 1.1 kg

- ➤ **Battery**
  - 3800 mAh / 7.4V
  - 4200 mAh / 7.4V (Optional 2nd Battery)

- ➤ **Security**
  - TPM 1.2

Accessory

Vehicle Dock   Desktop Dock   Strap   Shoulder Strap

MSR   Barcode Reader   Smart Card Reader + GNSS   External Battery

Battery Charger   Stylus   Ethernet Adapter   Car Adapter

DT02M
Desktop Dock

- I/O: USB 2.0 x4, VGA x1, Ethernet x1, 19V DC-in Jack x1

- Kensington lock slot x1, LED indicator x1

- Operating temperature: $-10^{o}C \sim 50^{o}C$

VD200M
Vehicle Dock

- I/O: USB 2.0 x 4, Ethernet x 1, RS-232 x 2, VGA x 1

- VESA Mount: 75 x 75 and 100 x 100mm

- DC-in: 9VDC to 32VDC

- Power Cord: both Cigarette lighter plug and ACC plug cables

- Operating temperature: $-10^{o}C \sim 55^{o}C$

BC01
1D/2D Barcode Reader

- Symbology: all major 1D & 2D code types
- Scan rate: 2D mode: 56 images/s auto adaptive
- Operating temperature: -20°C ~ 50°C

MR01
Magnetic Stripe Reader

- Reference Standards: ANSI/ISO Standards 7810,7811-1/6, 7813, JIS II
- Decoding Method: ISO Track1 - IATA , Track2 - ABA and Track3 – THRIFT
- Card Swiping Speed: Card speed through the unit may vary from 3 ips to 100 ips
- Operating temperature: -20°C ~ 50°C

SN201-GC01
Smart Card Reader + GNSS

- Supports ISO/IEC 7816 standard
- Supports PC Smart Card industry standard: PC/SC 1.0 & 2.0
- Works with 5V, 3V and 1.8V Smart cards
- IP65, 4 feet drop with tablet
- Operating temperature: -20°C ~ 50°C

APPLICATION AND SCENARIO

INDUSTRIAL & MANUFACTURING

RUGGON

1	Parts tracking
2	Quality assurance
3	Pick up and put away

4	Scheduling and dispatching
5	Facility and asset management
6	Shop floor data collection

Industrial & Manufacturing

Keep the back office, warehouse, engineers and field workers connected.	BT, Wi-Fi, RJ-45 Optional 3.5G / 4G LTE
Scan RFID tags or barcodes for Parts tracking and management.	Built-in NFC Optional snap-on 2D BCR
On site conference call for trouble shooting.	2MP front webcam Microphone, Speaker, Audio jack
Computerize work flow to increase efficiency and decrease human error.	Capacitive touch screen Programmable function buttons
Minimize downtime in harshest weather and heavy industrial environments.	IP65, 6ft drop resistance, Wide operating temperature

Field Service

1	Task dispatch		**4**	Pipeline inspection
2	Resource and route optimization		**5**	Mapping and surveying
3	Industrial equipment maintenance		**6**	Workforce automation

Field Service

Real time GPS position report for optimizing field worker dispatch.

Built-in high sensitivity GNSS.
3G or 4G LTE

Take pictures as the record of inspection or prove of delivery.

5MP rear camera
with autofocus and LED light

Connect with various professional Instruments for data capture and inspection.

USB 3.0 / 2.0, RJ-45,
BT4.0, Wi-Fi 802.11 ac

Mount in vehicle and work as a navigator.

700 nits sunlight readable,
Compact vehicle dock

Minimize downtime in harshest weather conditions and tough environment.

IP65, 6ft drop resistance,
Wide operating temperature

Transportation & Logistics

1 Mobile ticketing

2 Cargo and inventory management

3 GPS positioning systems for tracking

4 Real-time schedule updates

5 In-transit visibility

6 Train car and rail inspections

Transportation & Logistics

Ticketing and passenger management. Prevent errors from checking manually.	Built-in NFC, Snap-on 2D BCR, Bluetooth to connect with printer
Goods load and unload notice and display check list.	Wi-Fi, Built-in GNSS, Optional 3G or 4G LTE
Take pictures as the record of inspection or prove of delivery.	5MP rear camera with autofocus and LED light
Mount in the vehicle and use as a navigator.	700 nits sunlight readable, Compact vehicle dock
Minimize downtime in harshest weather conditions and tough environment.	IP65, 6ft drop resistance, Wide operating temperature
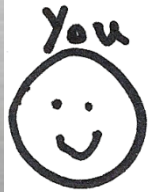
Government

