

User Manual

PCM4 Q87 version



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FCC Warning

Computing devices and peripherals generate, use, and can radiate radio frequency energy, and if not installed and used in accordance with the instructions advised by ISIC A/S, may cause interference to radio communication.

The PCM4 series of PC's, manufactured by ISIC A/S, is designed to comply with the emerging generic EEC standards, that cover applications in maritime environment.

Classification

The PC is classified as Environmental condition "protected" acc. to EN60945 ed. 4.

Approvals

Approval according to EN60945 ed. 4; Maritime navigation and radio communication equipment and systems – General requirements.



ISIC A/S is complying with the WEEE directive within the European Union, stating that electronic and electric products must be collected separately. Products are marked according to the directive.

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ISIC PCM4 User Manual

Congratulations on your purchase of ISIC PCM4. This short form manual is designed to get you started working with your new PCM4. It is not meant to cover all possible options or situations. For a more detailed description of the PCM4 motherboard, please read the fully comprehensive Main Board Manual obtainable on the CDROM.

Package contents:

- 1 PCM4
- 1 CDROM containing PCM4 Manual and Main Board Manual (optional)
- 1 Power cable (optional)

If any of these items are not present, please contact ISIC.

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1 General considerations on Installation and Operation

The PCM4-Q87 is designed to work at conditions according to IEC 60945. However, keeping the temperature and vibration level at a minimum will extend the life time of the product. ISIC recommend operating this product at normal room temperature (20-25 °C), with the lowest level of vibration and humidity.

Installation of the PCM4-Q87

When designing the cabinet/console for the PCM4-Q87, please ensure that air can flow freely around the cabinet, in order to avoid any unnecessary rise in temperature. If it is not possible to have an adequate natural airflow, use a fan to force the airflow to be higher.

2 Getting started

Please refer to the *PCM4 overview* for location of connectors specified in this section.

Connect Keyboard/Mouse to the connector specified in *PCM4 overview* or connect to the USB connectors.

Connect the monitor to the VGA, DVI, HDMI or DisplayPort connector.

Connect all other needed connectors ending with the Power outlet.

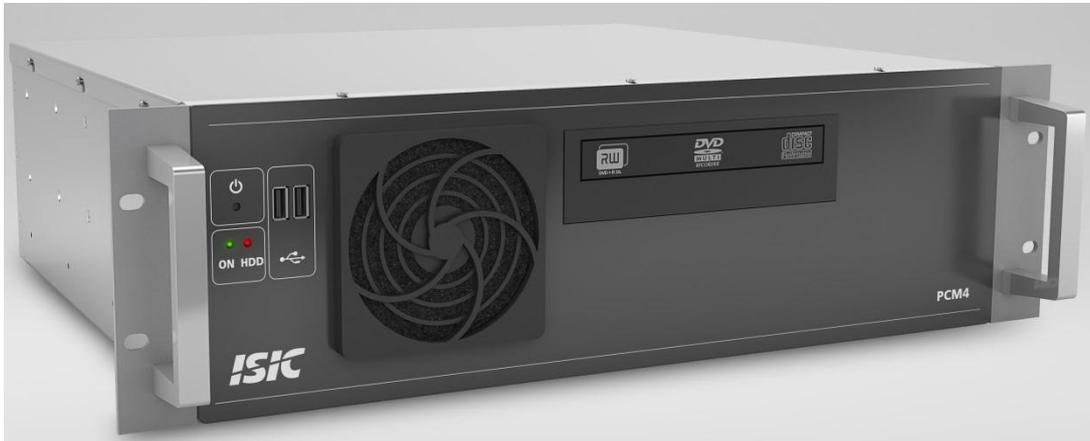
Press the ON/OFF button to "I" position.

To power up the PCM4, you need to press the power button on the front (dependant on BIOS setting). Use a pencil or similar for that purpose.

The PCM4 will be in standby mode when you power down. To restart the PCM4 again, use a pencil on the power button.

