



## Features

- Fanless industry Embedded platform
- Intel® Atom N270 1.6 GHz Processor, 533 MHz FSB
- Intel® 945GSE North & ICH 7-M South Bridge Chipset
- On board DDR 2 memory + SODIMM, Up to 1.5 GB w/o ECC
- 2 PCI slots, 1 Mini PCI & 1 Mini PCI-E expansion slot
- DC: 9V ~ 30V power input & Smart Battery I/F
- Support SATA HDD, 3 COMs
- Support external LVDS & VGA

## Specifications

### Fanless platform

- Low power low operation temperature
- Fanless Aluminum Alloy Embedded System

### Dimension

- 235.6 (W) x 125 (H) x 230 (D) mm, Compact size

### Processor

- Support Intel® Atom N270 1.6 GHz low power Processor
- 437 pins package, 533 MHz FSB, 512KB L2 Cache

### Chipset

- Intel® 945GSE North & ICH 7-M South Bridge Chipset

### Memory

- On board 512MB + 1 SODIMM Socket,  
Up to 1.5 GB w/o ECC, 533 MHz DDR 2 Memory

### BIOS

- Award System BIOS
- Support Console Redirection & Power On After Power failure

### Disk Drive Storage

- 1 channel SATA interface + 1 internal CF module slot

### Expansion

- 1 Mini PCI + 1 Mini-PCI-E + 2 PCI-32 expansion slot

### Ethernet

- 1 Realtek 8111C 100/1000 Mbps LAN interface with Wake-On-LAN & DMI

### Watchdog timer

- Programmable WDT from 1 to 255 seconds/minutes

### Display Function

- Support high resolution 1080i VGA display
- Support 18-bit dual channel LVDS w/ DB-26 connector

### Hardware Monitor

- Monitors Voltage, Temperature

### Support RTC & CMOS RAM

- Support Real Time Clock feature
- 256 bytes CMOS RAM built-in chipset

### Audio

- ALC662-GR Codec supports Speaker-out

### RS-232 / 485 supports

- 2 DB-9 RS-232/485 , 1 DB-9 RS-232 , all optional DC-output

## Cable-Free

### Support Hot Swappable CF

- Support Hot swappable external CF slot

### Support Digital I/O w/ isolation protection

- 3 D-In, supports Dry / Wet contact, low level 0~3V, High level 10 ~ 50V. 2500V isolation protection
- 2 D-Out, 500 mA drive capability. 2500V isolation protection

### Super I/O

- ITE 8712 & Fintek 81216 Super I/O for KB, MS, COM, Thermal monitor, Voltage monitor

### Front panel Extend I/O

- 1 USB, 4 LED, Power switch & Reset
- 1 Hot Swappable CF slot

### Rear panel Extend I/O

- Screw-Lock DC-9 ~ 30V power input, 3-pin connector
- 2 DB-9 for RS-232 / 485, 1 DB-9 for RS-232
- 1 DIN connector for 3 D-in + 2 D-out, 1 DB-15 for VGA
- USB x 4, 1 RJ-45 100/1000 Mbit LAN connector
- 1x 18-bit dual channel LVDS w/ DB-26 connector
- 1 Speaker out connector
- Power LED + HDD LED, 1 Power button

### Internal I/O interface

- 1 Mini PCI + 1 Mini-PCI-E expansion slot
- 1 CF slot, 1 SATA storage interface
- Total up to 4 D-In, 4 D-Out internal connector
- 1 x 5.1 channel Audio, CD-in, pin header
- 1 x 18-bit dual channel LVDS connector

### Power Supply

- DC: 9V~30V / 1.5~5 A input

### Power ON/OFF mode

- AT or ATX Power ON/OFF mode

### Environment

- Operation temperature: -20°C ~ 50°C
- Storage temperature: -40°C ~ 80°C
- Relative humidity: 10% ~ 90% (Non-condensing)