1	Accident and crime scene investigation

4	Emergency response

2	Stolen vehicle inquiry

5	Security and crowd control

3	Fire Investigation

6	Evidence and record keeping

Government

| Problem	Solution
Identification control for security concern. Read ID cards for inspection and citation.	Built-in NFC Snap-on 2D BCR or Smart card reader
Read maps such as relief route plan, 3D geographical map or building allocation.	700 nits sunlight readable 10.4" 4:3 display
Request for support or detail information of current location.	Built-in GNSS Optional 3G or 4G LTE
Taking photos of the disaster site for recover plan evaluation.	5MP rear camera with autofocus and LED light
Minimize downtime in harshest weather conditions and tough environment.	IP65, 6ft drop resistance, Wide operating temperature

COMPETITIVENESS

Competitive Analysis
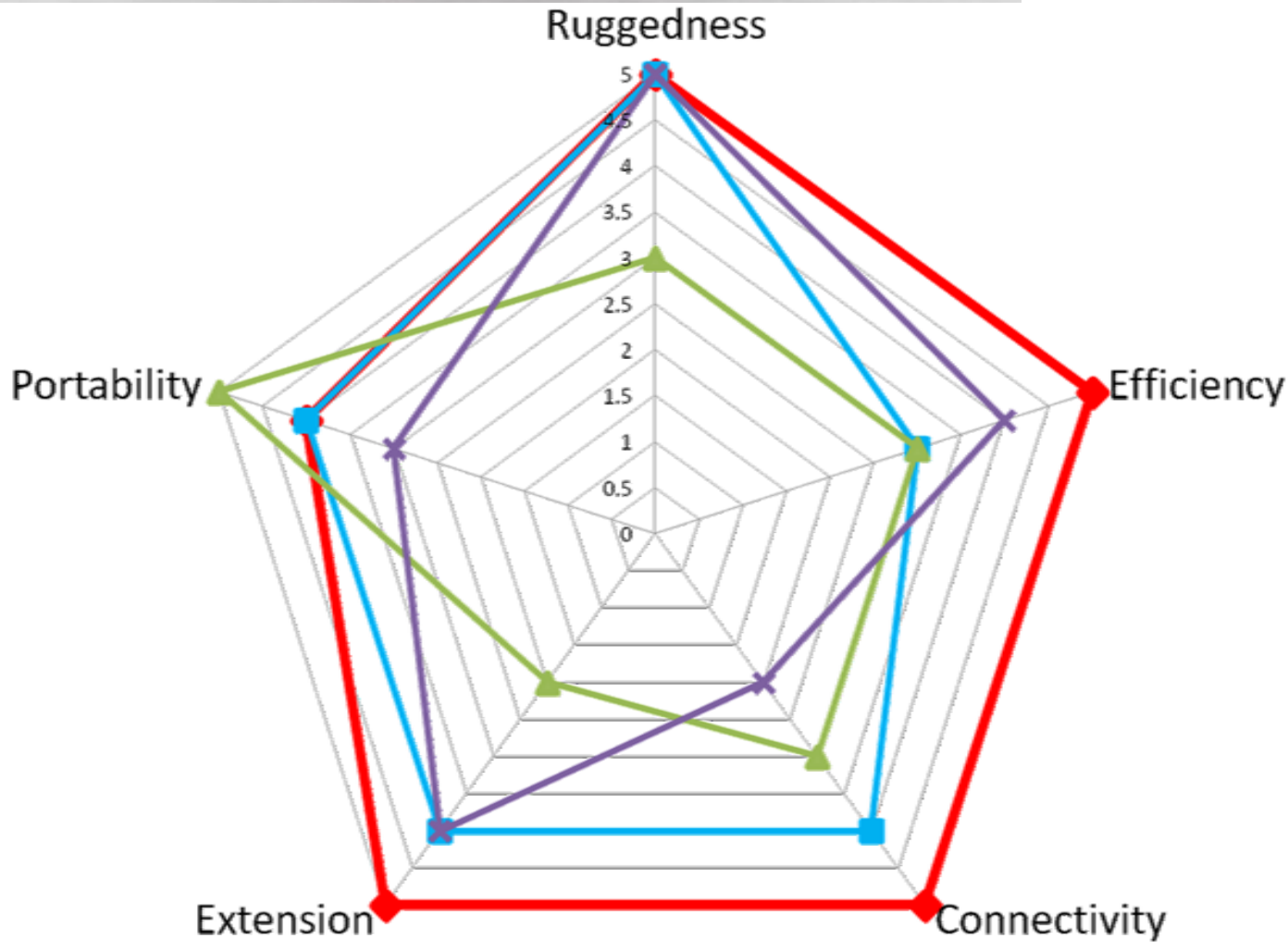
e First Fully

:3 10.4"

ail Tablet

RuggON PM-522 — Logic Instrument Fieldbook B1 — DAP M9700 — Panasonic Toughpad H1