3 PCM4 Q87 overview

Front view PCM4-Q87



Rear view PCM4-Q87

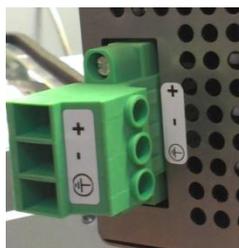


Power ac

**See Motherboard Connection Overview
(next page)**

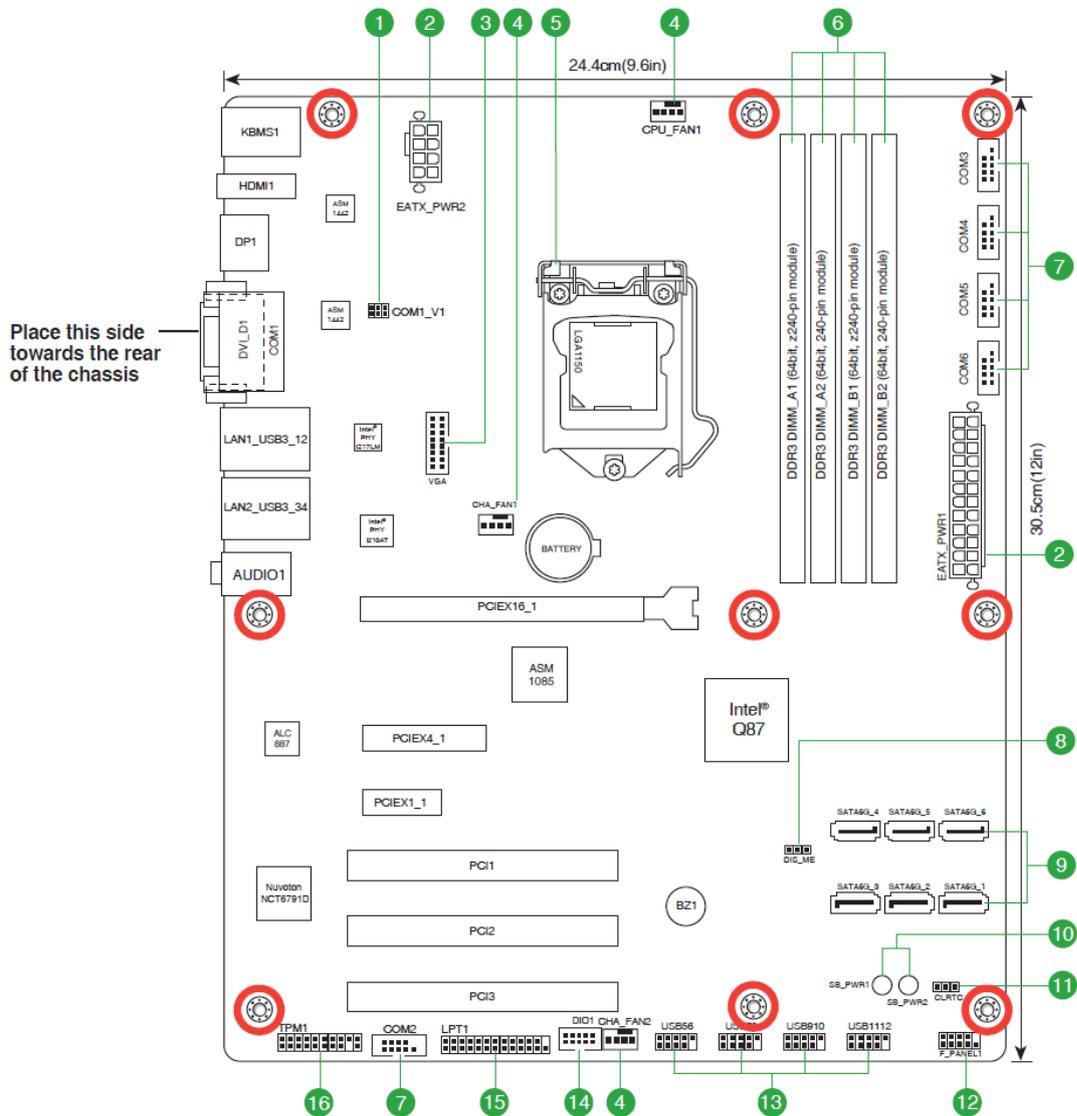
Power DC:

- + : 24V DC
- : 0V
-  : Chassis

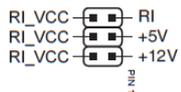


4 Motherboard connection overview

Below is an overview of motherboard connections and pin-out of the same.

