

PCM4 manual

H77 version



ISiC

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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 A/S
Edwin Rahrs Vej 54
DK-8220 Brabrand
Denmark

Phone: +45 70 20 70 77
Fax: +45 70 20 79 76
Web: <http://www.isic-systems.com>



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-H77 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-H77

When designing the cabinet/console for the PCM4-H77, 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 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 (dependant on BIOS setting). Use a pencil or similar for that purpose. If the temperature is very cold (below approx. 1.5°C) and the PCM4 has the special ISIC HPC option (Heater Power Controller) the PCM4 will automatically begin warming the components inside. That process can take up to 30 minutes. During that process, the power LED will flash red to indicate the warming process. When the PCM4 has reached the sufficient temperature, it will automatically start to boot. Please refer to PCM4 system indicators on page 11 for an in-depth description.

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 H77 overview

Front view PCM4-H77



Rear view PCM4-H77

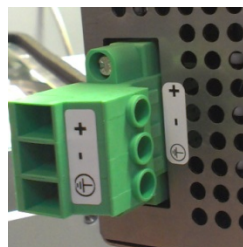


Power ac

See Motherboard Connection Overview
(next page)

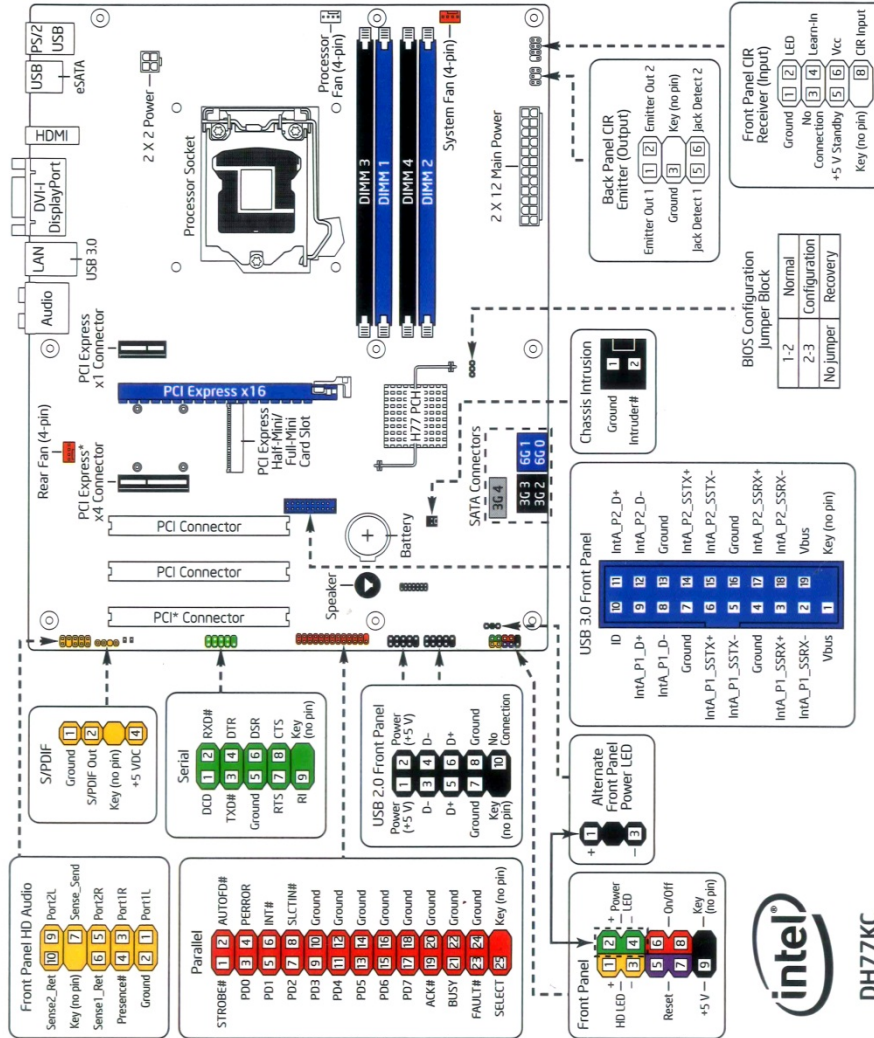
Power DC:

