



## Features

- Fan-less Industrial-grade Design
- Intel® Atom D510 Dual-core 64-bit Processor
- DDR-2 SO-DIMM Support
- 3G GSM / GPRS / GPS Support
- Anti-vibration Kit for HDD Protection
- Ignition Power Control and Wide-range DC Input
- PCI Slot and CAN-Bus Support
- Removable HDD Drive Bay
- Smart Battery Backup

## Cable-Free

## Specifications

### Fanless Platform

- Low power, low Heat-dissipation during operation
- Fan-less Aluminum chassis, without moving parts

### Processor

- Intel® Atom D510 Dual-core 1.66GHz processor
- 667MHz FSB, 1MB L2 Cache
- Intel® ICH 8-M chipset

### Memory

- 667MHz DDR-2 SO-DIMM socket, up to 2GB

### BIOS

- Phoenix BIOS with Console Redirection support
- Power-ON after Power Failure support
- Voltage and Temperature Monitoring support

### Expansion

- 1x mini-PCI, 1x mini-PCI-E, and 2x PCI Slots

### Ethernet

- 1x Realtek 8111 GbE LAN with Wake-ON-LAN and DMI

### Watchdog Timer

- Programmable WDT from 1 to 255 seconds

### Display Function

- Intel® Build-in GMA Display Engine with 18-bit LVDS support
- Up to 2048x1536@60Hz Resolution

### Audio

- ALC662-GR Codec for Speaker-out support

### Ignition Management

- System Power-ON/OFF Delay by Ignition Control (8-level)
- Low Power Protection for Boot-up and Shutdown

### 3G GSM

- Sierra MC8790V with GSM/GPRS/EDGE/WCDMA/HSDPA
- Tri-band or Quad-band support

### GPS

- SiRF-3 High Sensitivity GPS, 20-channel Tracking

### HDD Storage

- Anti-vibration Kit for HDD Protection (Optional)
- 1x Internal and 1x Removable SATA HDD Drive Bays

### CAN-Bus

- Isolated CAN-Bus 2.0B, speed up to 921Kbps

### Smart Battery (Optional)

- 5,000mA/Hr Kit, up to 1.5Hours Backup Power support

### Digital I/O with Isolation Protection

- 3 D-IN, supports Dry/Wet Contact, 2.5KV Isolation Protection  
Low level in 0~3V, High level in 10~50V
- 2 D-OUT, 500mA in Driving, 2.5KV Isolation Protection

### Power Source

- DC: 6~80V/ 7~0.5A Input
- Supports AT or ATX Power ON/OFF mode

### Dimension and Weight

- 208(W) x 115(H) x 230(D) mm, Compact Size
- Net: 4.8Kg, Gross: 6.2Kg

### OS Support

- Windows XP/XPE, Windows 7, Linux

### Certification

- CE / FCC Class A, E13 mark

### Environment

- Ambient Temperature for Operation: -30°C~50°C
- Ambient Temperature for Storage: -40°C ~ 80°C
- Relative Humidity for Storage: 10% ~ 90% (Non-condensing)

### Vibration

- 2G @ 5~500Hz random with CF, SSD & HDD
- Operation: MIL-STD-810F Method 514.5 C-1

### Shock

- Operation: MIL-STD-810F Method 516.5 Procedure I,  
Trucks and semitrailers 20g
- Non-Operation: MIL-STD-810F Method 516.5 Procedure V,  
Ground equipment 75g

### Front Panel I/O

- Power Button and 3G Power ON/OFF Switch
- LEDs of 3G Speed, Signal, Power, and System Status
- 5x SMA Antennas of 3G / GPS / WLAN
- 1x Removable 2.5" HDD Tray, 1x SIM Socket, 1x USB

### Rear Panel I/O

- 3-pin Screw-Lock DC Power Connector
- 2x DB-9 RS-232/485, 1x DB-9 Digital I/O
- 1x DB-15 LVDS, 1x DB-15 VGA, 1x DB-9 CAN-Bus
- 4x USB, 1x RJ-45 LAN, 1x Mic-in, 1x Speaker-out
- LEDs of Power, HDD Status, and Ignition Mode