### Certification

- CE Class A
- FCC Class A

## Ordering Guide

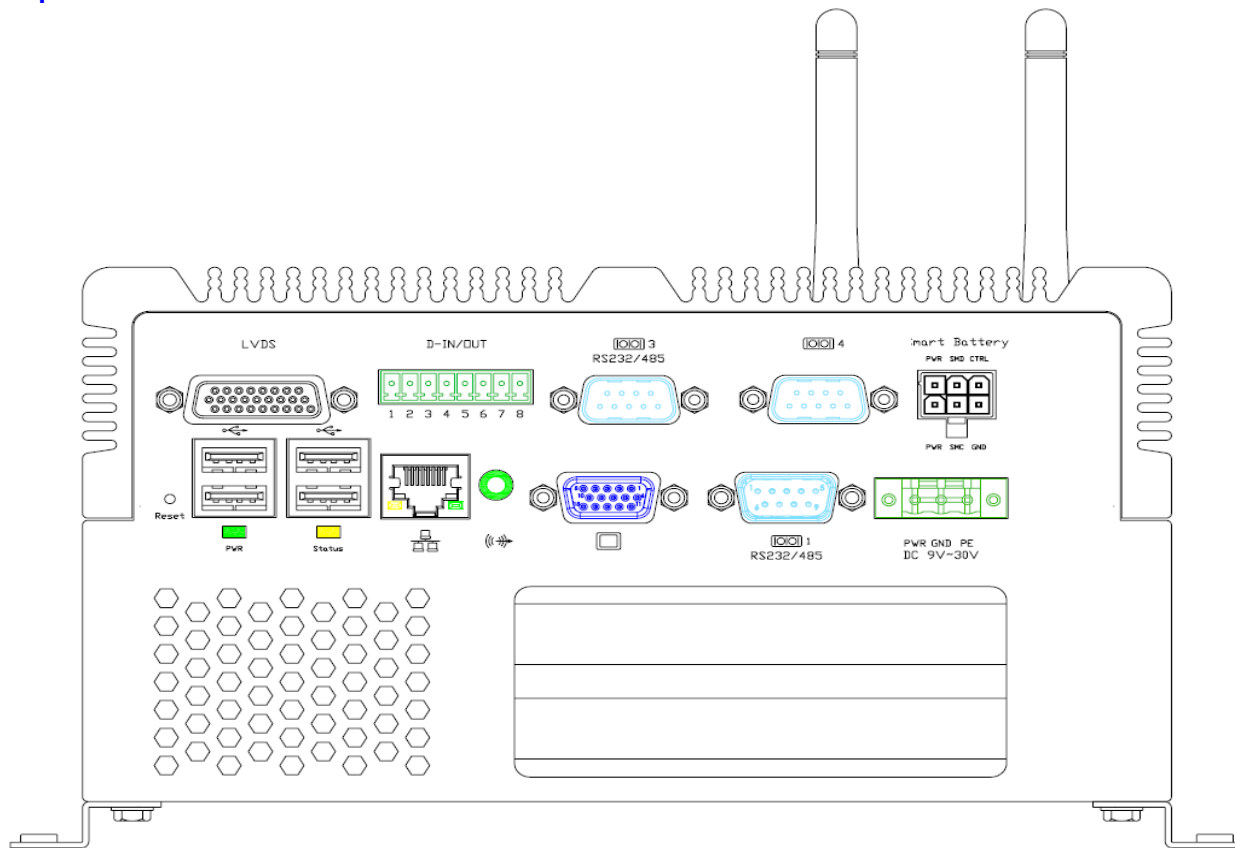
Specification may change without notice

Ordering NO.	CPU	Memory	DB-9 RS-232/485	LVDS	Isolation D-I/O	GPS / HSDPA	PCI-32 slot
Pipal 2052-835	N270 1.6Ghz	512MB	232/485x2, 232x1	18 bit dual ch. X 1	3 D-IN , 2 D-OUT	N/A	2

### Optional order :

- 60W / 120W Power Adapter , HDD , SODIMM Memory
- Wireless LAN Module , Anti-Vibration HDD drive bay

## Pipal 2052 rear I/O



Dimension: without mounting kit 208 W x 115.0 H x 230 D mm  
 with mounting kit 235.6 W x 125 H x 230 D mm

## Pipal 2052 front I/O

