

# IPC922-215-FL

2-slot Fanless System with Intel® Celeron® Processor J1900 (up to 2.42 GHz), PCIe & PCI Slots



Phoenix plug for DC version

Din-jack (screw type) for AC version

## Features

- Intel® Celeron® processor J1900 (up to 2.42 GHz)
- Fanless & ventilation-free
- Supports 2 expansion slots
- DC to DC power supply supports 18 ~ 28V
- Compact & front I/O design



▲ Rear view

## Specifications

Standard Color	Sliver
Construction	Aluminum extrusion heavy-duty cold-rolled steel
System Board	SHB215
Processor	CPU Level Intel® Celeron® processor J1900
System	Max. Speed 2.42 GHz
	Front Side Bus N/A
	Chipset SoC
System Memory	1 x 204-pin DDR3L 1333 SO-DIMM socket, up to 8 GB
I/O Interface (Front)	4 x USB 2.0
	4 x RS-232-422-485 (COM 1/2/3/4)
	2 x RJ-45
	1 x VGA
	1 x Remote switch
	1 x Power on/off switch
	1 x ATX/AT mode SW
	1 x PS/2 key board and mouse

Expansion Interface	HAB108: 2 PCI
	HAB103: 1 PCI & 1 PCIe x4
Storage	1 x 2.5" SATA HDD
	1 x onboard CompactFlash™ socket
System Indicators	1 x power on/off , 1 x HDD
Power Supply	DC ATX 120W:
	Input : 18-28VDC
	Output: +5V @ 6A, +3.3V @ 5A, +12V @ 5A, -12V @ 0.1A, 5Vsb @ 2.5A
AC-DC power adapter:	Input: 100-240VAC
	Output: +19V @ 4.74A
Operation Temperature	-10°C ~ +50°C (14°F~122°F)
Storage Temperature	-20°C ~ +80°C (-4°F ~ +176°F)
Humidity	10% ~ 90%, non-condensing
Dimensions	118 mm (4.6") (W) x 248 mm (9.8") (D) x 185 mm (7.3") (H)
Weight (net/gross)	4.22 kg (9.28 lb)/5.3 kg (11.68 lb)
Certification	CE

Архангельск (8182)63-90-72  
 Астана +7(7172)727-132  
 Белгород (4722)40-23-64  
 Брянск (4832)59-03-52  
 Владивосток (423)249-28-31  
 Волгоград (844)278-03-48  
 Вологда (8172)26-41-59  
 Воронеж (473)204-51-73  
 Екатеринбург (343)384-55-89  
 Иваново (4932)77-34-06  
 Ижевск (3412)26-03-58  
 Казань (843)206-01-48

Калининград (4012)72-03-81  
 Калуга (4842)92-23-67  
 Кемерово (3842)65-04-62  
 Киров (8332)68-02-04  
 Краснодар (861)203-40-90  
 Красноярск (391)204-63-61  
 Курск (4712)77-13-04  
 Липецк (4742)52-20-81  
 Магнитогорск (3519)55-03-13  
 Москва (495)268-04-70  
 Мурманск (8152)59-64-93  
 Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
 Новокузнецк (3843)20-46-81  
 Новосибирск (383)227-86-73  
 Орел (4862)44-53-42  
 Оренбург (3532)37-68-04  
 Пенза (8412)22-31-16  
 Пермь (342)205-81-47  
 Ростов-на-Дону (863)308-18-15  
 Рязань (4912)46-61-64  
 Самара (846)206-03-16  
 Санкт-Петербург (812)309-46-40  
 Саратов (845)249-38-78

Смоленск (4812)29-41-54  
 Сочи (862)225-72-31  
 Ставрополь (8652)20-65-13  
 Тверь (4822)63-31-35  
 Томск (3822)98-41-53  
 Тула (4872)74-02-29  
 Тюмень (3452)66-21-18  
 Ульяновск (8422)24-23-59  
 Уфа (347)229-48-12  
 Челябинск (351)202-03-61  
 Череповец (8202)49-02-64  
 Ярославль (4852)69-52-93

## Ordering Information

IPC922-215-FL-HAB103-AC (P/N: TBD)	2-slot fanless system with Intel® Celeron® processor J1900, PCI & PCIe slots, DC-in ATX 120W P/S and AC-DC 90W power adaptor and US power cord
IPC922-215-FL-HAB103-DC (P/N: TBD)	2-slot fanless system with Intel® Celeron® processor J1900, PCI & PCIe slots, DC-in ATX 120W P/S
IPC922-215-FL-HAB108-AC (P/N: TBD)	2-slot fanless system with Intel® Celeron® processor J1900, PCI slots, DC-in ATX 120W P/S and AC-DC 90W power adaptor and US power cord
IPC922-215-FL-HAB108-DC (P/N: TBD)	2-slot fanless system with Intel® Celeron® processor J1900, PCI slots, DC-in ATX 120W P/S

\*Specifications and certifications are based on options and may vary.

## Power Protection

### AC Version

OVP (over voltage protection)

OCP (over current protection)

SCP (short circuit protection)

### DC Version

SCP (short circuit protection)

OVP (over voltage protection)

OLP (over load protection)

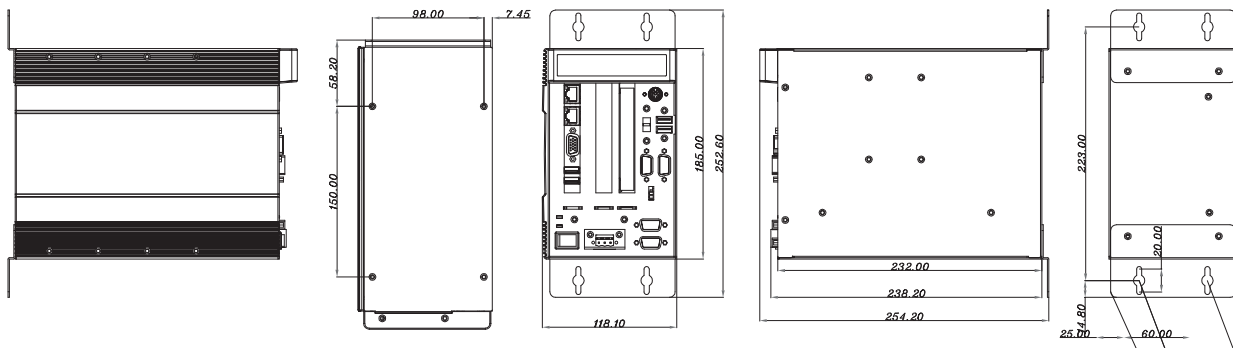
## Optional Items

AX93221-18/36: DVI card  
 40P-40P LVDS cable  
 DVI bracket for AX93221  
 2.5" SATA HDD: 250 GB, 320 GB, 500 GB  
 DDR3 SO-DIMM: 2 GB, 4 GB, 8 GB