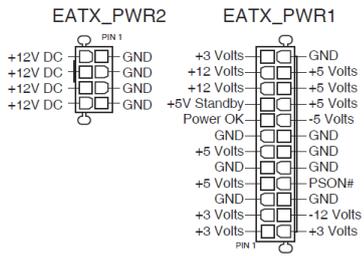


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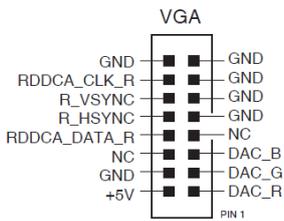


Setting	Pins
+12V	1-2
+5V	3-4
Ring (Default)	5-6

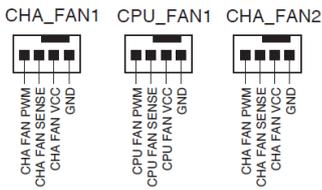
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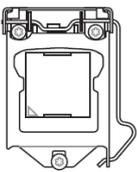
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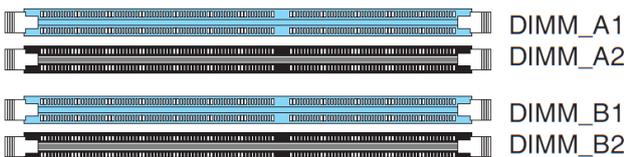
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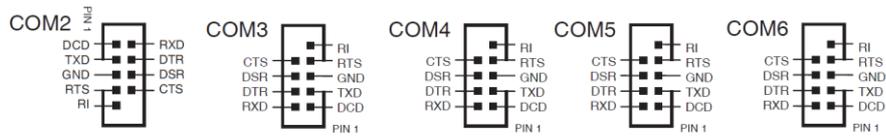
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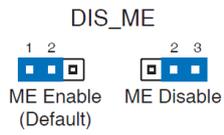
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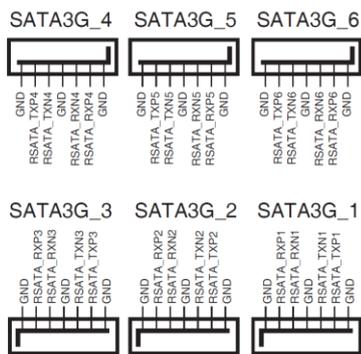
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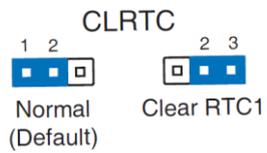
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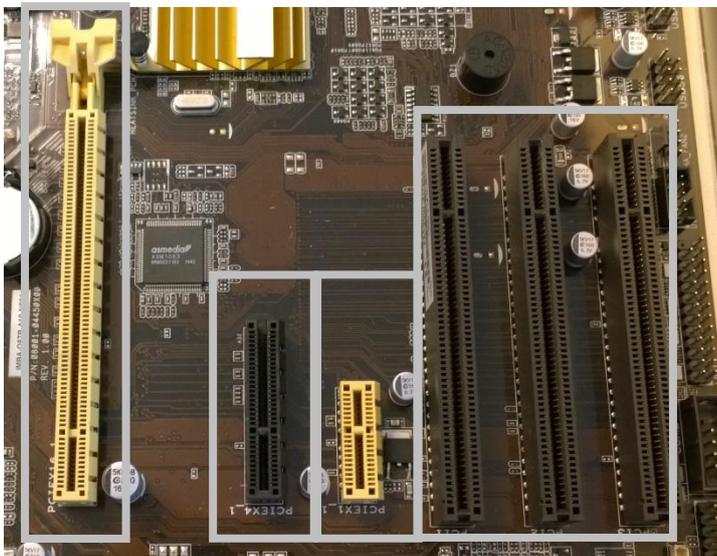
5 Installing additional expansion cards

Always disconnect the Power outlet before removing the top cover.

Remove the 2 thumb screws and top cover.

Remove the slot screw and remove the blind bracket. Install the add-on card in the slot and then replace the slot screw. Replace the top cover and fasten the 2 screws at the rear.

PCM4-Q87 motherboard



PCIe x 16

PCIe x 4

PCIe x 1

3 times PCI

ATTENTION - This marine computer is covered by ISIC warranty, and any alterations may render marine certificate and warranty invalid

6 Technical specifications (29/10-2015)

PCM4-Q87 – General

CPU:	Core™ i3-4360 (2 Cores, 4 Threads) Optional Core™ i5-4590S (4C/4T) Optional Core™ i7-4790S (4C/8T) Optional Pentium G3420 Dual Core
Chipset:	Intel® Q87 64Bits, Intel® Virtualization Technology, Intel® vPro Technology, Intel® ME v9.0, Intel® Rapid Storage Technology, Intel® Smart Connect Technology, Intel® Smart Response Technology, Intel® Stable Image Platform Program (SIPP), Supports Hyper-Threading, Enhanced SpeedStep® and Turbo Boost Technology
Memory:	4 GB DDR3 RAM 1600 MHz (Standard) Optional Upgrades 4 DIMM sockets supporting up to a total of 32GB DDR3 1333/1600 RAM
Video:	On-CPU Intel HD Graphics 4600 The maximum supported resolution is 4096x2160 (HDMI) OpenGL 4.0, OpenCL 1.2 compliant DirectX 11.1 / Shader model 5 Tripple independent display support Optional PCIe x16 graphics card
Audio:	6-channel Audio (Realtek ALC887)
Ethernet:	1x 10/100/1000 Mbit/sec Ethernet Intel® PHY I217LM (support AMT 9.0) 1x 10/100/1000 Mbit/sec Ethernet Intel® I210AT Optional 1,2 or 4x RJ45 on add-on card
Hard Disk Drive:	80+GB 2.5", SATA (Standard) Optional Upgrades 500GB and 1TB, disk, 2.5" SATA Solid State Disc 80GB, 100GB... up to 1600GB
5¼" drive bay:	DVD-R/W Drive (SATA interface) Optional Combined Removable Solid State disk drive and Slide-in DVD drive