Comparison Table

		RuggON PM-522	Logic Instrument Fieldbook B1	DAP (Winmate) M9700 (M970D)	Panasonic Toughpad H1
System	CPU	Atom E3827; 1.75GHz (8W)	Atom N2600; 1.6GHz	Atom N2600; 1.6GHz	Atom Z540; 1.86 GHz
	OS	Win8	Win7	WES7	Win7
	RAM	4GB	2GB	2GB	2GB
	Storage	64GB / 128GB / 256GB SSD	32GB / 64GB / 128GB SSD	32GB SSD	64GB SSD
Display	Panel Size	10.4''	10.4"	9.7"	10.4"
	Resolution	1024 x 768 (4:3)	1024 x 768 (4:3)	1024 x 768 (4:3)	1024 x 768 (4:3)
	Brughtness (before T/S)	700 nits / 340 nits (option)	???	350 nits	500 nits
Input Interface	Touch	10-finger Capacitive	Resistive	4-finger Capacitive	2-finger ???
	Digitizer	N/A	N/A	N/A	V
	Button	Power x1, Windows x1, Function x2	Power x1, Lock x1, Function x8, Fn switch x1,	Power x1, Volume x2, Menu x1, Function x1	Power x1, Windows x1, Function x5
Wireless	Bluetooth	4.0	4.0	2.1	2.1
	Wi-Fi	a/b/g/n/ac	a/b/g/n	b/g/n	a/b/g/n
	WWAN	3.5G (option) / 4G LTE (option)	3.5G (option) / 4G LTE (option)	3G (option)	Gobi (option)
I/O	USB 3.0	X1	N/A	N/A	N/A
	USB 2.0	X1	x2	X1	N/A
	RS-232	N/A	via adapter (option)	N/A	N/A
	RJ45	via adapter; mini USB to RJ45	via adapter (option)	via adapter	N/A
	HDMI	N/A	N/A	via adapter	N/A
	VGA	N/A	N/A	N/A	N/A
	Docking Connector	x1	x1	X1	x1 (19-pin)
	RF Pass-through	N/A	N/A	N/A	N/A
	Headphone	Audio x1	Audio x1	Audio x1	N/A
	Microphone				N/A
Data Capture	GPS	V (u-blox)	Snap-on module (option)	N/A	Option
	Glonass	V (u-blox)	N/A	N/A	N/A
	Beidou	V (u-blox)	N/A	N/A	N/A
	Camera	2M / 5M	2M / 5M	2M	3M (option)
	NFC / RFID	NFC	Snap-on module (option)	N/A	RFID (option)
	1D/2D BCR	Snap-on module (option)	Snap-on module (option)	N/A	Option
	Magnetic Stripe Reader	Snap-on module (option)	N/A	N/A	N/A
	Fingerprint Reader	N/A	N/A	N/A	Option
Ruggedness	IP Rating	IP65	IP65	IP54	IP65
	Drop	6ft	6ft	4ft	6ft
	Temperature - Storage	- 20°C to +50°C	- 20°C to +50°C	0°C to +50°C	???
	Temperature - Operating	- 30°C to +70°C	???	???	???
Dimension		275.4 x 203.6 x 26.5mm	294 x 222 x 41 mm	267 x 210 x 22 mm	264.16 x 269.24 x 58.42 mm
Weight		1.1 kg	1.475 kg	0.988 kg	1.54 kg

APPENDIX

PM-522 vs. PM-511

Different Item	PM-522	PM-511
CPU	Bay Trail Atom E3827; 1.75GHz	Cedar Trail ATOM N2600; 1.6GHz
RAM	4GB / 8GB	2GB
SSD	64GB / 128GB / 256GB	32GB
Touch	10-finger Capacitive	Resistive
Wi-Fi	a/b/g/n/ac	a/b/g/n
Built-in GNSS	GPS + GLONASS + Beidou	No
Built-in NFC	Yes	No
Light Sensor	Yes	No
G Sensor	Yes	No

PM-522 has better computing power and larger storage with user friendly capacitive touch screen and more built-in data capture functions. These all can make your field workers complete their daily job more efficiently.