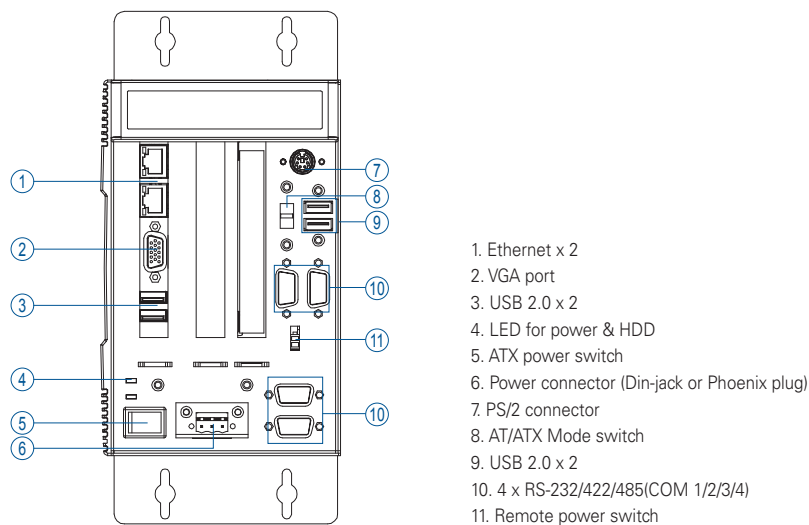
## Packing List

19V 90W adaptor and US power cord (for AC version)  
 Drive CD  
 Quick manual  
 Wall mount bracket x 2  
 Foot pad x 4  
 HDD bracket x 1  
 Screw pack x 1  
 Terminal Block x 1 (for DC version)  
 Remote power switch cable x 1

## Dimensions



## Front & Rear Metal Panel I/O Layout

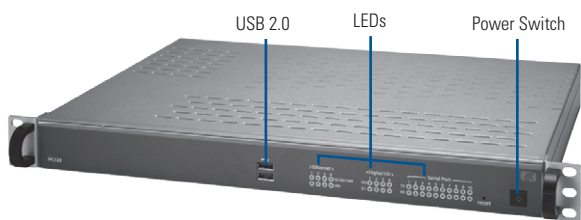


# IPC122-833-FL

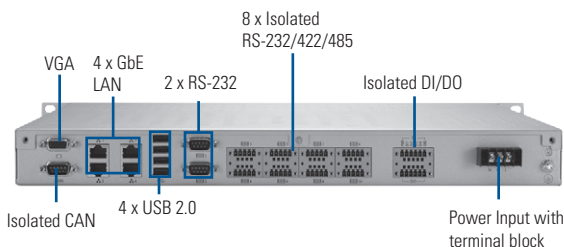
IEC 61850-3/IEEE 1613 Certificated  
1U Rackmount Fanless Embedded Computer  
with Intel® Atom™ Processor N2800 Multiple  
Isolated LAN, Isolated COM, CAN Bus and  
DIO

## Features

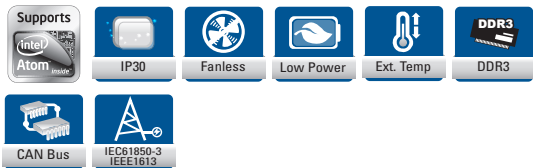
- IEC 61850-3 and IEEE 1613 certified for substation automation
- Highly efficient heat conduction with fanless design
- Intel® Atom™ processor N2800 (1.86 GHz)
- DDR3-800/1066 SO-DIMM supports up to 4 GB memory
- Isolated COM, LAN, CANBus and DIO ports
- One 2.5" SATA HDD and one CFast™ socket
- Wide temperature -10°C ~ +55°C for hash environment
- 100 ~ 240VAC and 134 ~ 370VDC wide range power input



▲ Front view



▲ Rear view



## Specifications

Standard Color	Silver														
Construction	Heavy-duty cold-rolled steel, IP30														
CPU	Intel® Atom™ processor N2800 (1.86 GHz) onboard														
System Board	SBC87833														
BIOS	AMI UEFI BIOS														
System Memory	1 x 204-pin DDR3-800/1066 SO-DIMM, max. up to 4 GB														
I/O Interface-Front	1 x Power on/off, 1 x Reset, 2 x USB 2.0														
I/O Interface-Rear	<table border="0"> <tr> <td>Serial Port</td> <td>2 x RS-232 8 x isolated RS-232/422/485 ESD protection: 2.5KV</td> </tr> <tr> <td>LAN</td> <td>4 x 10/100/1000Mbps Ethernet Magnetic isolation protection: 1.5KV</td> </tr> <tr> <td>USB</td> <td>4 x USB 2.0</td> </tr> <tr> <td>DIO</td> <td>1 x isolated DI/DO (4-IN/4-OUT) DI: Input range: 0-30VDC at 25Hz Logic level 0: Close to GND Logic level 1: Open DO: Logic level 0: +/-12VDC min to +/-30V max. (source to DI) Logic level 1: 0 min. to +/-3VDC max.</td> </tr> <tr> <td>VGA</td> <td>1 x DB15 connector</td> </tr> <tr> <td>Power Input</td> <td>1 x power input with terminal block</td> </tr> <tr> <td>CAN Bus</td> <td>1 x CAN Bus (DB9 Connector) Magnetic isolation protection: 2.5KV</td> </tr> </table>	Serial Port	2 x RS-232 8 x isolated RS-232/422/485 ESD protection: 2.5KV	LAN	4 x 10/100/1000Mbps Ethernet Magnetic isolation protection: 1.5KV	USB	4 x USB 2.0	DIO	1 x isolated DI/DO (4-IN/4-OUT) DI: Input range: 0-30VDC at 25Hz Logic level 0: Close to GND Logic level 1: Open DO: Logic level 0: +/-12VDC min to +/-30V max. (source to DI) Logic level 1: 0 min. to +/-3VDC max.	VGA	1 x DB15 connector	Power Input	1 x power input with terminal block	CAN Bus	1 x CAN Bus (DB9 Connector) Magnetic isolation protection: 2.5KV
Serial Port	2 x RS-232 8 x isolated RS-232/422/485 ESD protection: 2.5KV														
LAN	4 x 10/100/1000Mbps Ethernet Magnetic isolation protection: 1.5KV														
USB	4 x USB 2.0														
DIO	1 x isolated DI/DO (4-IN/4-OUT) DI: Input range: 0-30VDC at 25Hz Logic level 0: Close to GND Logic level 1: Open DO: Logic level 0: +/-12VDC min to +/-30V max. (source to DI) Logic level 1: 0 min. to +/-3VDC max.														
VGA	1 x DB15 connector														
Power Input	1 x power input with terminal block														
CAN Bus	1 x CAN Bus (DB9 Connector) Magnetic isolation protection: 2.5KV														

Watchdog timer	1 sec, 255 levels				
LEDs	System : 1 x Power, 1 x HDD Gigabit LAN : 4 x Active, 4 x Link Serial : 10 x TX, 10 x RX Digital I/O : 4 x DI, 4 x DO				
Storage	1 x on board CFast™ socket 1 x 2.5" SATA HDD drive bay				
Installation	Rack mount				
Power Supply	<table border="0"> <tr> <td>Power Input</td> <td>AC: 100 ~ 240VAC, 2.5A, 50/60Hz DC: 134 ~ 370VDC, 2.5A</td> </tr> <tr> <td>Power Protection</td> <td>SCP (Short Circuit Protection) OVP (Over Voltage Protection)</td> </tr> </table>	Power Input	AC: 100 ~ 240VAC, 2.5A, 50/60Hz DC: 134 ~ 370VDC, 2.5A	Power Protection	SCP (Short Circuit Protection) OVP (Over Voltage Protection)
Power Input	AC: 100 ~ 240VAC, 2.5A, 50/60Hz DC: 134 ~ 370VDC, 2.5A				
Power Protection	SCP (Short Circuit Protection) OVP (Over Voltage Protection)				
Power Consumption	45W				
Operating Temperature	-10°C ~ +55°C (14°F ~ 131°F) (with W.T. HDD)				
Storage Temperature	-20°C ~ +80°C (-4°F ~ +176°F)				
Humidity	10% ~ 90%, non-condensing				
Dimensions	427 mm (16.81") (W) x 301 mm (11.85") (D) x 44 mm (1.73") (H)				
Weight (net/gross)	5.02 kg (11.07 lb)/ 6.02 kg (13.27 lb)				
Certification	IEC 61850-3, IEEE 1613, CE				