PCM4-Q87 - Ports

Video:	HDMI + DP + DVI-D + VGA video out
Audio:	3x 3.5mm jack socket (Line in, Line out, Mic in)
Ethernet:	2x RJ45
Serial:	1x RS232/422/485 un-isolated Optional 2 x RS232 un-isolated..
USB:	4x USB 3.0 ports on back 10x USB 2.0 ports (2 on back, 6 on internal headers and 2 on front)
SATA:	6x 6.0Gb/s SATA RAID 0,1,5,10 supported by onboard Intel Rapid Storage Technology
Expansion Slots:	1x PCI Express x16, 1x PCI Express x4, 1x PCI Express x1, 3x PCI

PCM4-Q87 – Power

Standard:	90-264 VAC, 50-60 Hz, max 300 Watt Typ 35-130Watts
Automotive:	18-36 VDC max 300 Watt Typ 35-130Watts

PCM4-Q87 – Environmental

Operating Temperature:	-15 to 55 °C
Storage Temperature:	-25 to 70 °C
Relative Humidity:	8 to 90 %

PCM4-Q87 - Approvals

CE Mark: EN61000-6-2, EN61000-6-4, EN61000-6-1 & EN61000-6-3

Marine: IACS E10 rev. 6 & IEC 60945 Ed. 4

Type Approvals: *For latest marine class approvals – see www.isic-systems.com*

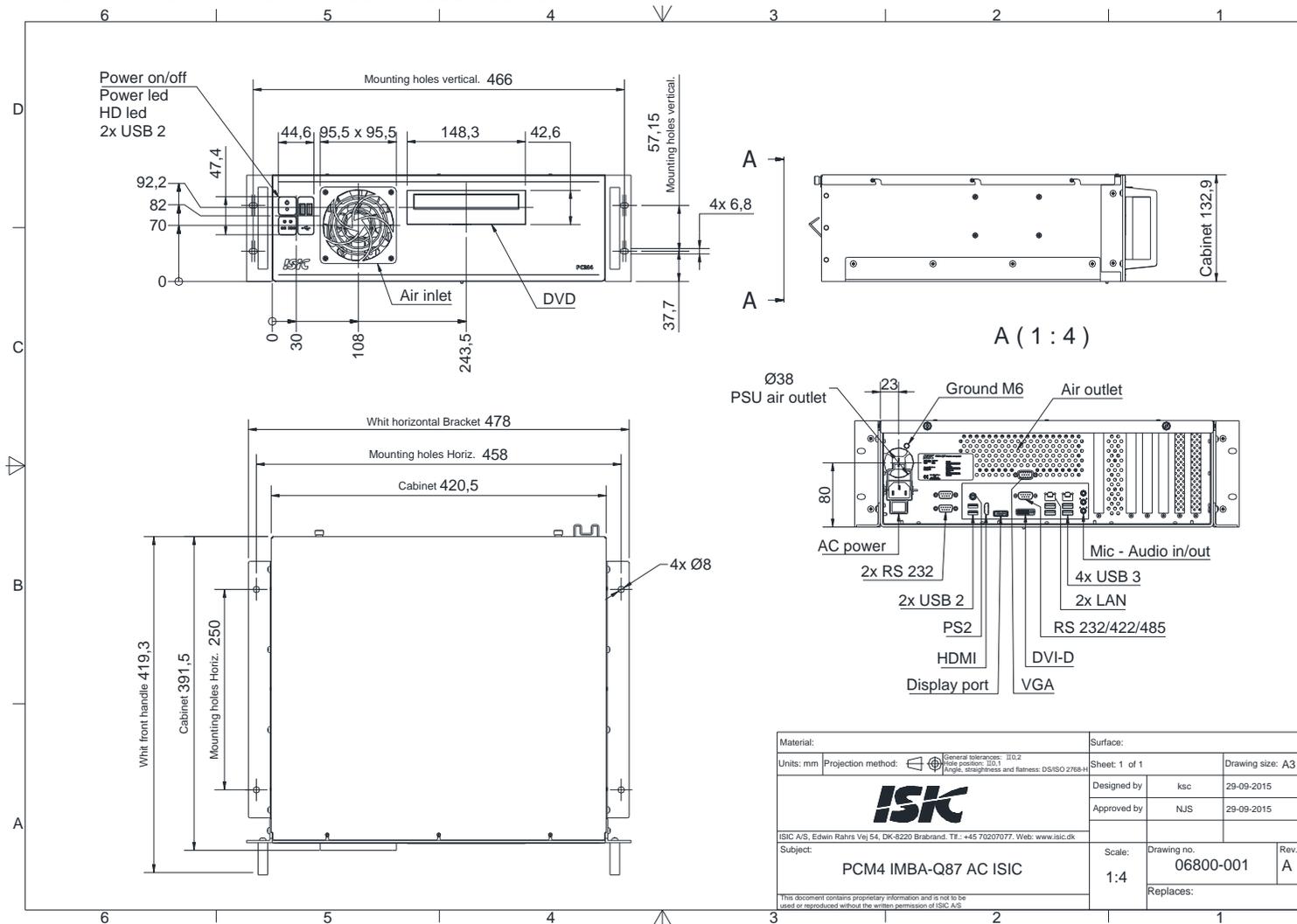
PCM4-Q87 - Dimensions

Basic Version: 420 x 132 (3U) x 380 mm

Brackets: Mounting-angles - Optional 19" brackets for 19" rack-mount (on shelf)

Weight: 11 Kg

7 Mechanical dimensions



8 Mounting positions

The PCM4 can be mounted in horizontal and vertical positions, but NOT upside down. If needed, it is also possible to mount the PCM4 with the DVD drive facing downwards.

9 PCM4 System Indicators

The PCM4 is equipped with two LED's, located on the case front.

LED Indication	Description
Green	System is on.
Red	Indicate activity of SSD.

10 Troubleshooting

Problem	Cause	Solutions
The PCM4 won't start	- There is no power connected	- Connect the power cord
	- The ON/OFF button at the rear side is in the 'O' position (ac version only)	- Push the ON/OFF button to the 'I' position
	- The power button on the front has not been pressed	- Use a pencil on the power button
	- USB power overload	- Read paragraph "General notes on USB"