- + : 24V DC
- : 0V
- ⊕ : Chassis

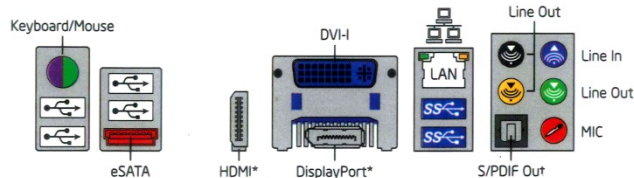


4 Motherboard connection overview

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



CAUTION
Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.



Attach this label near the back panel connectors.
Attach this label to the inside surface of the chassis.

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G53664-001

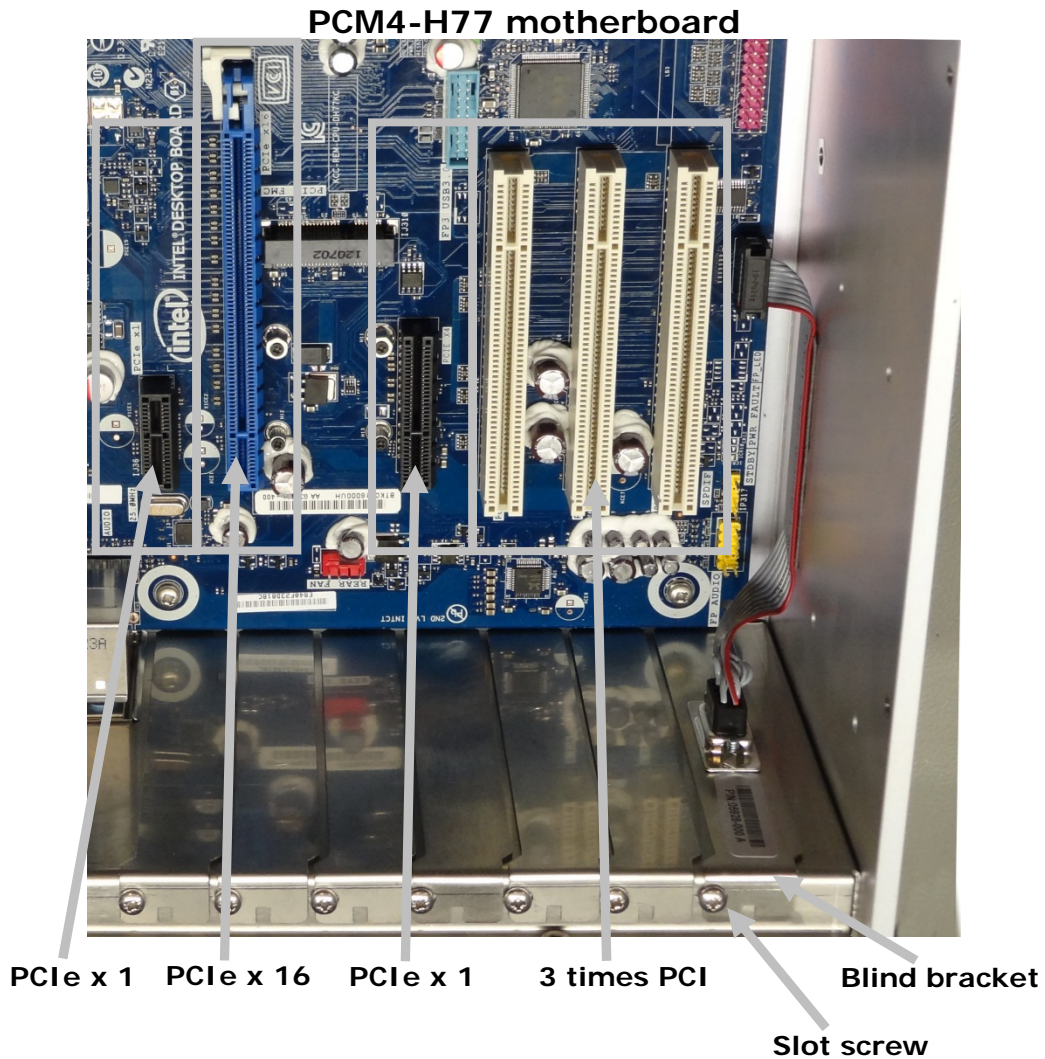


5 Installing additional expansion cards

Always disconnect the Power outlet before removing the top cover.