## Ordering Information

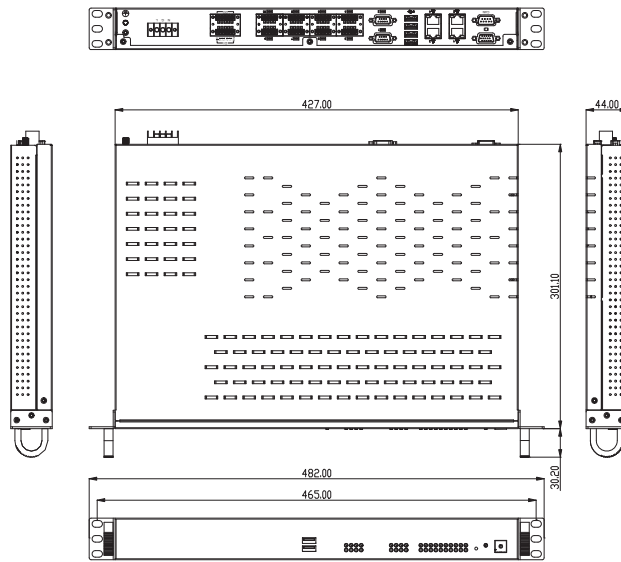
IPC122-833-FL (P/N: E26G122100)	IEC61850-3 and IEEE1613 certified 1U fanless barebone system with Intel® Atom™ processor N2800, multiple LAN and multiple COM
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\*Specifications and certifications are based on options and may vary.

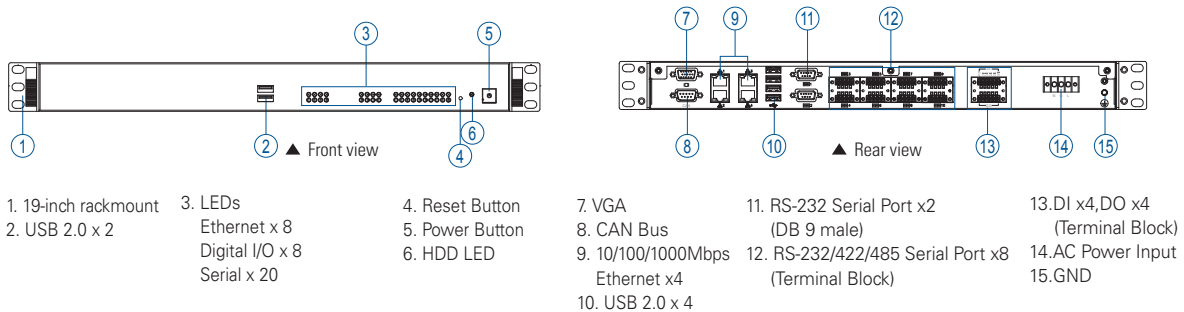
## Packing List

- 1 x IPC122-833-FL unit
- 1 x utility CD
- 1 x screw pack
- 4 x Foot pad
- 2 x thermal pad for DRAM
- 2 x Rack mount handle
- 2 x Rack mount Ear
- 1 x HDD Mylar
- 8 x 5-Pin Phoenix connector
- 2 x 6-Pin Phoenix connector

## Dimensions

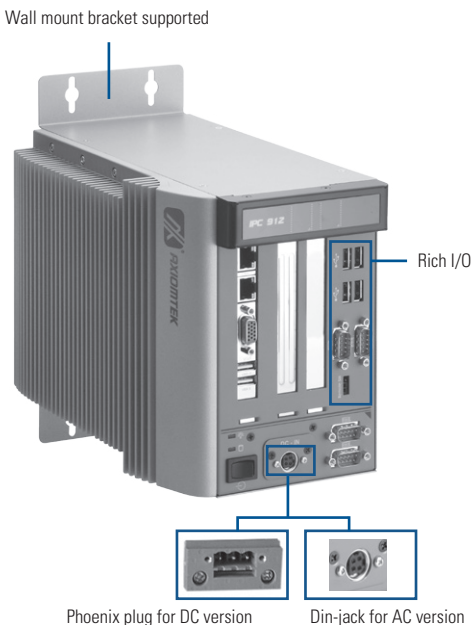


## Front & Rear Metal Panel I/O Layout



# IPC912-213-FL

2-slot Fanless System with Intel® Core™ i7/i5/i3 & Celeron® Processor (up to 2.5 GHz), Intel® HM65 chipset, PCIe & PCI Slots



## Features

- Socket G2 for Intel® Core™ i7/i5/i3 & Celeron® processor up to 45W
- Fanless operation
- Intel® HM65 chipset
- Supports 2 expansion slots
- DC to DC power supply supports 10V ~ 30V
- Compact & front I/O design



▲ Rear view



## Specifications

Standard Color	Sliver	
Construction	Aluminum extrusion heavy-duty cold-rolled steel, IP30	
System Board	SHB213VGG	
BIOS	AMI UEFI BIOS	
Processor System	CPU Level	Socket G2 2nd generation for Intel® Core™ i7/i5/i3 & Celeron® processors, up to 45W
	Max. Speed	2.5 GHz
	Front Side Bus	N/A
	Chipset	Intel® HM65
System Memory	2 x 204-pin DDR3 1066/1333 SO-DIMM socket, up to 8 GB	
I/O Interface (Front)	ATX power on/off switch	
	1 x Remote power on/off switch	
	6 x USB 2.0	
	3 x RS-232 (COM 2/3/4)	
	1 x RS-232/422/485 (COM 1)	
	2 x 10/100/1000Mbps Ethernet 1 x VGA	
Expansion Interface	HAB103:	1 PCIe x4 & 1 PCI
	HAB100:	1 PCIe x1 & 1 PCIe x4

Storage	1 x 2.5" SATA HDD
	1 x onboard CFast™ socket
System Indicators	1 x Power on/off, 1 x HDD
Power Supply	DC ATX150W:
	Input : 10 ~ 30VDC
	Output: +5V @ 11A, +3.3V @ 5A, +12V @ 9A, -12V @ -150mA, 5Vsb @ 2A
	AC-DC power adapter:
	Input: 90 ~ 240VAC
	Output: 19V @ 7.89A
Operation Temperature	0°C ~ +45°C (32°F ~ 113°F) (with W.T HDD)
Storage Temperature	-20°C ~ 80°C (-4°F ~ 176°F) (with W.T HDD)
Humidity	10% ~ 90%, non-condensing
Dimensions	142 mm (5.6") (W) x 248 mm (9.8") (D) x 185 mm (7.3") (H)
Weight (net/gross)	4.22 kg (9.28 lb)/5.3 kg (11.68 lb)
Certification	CE

\*Note: The maximum power rating for expansion slots at 45°C can not be exceeded the following values :

The maximum loading of 3.3V + 5Vsb + 5V is <49W.

The maximum loading of 3.3V + 5V+ 12V is <74W.

## Ordering Information

### PCIe Version

IPC912-213-FL-HAB100 DC 2-slot fanless system with Intel® Core™ i7/i5/i3 processor, (P/N: E26G912113) PCIe slots and DC-in ATX 150W P/S

IPC912-213-FL-HAB100 AC 2-slot fanless system with Intel® Core™ i7/i5/i3 processor, (P/N: E26G912112) PCIe slots, DC-in ATX 150W P/S, AC-DC 150W power adapter and US power cord

### PCI+PCIe Version

IPC912-213-FL-HAB103 DC 2-slot fanless system with Intel® Core™ i7/i5/i3 processor, (P/N: E26G912117) PCI & PCIe slots and DC-in ATX 150W P/S

IPC912-213-FL-HAB103 AC 2-slot fanless system with Intel® Core™ i7/i5/i3 processor, (P/N: E26G912116) PCI & PCIe slots, DC-in ATX 150W P/S, AC-DC150W power adapter and US power cord

\*Specifications and certifications are based on options and may vary.

