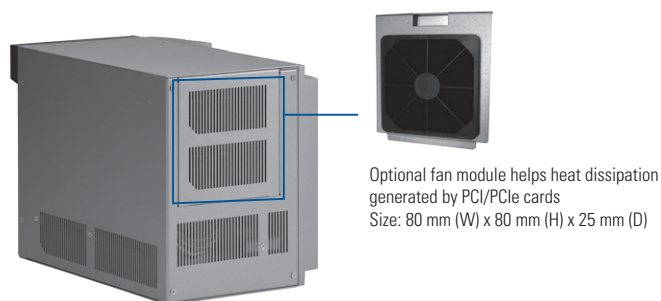
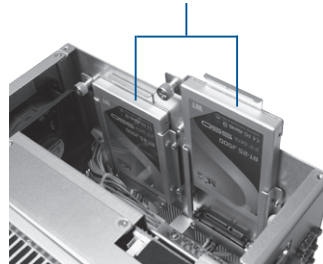
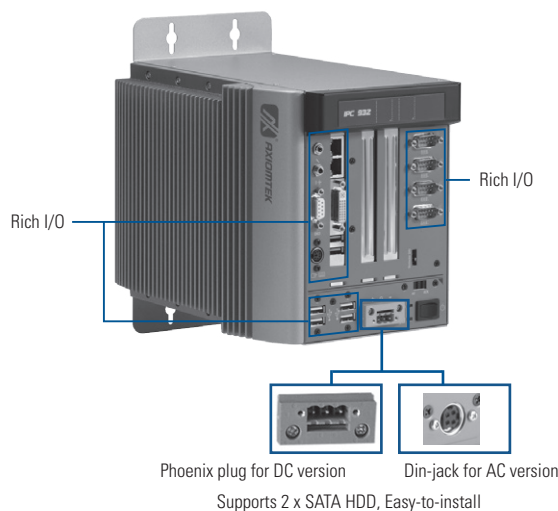


# IPC932-230-FL-ECM

2-slot Fanless EtherCAT Master Controller with 4th Gen Intel® Core™ i7/i5/i3 & Celeron® Processors (up to 3.3 GHz) , Intel® Q87 Chipset, PCIe and PCI Slots

## Features

- 4th gen Intel® Core™ i7/i5/i3 & Celeron® Processor, up to 45W (codename: Haswell/Haswell Refresh)
- Intel® Q87 chipset
- Supports 2 expansion slots
- 10-30 VDC to DC power supply
- Compact & front I/O design
- -10°C to +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
- Support IntervalZero Windows real-time extension RTX64
- 1 EtherCAT port, 1 GbE LAN port
- Verified with IntervalZero EtherCAT solution KingStar
- Support Acontis EtherCAT master stack



▲ Rear view



## Specifications

Standard Color	Silver	
Construction	Aluminum extrusion heavy-duty cold-rolled steel, IP30	
System Board	SHB230DGGA	
Processor System	CPU Level	4th generation Intel® Core™ i7/i5/i3 & Celeron® processors up to 45 W (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, up to 16GB	
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 EtherCAT port	
	1 x GbE LAN port	
	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
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: 10-30 VDC Output: +5V@11A, +3.3V@5A, +12V@9A, -12V@-150mA, 5Vsb@2A
	AC-DC power adapter: Input: 90-264 VAC Output: 19V@7.89A
	Operation Temperature
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-ECM-DC SYS w/HAB100 (PN: E26G932107)	2-slot fanless EtherCAT master controller embedded system with 4th generation Intel® Core™ i7/i5/i3 processor, PCIe slots and DC-in ATX 150W P/S
IPC932-230-FL-ECM-AC SYS w/HAB100 (PN: E26G932106)	2-slot fanless EtherCAT master controller 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

\*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)

## Verified with Software

Operating System	Windows® Embedded Standard 7 64 bit
Windows Extension	IntervalZero Windows real-time extension RTX64
Test Middleware	IntervalZero KingStar
EtherCAT Configurator	IntervalZero EtherCAT configurator

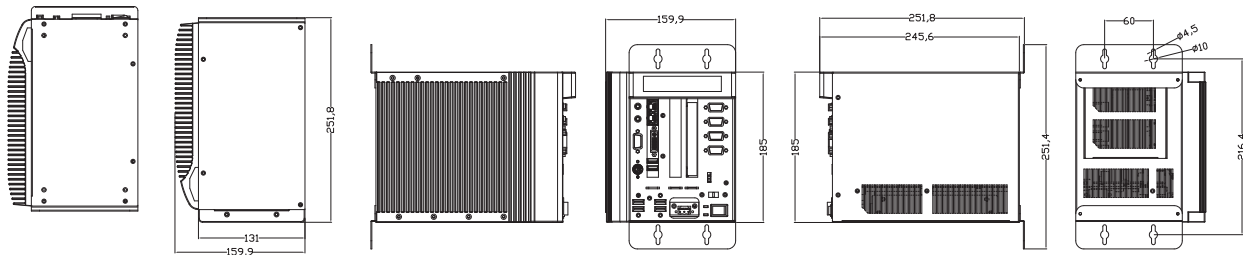
## Optional Items

DDR3 SO-DIMM: 2GB, 4GB, 8GB  
 CFast™: 2GB, 4GB, 8GB  
 2.5" SATA HDD: 320GB, 500GB  
 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

- 1 x IPC932-230-FL series unit
- 1 x 19 V 15 0W adapter (for AC version)
- 1 x Driver CD
- 1 x Quick manual
- 2 x Wall mount bracket x 2
- 1 x Screw pack
- 4 x Foot pad
- 1 x CPU thermal pad
- 2 x HDD bracket
- 2 x HDD mylar
- 1 x Terminal block (for DC version)
- 1 x Remote power switch cable

## Dimensions



## Front & Rear Metal Panel I/O Layout