## Ordering Guide

Specifications subject to change without notice

Model Name	CPU	PCI	RS-232 / CAN-Bus	Display	HDD Bay	GPS/3G	Smart Battery
Pipal 2192M	D510 1.66GHz	x2	x2 / x1	VGA + LVDS	x2	Yes	No
Pipal 2192ME	D510 1.66GHz	x2	x2 / x1	VGA + LVDS	x2	Yes	Yes

### Optional:

- \* 60W Power Adapter, SO-DIMM Memory Module
- \* Wireless LAN Module, Anti-Vibration 2.5" HDD Kit, HDD, SSD

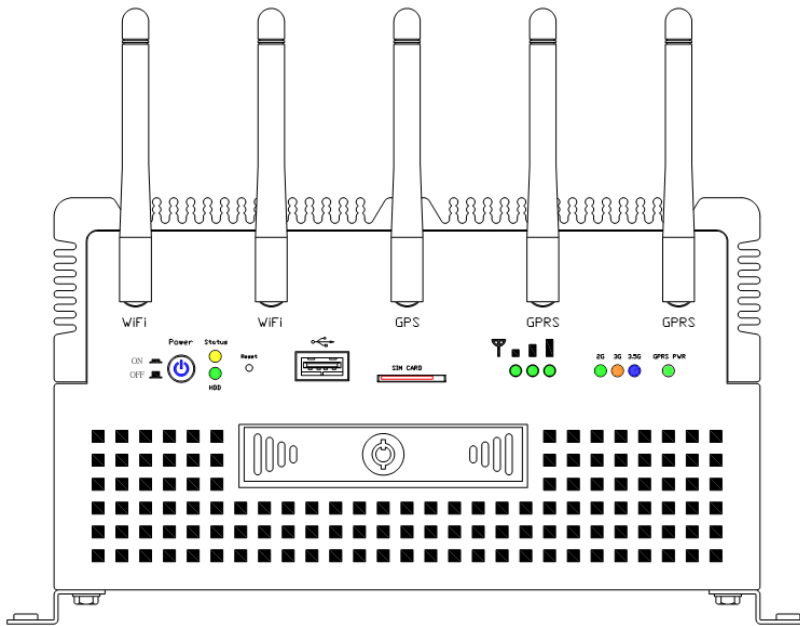
**Dimension:**

Without Mounting Kit: 208(W) x 115(H) x 230(D) mm

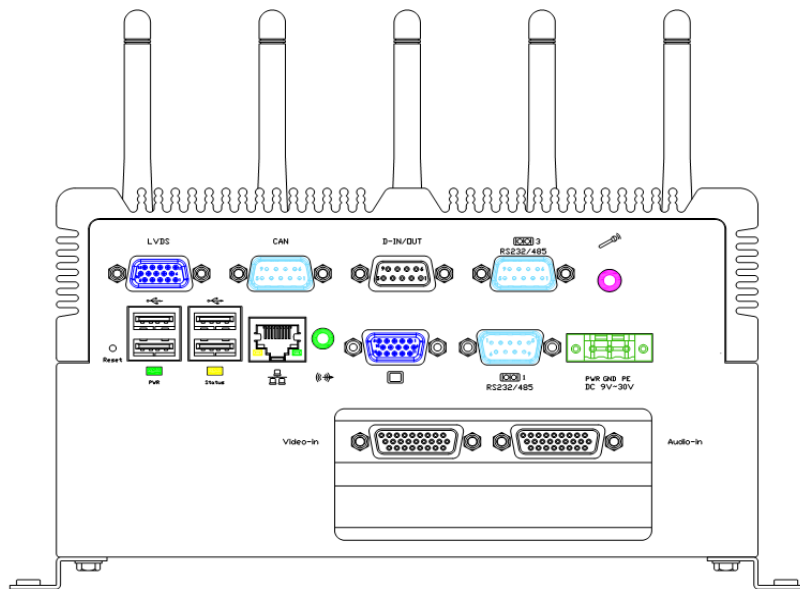
With Mounting Kit: 236(W) x 125(H) x 230(D) mm

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### Pipal 2192ME Front I/O



### Pipal 2192ME Rear I/O



(V1.2 Sep/2011)