## Power Protection

### AC Version

OVP (over voltage protection)  
OTP (over temperature protection)  
OPP (over power protection)  
SCP (short circuit protection)

### DC Version

OVP (over voltage protection)  
SCP (short circuit protection)  
OCP (over current protection)

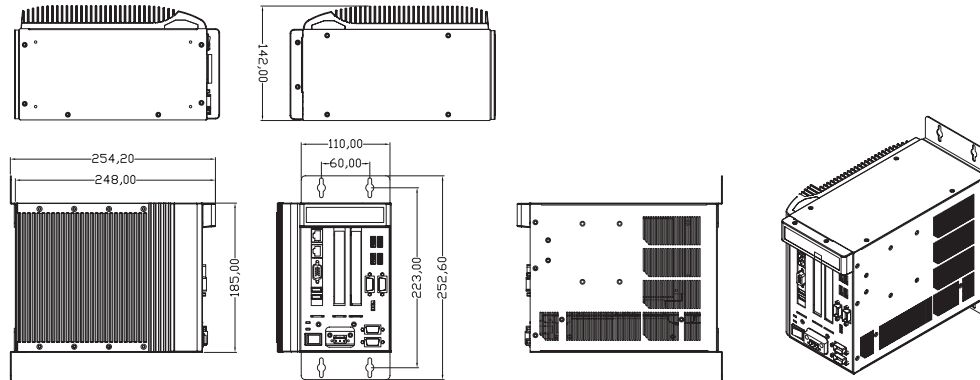
## Optional Items

DDR3 SO-DIMM: 2 GB, 4 GB, 8 GB  
CFast™: 2 GB, 4 GB, 8 GB  
Embedded OS: XPE-SP3 OS image and license  
2.5" SATA HDD: 250 GB, 320 GB, 500 GB

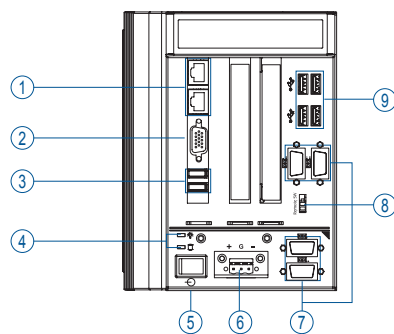
## Packing List

19V 150W adapter and US power cord (for AC version)  
Driver CD  
Quick manual  
Wall mount bracket x 2  
Foot pad x 4  
HDD bracket x 1  
Screw pack x 1  
Thermal Pad for RAM x 1  
Terminal block x 1 (for DC version)  
Remote power switch cable x 1

## Dimensions



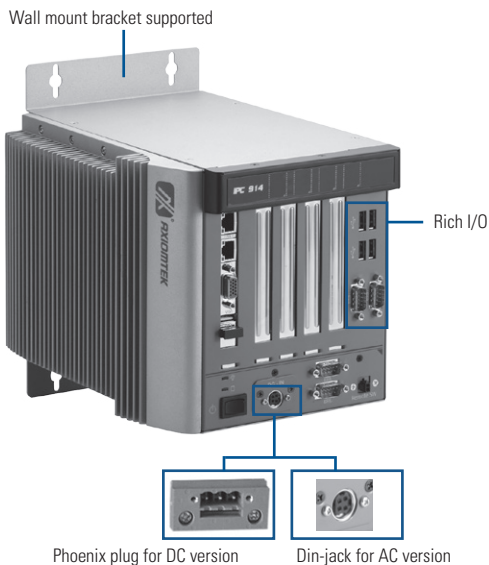
## Front & Rear Metal Panel I/O Layout



1. Ethernet x 2
2. VGA port
3. USB 2.0 x 2
4. LED for power & HDD
5. ATX power switch
6. Power connector (Din-jack or Phoenix plug)
7. RS-232/422/485 (COM 1)  
RS-232 (COM 2/3/4)
8. Remote power switch
9. USB 2.0 x 4

# IPC914-213-FL

4-slot Fanless System with Socket G2 Intel® Core™ i7/i5/i3 & Celeron® Processors (up to 2.5 GHz), Intel® HM65 chipset, PCIe and PCI Slots



## Features

- Socket G2 (rPGA 988B) for Intel® Core™ i7/i5/i3 & Celeron® processor up to 35W
- Fanless operation
- Intel® HM65 chipset
- Supports 4 expansion slots
- DC to DC power supply supports 10~30V
- Compact & front I/O design



▲ Rear view



## Specifications

Standard Color	Sliver	
Construction	Aluminum extrusion heavy-duty cold-rolled steel, IP30	
System Board	SHB213VGG	
BIOS	AMI UEFI BIOS	
Processor System	CPU Level	Socket G2 (rPGA 988B) 2nd generation Intel® Core™ i7/i5/i3 & Celeron® processor up to 35W
	Max. Speed	2.5 GHz
	Front Side Bus	N/A
	Chipset	Intel® HM65
System Memory	2 x 204-pin DDR3 800/1066 SODIMM socket, up to 8 GB	
I/O Interface (Front)	ATX power on/off switch	
	1 x remote on/off switch	
	6 x USB 2.0	
	3 x RS-232 (COM 2/3/4)	
	1 x RS-232/422/485 (COM 1)	
	2 x 10/100/1000Mbps Ethernet	
	1 x VGA	

Expansion Interface	HAB104: 4 PCI
	HAB105: 2 PCI & 1 PCIe x1 & 1 PCIe x16
Storage	1 x 2.5" SATA HDD, 1 x onboard CFast™ socket
System Indicators	1 x power on/off, 1 x HDD
Power Supply	DC ATX150W:
	Input : 10~30VDC
	Output: +5V@11A, +3.3V@5A, +12V@9A, -12V@-150mA, 5Vsb@2A
AC-DC power adapter:	Input: 90~264VAC
	Output: 19V@7.89A
Operation Temperature	0°C ~ +55°C (+32°F ~ +113°F)
Storage Temperature	-20°C ~ +80°C (-4°F ~ +176°F)
Humidity	10% ~ 90%, non-condensing
Dimensions	182 mm (7.2") (W) x 248 mm (9.8") (D) x 185 mm (7.3") (H)
Weight (net/gross)	5 kg (11.02 lb)/6.4 kg (14.1 lb)
Certification	CE

\*Note: The maximum power rating for expansion slots at 45°C can not be exceeded the following values :

The maximum loading of 3.3V + 5Vsb + 5V is <49W.

The maximum loading of 3.3V + 5V+ 12V is <74W.