Remove the 9 overhead 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 the 9 overhead screws.



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

6 Technical specifications

PCM4-H77 - General

CPU:	Core™ i3-3220 (2 Cores, 4 Threads) <i>Optional Core™ i7-3770 (4C/8T)</i>
Chipset:	Intel® H77 Express <i>64Bits, Hyper-Threading and Virtualization Technology with Enhanced SpeedStep® and Turbo Boost Technology</i> <i>5GT/s Direct Media Interface</i>
Memory:	1 GB DDR3 RAM 1066 MHz (Standard) Optional Upgrades <i>4 DIMM sockets supporting up to a total of 16GB DDR3 1066/1333/1600 RAM</i>
Video:	On-CPU Intel HD Graphics 2500 (Core i3) / 4000 (Core i7) <i>The maximum supported resolution is 1900 x 1200 (WUXGA)</i> <i>DirectX 10.1 and OpenGL 3.0 compliant</i> <i>DirectX 11.0 CS4.0 only / Shader model 4.0</i> <i>Dual independent display support</i> <i>Optional PCIe x16 graphics card</i>
Audio:	10-channel (7.1 + 2) Intel High Definition Audio (Realtek ALC892 audio Codec)
Ethernet:	10/100/1000 Mbit/sec Ethernet (RJ45) – onboard
Hard Disk Drive:	100+GB 2.5", SATA (Standard) Optional Upgrades <i>Sizes up till 500GB, 24/7 rated disk, 2.5" SATA</i> <i>Solid State Disc 32,64,128 GB</i>
5¼" drive bay:	DVD-R/W Drive (SATA interface) <i>Optional Combined Removable Solid State disk drive and Slide-in DVD drive</i>

PCM4-H77 - Ports

Video:	HDMI+DVI-I + DisplayPort video out
Audio:	5x 3.5mm jack socket, Optical S/PDIF out
Ethernet:	1x RJ45
Serial:	<i>Optional 1 x RS232 un-isolated. Routed to back from Motherboard header.</i>
USB:	4x USB 3.0 ports (2 on back and 2 on internal header) 10x USB 2.0 ports (4 on back, 2 on internal header, 2 via Mini PCIe and 2 accessible from front)
SATA:	RAID 0,1,5,10 supported by onboard Intel Rapid Storage Technology 2x 6.0Gb/s, 3x 3.0Gb/s (1 port shared with mSATA on Mini PCIe)
eSATA:	1x eSATA 3.0Gb/s (on back)
Expansion Slots:	1x PCI Express x16, 1x PCI Express x4, 1x PCI Express x1, 3x PCI 1x PCI Express Full-/Half-Mini Card slot with support for mSATA