The PCM4 starts, but there is no picture on the screen	- The display cable is not connected, or have fallen out	- Connect the display cable
	- Your brightness/contrast on the monitor is either at max or min level.	- Turn the brightness/contrast to the correct levels.

11 Servicing the unit

In case that the unit still fails after following the troubleshooting send the unit to ISIC for repair. There are no user serviceable parts inside.

12 General notes on USB

In the USB specification a max power consumption of 500mA on each USB port is specified. If you experience start- up problems, start by removing all USB devices, and then try to restart the PCM4 again.

Faulty USB devices can also cause malfunction of your PCM4.

13 ISIC info / Support

In case you have inquiries or problems with your PCM4, you have a number of possibilities to get support.

Company name: ISIC A/S

Head office: Edwin Rahrs Vej 54
DK – 8220 Brabrand
Denmark

Shipping address: Holmstrupgaardvej 5
DK-8220 Brabrand
Denmark

Telephone: +45 70 20 70 77
Fax: +45 70 20 79 76

Mail: mail@isic-systems.com
www: www.isic-systems.com

VAT number: DK 16 70 45 39

Bank Name/Address: Handelsbanken A/S
Havneholmen 29
DK – 1561 København V
Denmark

Bank Code: 0892
SWIFT: HANDDKKK
IBAN for DKK: DK53 0892 0001 0159 69
IBAN for EUR: DK48 0892 0003 0026 19
IBAN for USD: DK26 0892 0003 0026 27

Contacts:
RFQ's: By fax to +45 70 20 79 76
By mail to sales@isic-systems.com

Orders: By fax to +45 70 20 79 76
By mail to orders@isic-systems.com

Support: Via homepage www.isic-systems.com under aftersales
By mail to service@isic-systems.com
During office-hours (Mo-Fr: CET 0800 - 1600) at +45 70 20 70 77

Service: Before shipment for service Request Return Material Authorisation
number at homepage www.isic-systems.com under RMA
By mail to service@isic-systems.com

14 Revision history

Rev A	Oct 2015	Release
Rev B	Jan 2016	Pictures updated