## Ordering Information

PCI Version	
IPC914-213-FL-HAB104 DC (P/N: E26G914109)	4-slot fanless system with Intel® Core™ i7/i5/i3 processor, PCI slots and DC-in ATX 150W P/S
IPC914-213-FL-HAB104 AC (P/N: E26G914110)	4-slot fanless system with Intel® Core™ i7/i5/i3 processor, PCI slots, DC-in ATX 150W P/S, AC-DC 150W power adapter and US power cord
PCI+PCIe Version	
IPC914-213-FL-HAB105 DC (P/N: E26G914111)	4-slot fanless system with Intel® Core™ i7/i5/i3 processor, PCI & PCIe slots and DC-in ATX 150W P/S
IPC914-213-FL-HAB105 AC (P/N: E26G914112)	4-slot fanless system with Intel® Core™ i7/i5/i3 processor, PCI & PCIe slots, DC-in ATX 150W P/S, AC-DC 150W power adapter and US power cord

## Power Protection

AC Version
OVP (over voltage protection)
OTP (over temperature protection)
OPP (over power protection)
SCP (short circuit protection)
DC Version
OVP (over voltage protection)
SCP (short circuit protection)
OCV (over current protection)

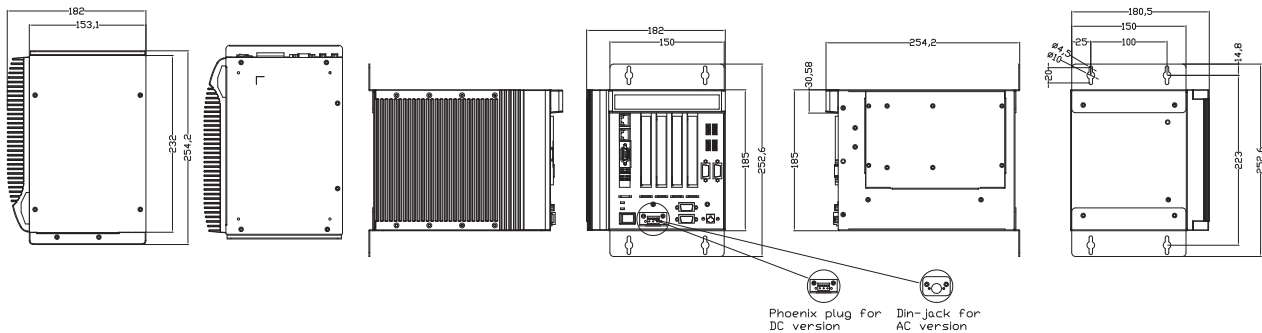
## Optional Items

DDR3 SODIMM: 2 GB, 4 GB, 8 GB  
 Cfast™: 2 GB, 4 GB, 8 GB  
 Embedded OS: XPE SP3 OS Image and License  
 2.5" SATA HDD: 250 GB, 320 GB, 500 GB

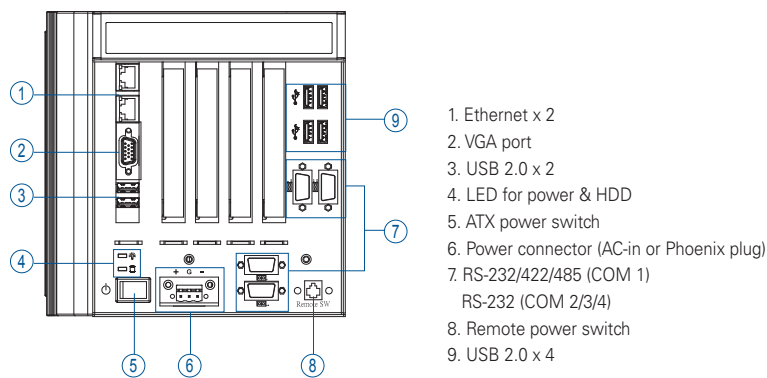
## Packing List

19V 150W adapter and US power cord (for AC version)  
 Driver CD  
 Quick manual  
 Wall mount bracket x 2  
 Foot pad x 4  
 Screw pack x 1  
 Thermal pad for RAM x 1  
 Terminal Block x 1 (for DC version)  
 Remote power switch cable x 1  
 HDD Bracket x 1

## Dimensions



## Front & Rear Metal Panel I/O Layout

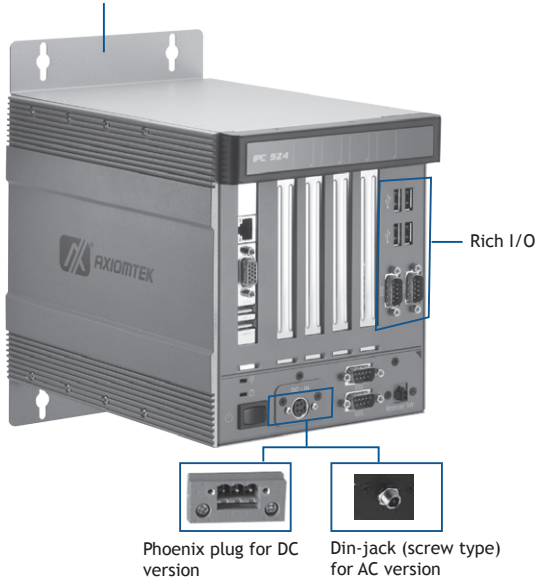




# IPC924-212-FL

4-slot Fanless System with Intel® Atom™ Processor D525 (up to 1.8 GHz), Intel® ICH8M Chipset, PCIe & PCI Slots

Wall mount bracket supported



Phoenix plug for DC version

Din-jack (screw type) for AC version

## Features

- Intel® Atom™ processor D525 (up to 1.8 GHz)
- Fanless & ventilation-free
- Intel® ICH8M chipset
- Supports 4 expansion slots
- DC to DC power supply supports 10~30V
- Compact & front I/O design



▲ Rear view



## Specifications

Standard Color	Sliver
Construction	Aluminum extrusion heavy-duty cold-rolled steel
System Board	SHB212VGA
Processor	CPU Level Intel® Atom™ processor D525
System	Max. Speed 1.8 GHz
	Front Side Bus N/A
	Chipset Intel® ICH8M
System Memory	1 x 204-pin DDR3 800 SO-DIMM socket, up to 4 GB
I/O Interface (Front)	ATX power on/off switch
	6 x USB 2.0
	3 x RS-232 (COM 2/3/4)
	1 x RS-232/422/485 (COM 1)
	1 x 10/100/1000Mbps Ethernet
	1 x VGA

Expansion Interface	HAB104: 4 PCI
	HAB105: 2 PCI & 1 PCIe x1 & 1 PCIe x16
Storage	1 x 2.5" SATA HDD
	1 x onboard CompactFlash™ socket
System Indicators	1 x power on/off , 1 x HDD
Power Supply	DC ATX 150W:
	Input : 10~30VDC
	Output: +5V @ 11A, +3.3V @ 5A, +12V @ 9A, -12V @ -150mA, 5Vsb @ 2A
	AC-DC power adapter:
	Input: 100~240VAC
	Output: 19V @ 7.89A
Operation Temperature	0°C ~ +45°C (32°F ~ 113°F)
Storage Temperature	-20°C ~ +80°C (-4°F ~ +176°F)
Humidity	10% ~ 90%, non-condensing
Dimensions	158 mm (6.2") (W) x 248 mm (9.8") (D) x 185 mm (7.3") (H)
Weight (net/gross)	3.88 kg (8.55 lb)/4.86 kg (10.71 lb)
Certification	CE

## Ordering Information

### PCI Version

IPC924-212-FL-HAB104-AC (P/N: E26G924100) 4-slot fanless system with Intel® Atom™ Processor D525, PCI slots, DC-in ATX 150W P/S and AC-DC 150W power adaptor and US power cord

IPC924-212-FL-HAB104-DC (P/N: E26G924101) 4-slot fanless system with Intel® Atom™ Processor D525, PCI slots, DC-in ATX 150W P/S

### PCI+PCIe Version

IPC924-212-FL-HAB105-AC (P/N: E26G924102) 4-slot fanless system with Intel® Atom™ Processor D525, PCI & PCIe slots, DC-in ATX 150W P/S and AC-DC 150W power adaptor and US power cord

IPC924-212-FL-HAB105-DC (P/N: E26G924103) 4-slot fanless system with Intel® Atom™ Processor D525, PCI & PCIe slots, DC-in ATX 150W P/S

\*Specifications and certifications are based on options and may vary.