PCM4-H77 – power

Standard:	90-264 VAC, 50-60 Hz, 300 Watt
Automotive:	18-36 VDC

PCM4-H77 – Environmental

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

PCM4-H77 - Approvals

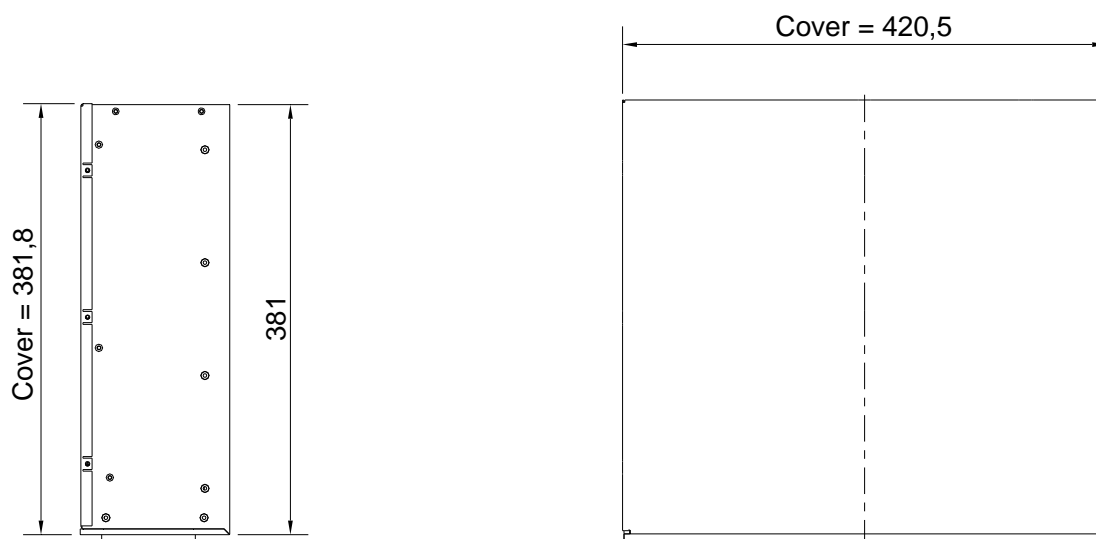
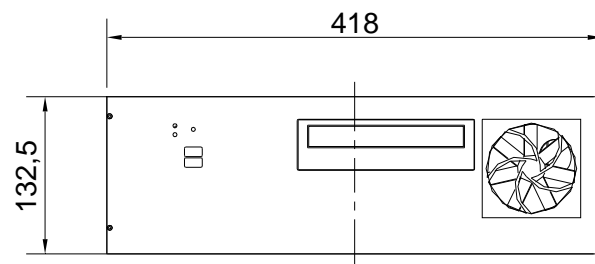
CE Mark:	EN61000-6-2 & EN61000-6-4
Marine:	IACS E10 rev. 5 & IEC 60945 Ed. 4
Type Approvals:	<i>For latest marine class approvals – see www.isic-systems.com</i>