## Power Protection

### AC Version

OVP (over voltage protection)

OTP (over temperature protection)

OPP (over power protection)

SCP (short circuit protection)

### DC Version

OVP (over voltage protection)

SCP (short circuit protection)

OCP (over current protection)

## Optional Items

AX93221-18/36: DVI card

40P-40P LVDS cable

DVI bracket for AX93221

2.5" SATA HDD: 250 GB, 320 GB, 500 GB

DDR3 SO-DIMM: 2 GB, 4 GB

## Packing List

19V 150W adaptor and US power cord (for AC version)

Drive CD

Quick manual

Wall mount bracket x 2

Foot pad x 4

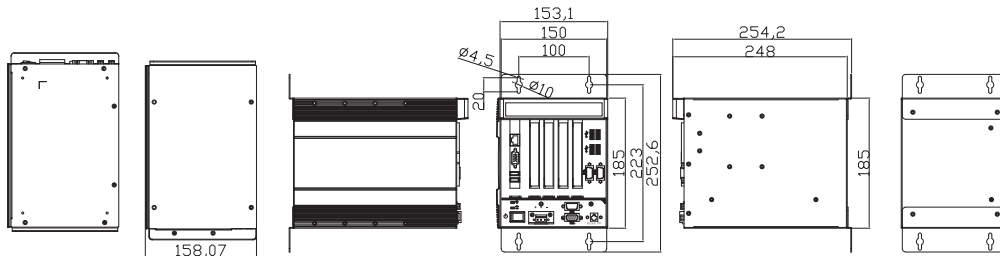
HDD bracket x 1

Screw pack x 1

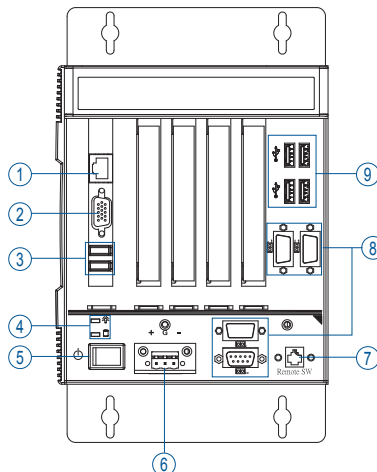
Terminal Block x 1 (for DC version)

Remote power switch cable x 1

## Dimensions



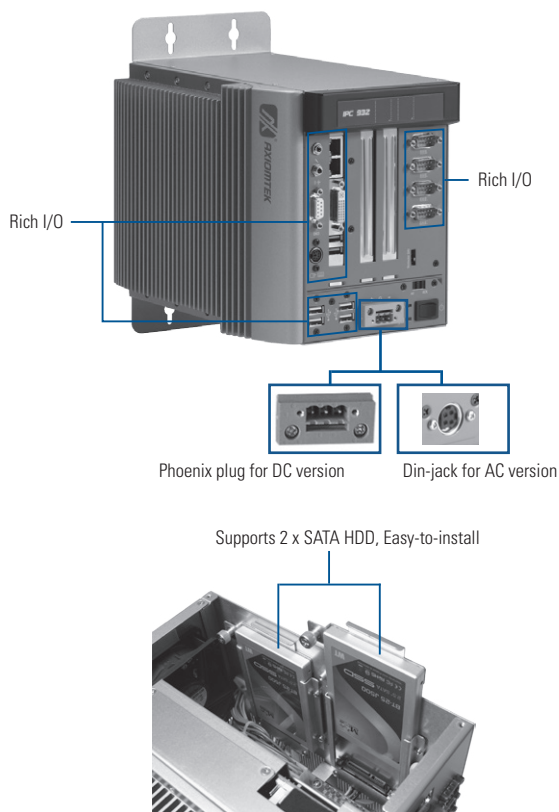
## Front & Rear Metal Panel I/O Layout



1. Ethernet x 1
2. VGA port
3. USB 2.0 x 2
4. LED for power & HDD
5. ATX power switch
6. Power connector (Din-jack or Phoenix plug)
7. Remote power switch
8. RS-232 (COM 2/3/4)  
RS-232/422/485 (COM 1)
9. USB 2.0 x 4

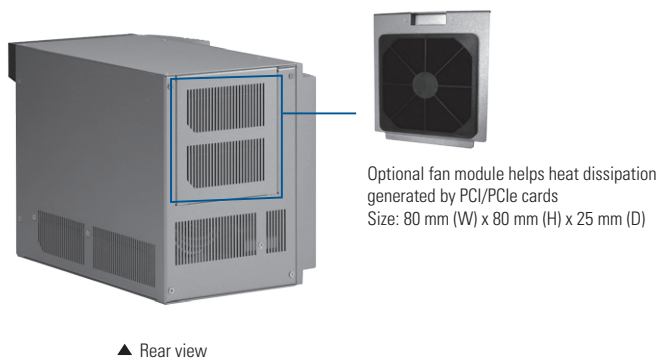
# IPC932-230-FL

2-slot Fanless Barebone System with 4th Generation Intel® Core™ i7/i5/i3 & Celeron® processor (up to 3.3 GHz), Intel® Q87 Chipset, PCIe and PCI Slots



## Features

- 4th generation Intel® Core™ i7/i5/i3 & Celeron® processor, up to 45W (Codename Haswell/Haswell Refresh)
- Intel® Q87 chipset
- Supports two expansion slots
- DC to DC power supply supports 10~30V
- Compact & front I/O design
- Rugged, up to -10°C ~ +50°C fanless operation with W.T. SSD or W.T. CFast™
- Supports Intel® AMT 9.0
- Supports two 2.5" SATA HDD
- Supports SATA 6Gbs with RAID 0,1



## Specifications

Standard Color	Sliver	
Construction	Aluminum extrusion heavy-duty cold-rolled steel, IP30	
System Board	SHB230DGGA	
Processor	4th generation Intel® Core™ i7/i5/i3 & Celeron® processor up to 45W (Codename Haswell/Haswell Refresh)	
System	CPU Level	
	Max. Speed	3.3GHz
	Front Side Bus	N/A
Chipset	Intel® Q87	
System Memory	2 x 204-pin DDR3-1333/1600 SO-DIMM, max. up to 16 GB	
I/O Interface (Front)	ATX power on/off switch 1 x 2-pin connector output for remote on/off switch 2 x USB 3.0 4 x USB 2.0 2 x RS-232 (COM 3/4) 2 x RS-232/422/485 (COM 1/2) 2 x 10/100/1000Mbps Ethernet 1 x DVI-I 1 x DIO (Female DB9 Connector) (4 IN and 4 OUT) 1 x PS/2 keyboard/mouse 1 x Audio (MIC-in/Line-out) 1 x AT/ATX Mode switch	

Expansion Interface	HAB100: 1 PCIe x1 & 1 PCIe x4 HAB103: 1 PCIe x4 & 1 PCI HAB108: 2 PCI HAB110: 1 PCIe x4 & 1 PCIe x16
Storage	2 x 2.5" SATA HDD, 1 x CFast™ socket
System Indicators	1 x power on/off, 1 x HDD
Power Supply	DC ATX 150W: Input : 10~30VDC Output: +5V@11A, +3.3V@5A, +12V@9A, -12V@-150mA, 5Vsb@2A AC-DC power adapter: Input: 90~264VAC Output: 19V@7.89A
Operation Temperature	-10°C ~ +50°C (+14°F ~ +122°F) with W.T. HDD or W.T. SSD or W.T. CFast™
Storage Temperature	-20°C ~ +80°C (-4°F ~ +176°F)
Humidity	10% ~ 90%, non-condensing
Dimensions	159.9 mm (6.36") (W) x 251.8 mm (10.02") (D) x 185 mm (7.2") (H)
Weight (net/gross)	6.2 kg (13.67 lb)/7.2 kg (15.87 lb)
Certification	CE compliance

\*\*The maximum power rating for expansion slots at 50°C can not be exceeded the following values: The maximum loading of +3.3V /1A and +5V/5A and +12V /3A <60W

## Ordering Information

### PCIe Version

IPC932-230-FL-HAB100-DC (PN: E26G932107)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCIe slots and DC-in ATX 150W P/S
IPC932-230-FL-HAB100-AC (PN: E26G932106)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCIe slots , DC-in ATX 150W P/S, AC-DC 150W power adaptor and US power cord
IPC932-230-FL-HAB110-DC (PN: E26G932116)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCIe slots and DC-in ATX 150W P/S
IPC932-230-FL-HAB110-AC (PN: E26G932115)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCIe slots and DC-in ATX 150W P/S

### PCI Version

IPC932-230-FL-HAB108-DC (PN: E26G932114)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCI slots and DC-in ATX 150W P/S
IPC932-230-FL-HAB108-AC (PN: E26G932113)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCI slots and DC-in ATX 150W P/S

### PCI+PCIe Version

IPC932-230-FL-HAB103-DC (PN: E26G932103)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCI & PCIe slots and DC-in ATX 150W P/S
IPC932-230-FL-HAB103-AC (PN: E26G932102)	2-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor PCI & PCIe slots, DC-in ATX 150W P/S, AC-DC150W power adaptor and US power cord

\*Specifications and certifications are based on options and may vary.

## Power Protection

### AC Version

OVP (over voltage protection)
OTP (over temperature protection)
OPP (over power protection)
SCP (over circuit protection)

### DC Version

OVP (over voltage protection)
SCP (short circuit protection)
OCP (over current protection)

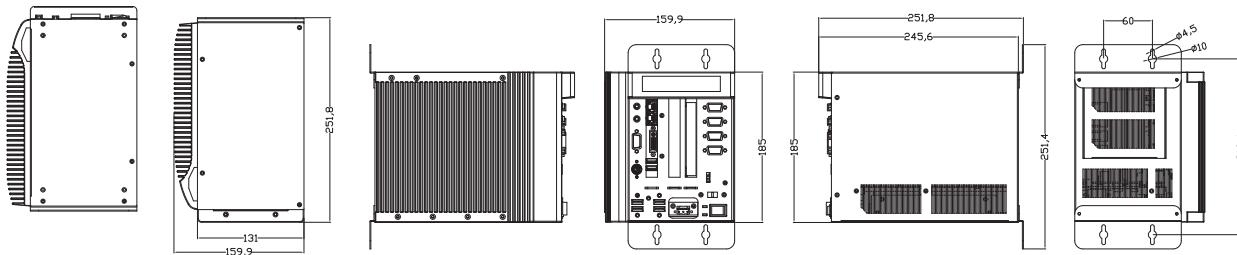
## Optional Items

DDR3 SO-DIMM: 2 GB, 4 GB, 8 GB  
 CFast™: 2 GB, 4 GB, 8 GB  
 2.5" SATA HDD: 320 GB, 500 GB  
 IPC932-230-FL Fan module kit (E26G932104)  
 Y-Cable for CRT and DVI 150 mm (594826A0010E)  
 6P PS/2 KB+Mouse cable (59381560000E)

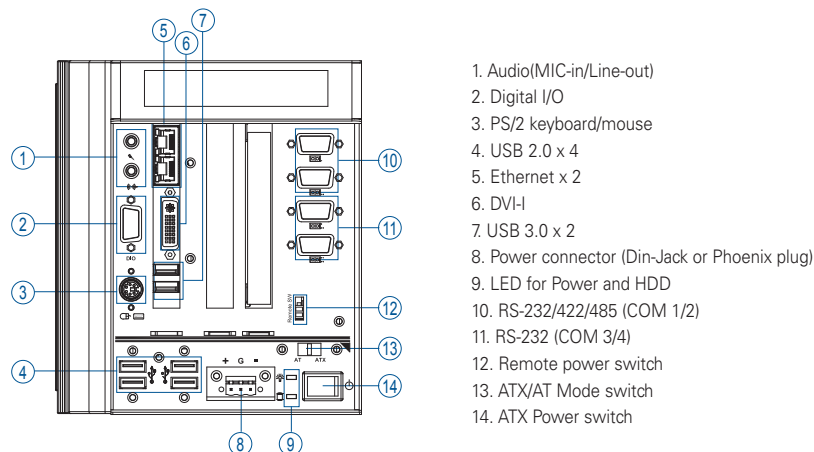
## Packing List

IPC932-230-FL Series Unit x 1  
 19V 150W Adapter (for AC Version)  
 Driver CD  
 Quick Manual  
 Wall Mount Bracket x 2  
 Screw pack x 1  
 Foot pad x 4  
 CPU Thermal Pad x 1  
 HDD Bracket x 2  
 HDD Mylar x 2  
 Terminal block x 1 (for DC version)  
 Remote power switch cable x 1

## Dimensions

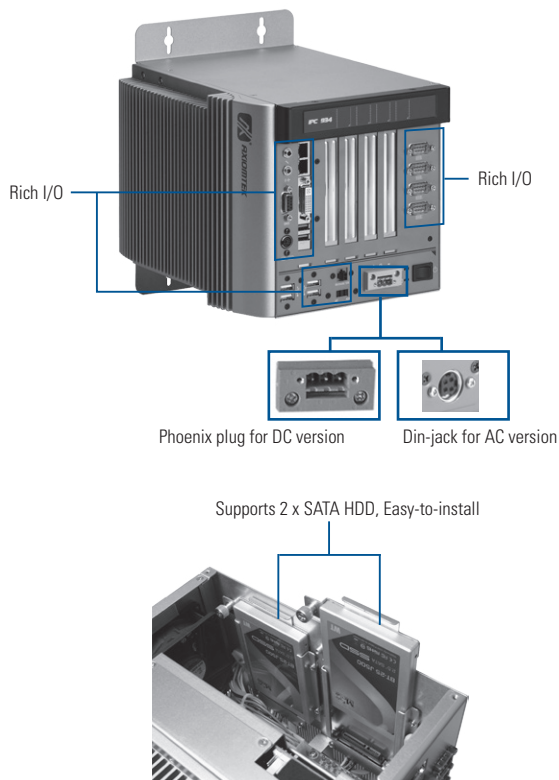


## Front & Rear Metal Panel I/O Layout



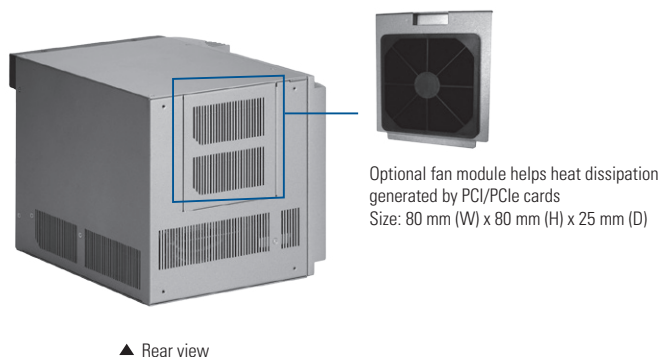
# IPC934-230-FL

4-slot Fanless Barebone System with 4th Generation Intel® Core™ i7/i5/i3 & Celeron® Processor (up to 3.3 GHz) Intel® Q87, PCIe and PCI Slots