PCM4-H77 - Dimensions

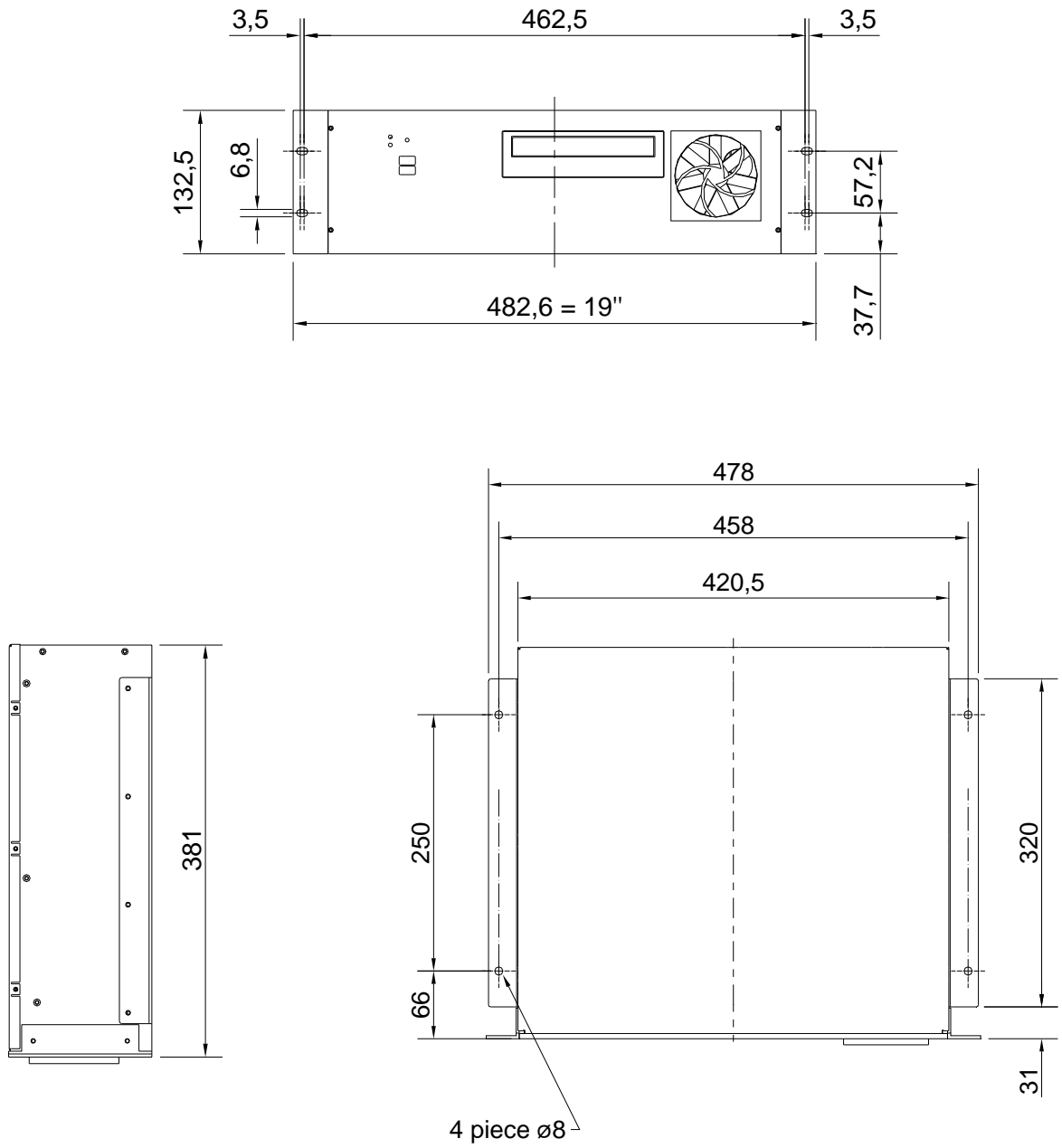
Basic Version:	420 x 132 (3U) x 380 mm
Brackets:	Mounting-angles - Optional 19" brackets for 19" rack-mount (on shelf)
Weight:	11 Kg



7 Mechanical dimensions



Cabinet with 19" brackets and rails.



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.

Having a version without the ISIC HPC option (Heater Power Control), the upper LED is used to simply indicate if the system is on or off, while the lower LED indicated Hard Disk activity.

In a PCM4 having the ISIC HPC option the display capability has been extended to provide an indication of the current PCM4 system state. The lower LED still indicates Hard Disk activity; the upper LED has been reconfigured as described in the following table:

LED Indication	Description
Off	Power is removed from the system.
Red Flashing	Boot sequence is delayed up to 30 minutes while the Hard Disk Drive is heated. 1.25 Hz : HDD Temperature is below -5°C 2.5 Hz : HDD Temperature is between -5°C and +5°C 5 Hz : HDD Temperature is above +5°C
Green Flashing	The system is monitored for 10 seconds to ensure valid boot-up. If the motherboard shuts down as a consequence of BIOS "Last State" settings, it will be forced to reboot.
Green	System is on.
Red	System is in standby mode.

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
	- The Power LED is flashing green (HPC option only)	- The temperature is low and the PCM4 is warming up. This process can take up to 30 minutes.
	- 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 DuraMON, 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	Jan 2013	Release





SCIGATE AUTOMATION (S) PTE LTD
No.1 Bukit Batok Street 22 #01-01 Singapore 659592
Tel: (65) 6561 0488 Fax: (65) 6562 0588
Email: sales@scigate.com.sg Web: www.scigate.com.sg
Business Hours: Monday - Friday 8.30am - 6.15pm



Edwin Rahrs Vej 54
DK-8220 Brabrand
Denmark

Web: <http://www.isic-systems.com>
Email: service@isic-systems.com