## Features

- Fanless operation
- 4th Generation Intel® Core™ i7/i5/i3 & Celeron® processor up to 45W (Codename Haswell/Haswell Refresh)
- Intel® Q87 chipset
- Supports 4-slot expansion slots
- DC to DC power supply supports 10~30V
- Compact & front I/O design
- Rugged, up to -10°C ~ +50°C operation with W.T. SSD or W.T. CFast™
- Supports iAMT 9.0
- Support SATA 6Gbs with RAID 0,1



## Specifications

Standard Color	Sliver	
Construction	Aluminum extrusion heavy-duty cold-rolled steel, IP30	
System Board	SHB230DGGGA	
Processor System	CPU Level	4th Generation for Intel® Core™ i7/i5/i3 & Celeron® processor, up to 45W (Codename Haswell/ Haswell Refresh)
	Max. Speed	3.3 GHz
	Front Side Bus	N/A
	Chipset	Intel® Q87
System Memory	2 x 204-pin DDR3-1333/1600 SO-DIMM, max. up to 16 GB	
I/O Interface (Front)	ATX power on/off switch	
	1 x 2-pin connector output for remote on/off switch	
	2 x USB 3.0	
	4 x USB 2.0	
	2 x RS-232/422/485(COM 1/2)	
	2 x RS-232(COM 3/4)	
	2 x 10/100/1000Mbps Ethernet	
	1 x DVI-I	
	1 x DIO (Female DB9 Connector) (4 IN and 4 OUT)	
	1 x PS/2 keyboard/mouse	
1 x Audio (MIC-in/Line-out)		
1 x AT/ATX Mode SW		

Expansion Interface	HAB104: 4 PCI
	HAB105: 2 PCI & 1 PCIe x1 & 1 PCIe x16
Storage	2 x 2.5" SATA HDD, 1 x CFast™ socket
System Indicators	1 x power on/off, 1 x HDD
Power Supply	DC ATX150W :
	Input : 10~30Vac
	Output: +5V@11A, +3.3V@5A, +12V@9A, -12V@-150mA, 5Vsb@2A
AC-DC power adapter :	Input : 90 ~ 264Vac
	Output : 19V@7.89A
	Operation Temperature
Storage Temperature	-20°C ~ +80°C (-4°F ~ 176°F)
Humidity	10% ~ 90%, non-condensing
Dimensions	200.54 mm (7.96") (W) x 251.8mm (9.99") (D) x 185 mm (7.3") (H)
Weight (net/gross)	5.9 kg (12.98 lb)/6.9 kg (15.18 lb)
Certification	CE Compliance

\*\*The maximum power rating for expansion slots at 50°C can not be exceeded the following values: The maximum loading of +3.3V /1A and +5V/5A and +12V /3A <60W

## Ordering Information

### PCI Version

IPC934-230-FL-HAB104 DC (P/N: E26G934101)	4-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor, PCI slots and DC-in ATX 150W P/S
IPC934-230-FL-HAB104 AC (P/N: E26G934100)	4-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor, PCI slots, DC-in ATX 150W P/S and AC-DC 150W power adaptor and US power cord

### PCI+PCIe Version

IPC934-230-FL-HAB105 DC (P/N: E26G934103)	4-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor, PCI & PCIe slots and DC-in ATX 150W P/S
IPC934-230-FL-HAB105 AC (P/N: E26G934102)	4-slot fanless embedded system with 4th generation Intel® Core™ i7/i5/i3 processor, PCI & PCIe slots, DC-in ATX 150W P/S and AC-DC 150W power adaptor and US power cord

\*Specifications and certifications are based on options and may vary.

## Power Protection

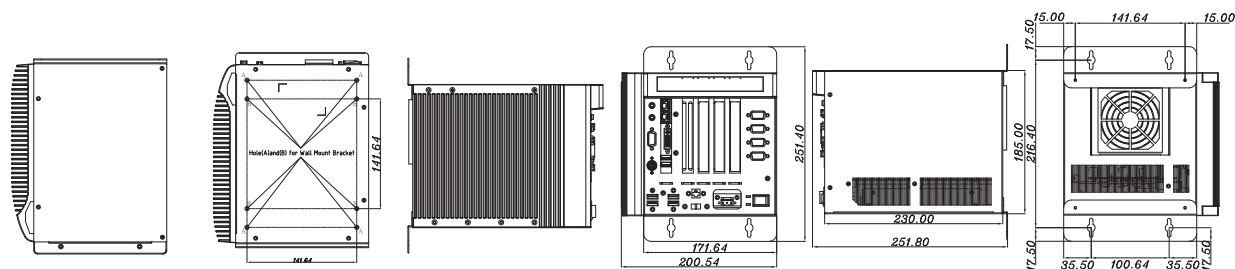
### AC Version

OVP (Over voltage protection)
OTP (over temperature protection)
OPP (over power protection)
SCP (over circuit protection)

### DC Version

OVP (Over voltage protection)
SCP (short circuit protection)
OCP (Over current protection)

## Dimensions



## Optional Items

DDR3 SODIMM: 2 GB, 4 GB, 8 GB
CFast : 2 GB, 4 GB, 8 GB
Embedded OS: WIN7 OS Image and License
2.5" SATA HDD: 320 GB, 500 GB
IPC932-230-FL Fan module kit (E26G932104)
Y-Cable for CRT and DVI 150 mm (594826A0010E)
6P PS/2 KB+Mouse cable (59381560000E)

## Packing List

19V 150W adapter and US Power cord (for AC Version)
Driver CD
Quick Manual
Wall mount bracket x 2
Foot Pad x 4
HDD bracket x 2
HDD Mylar x 2
Screw pack x 1
Thermal Pad for RAM x 1
CPU thermal Pad x 1
Terminal block x 1 ( for DC version)
Remote power switch cable x 1

Архангельск (8182)63-90-72  
 Астана +7(7172)727-132  
 Белгород (4722)40-23-64  
 Брянск (4832)59-03-52  
 Владивосток (423)249-28-31  
 Волгоград (844)278-03-48  
 Вологда (8172)26-41-59  
 Воронеж (473)204-51-73  
 Екатеринбург (343)384-55-89  
 Иваново (4932)77-34-06  
 Ижевск (3412)26-03-58  
 Казань (843)206-01-48

Калининград (4012)72-03-81  
 Калуга (4842)92-23-67  
 Кемерово (3842)65-04-62  
 Киров (8332)68-02-04  
 Краснодар (861)203-40-90  
 Красноярск (391)204-63-61  
 Курск (4712)77-13-04  
 Липецк (4742)52-20-81  
 Магнитогорск (3519)55-03-13  
 Москва (495)268-04-70  
 Мурманск (8152)59-64-93  
 Набережные Челны (8552)20-53-41

Нижний Новгород (831)429-08-12  
 Новокузнецк (3843)20-46-81  
 Новосибирск (383)227-86-73  
 Орел (4862)44-53-42  
 Оренбург (3532)37-68-04  
 Пенза (8412)22-31-16  
 Пермь (342)205-81-47  
 Ростов-на-Дону (863)308-18-15  
 Рязань (4912)46-61-64  
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 Тверь (4822)63-31-35  
 Томск (3822)98-41-53  
 Тула (4872)74-02-29  
 Тюмень (3452)66-21-18  
 Ульяновск (8422)24-23-59  
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