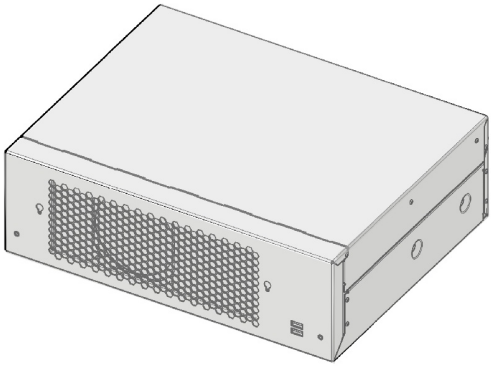
WINCOR NIXDORF



EPC-G41

Operating Manual

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Edition Nov 2010

Contents

Manufacturer's Certification

The device complies with the requirements of the EEC directive 2004/108/EC with regard to "Electromagnetic compatibility" and 2006/95/EC "Low Voltage Directive".

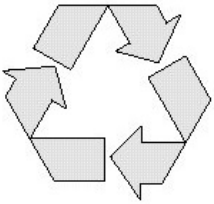
FCC-Class A Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not in-stalled and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at own expense.

Le présent appareil numérique ne génère pas de bruits radioélectriques dépassant les limites applicable aux appareils numériques de la "Class A" prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Recycling



The EPC-G41 has been designed according to the Wincor Nixdorf standard for "Environmentally friendly product design and development."

The EPC-G41 is manufactured without using CFCs or CHCs and is made predominantly of recyclable parts and materials.

For purposes of reuse, it is helpful not to place any additional stickers on the device.

Wincor Nixdorf disposes of old units in an environmentally friendly manner in a recycling centre which, like the entire company, is certified according to ISO 9001 and ISO 14001.

Comply with local regulations for removing/disposing of hazardous waste (e.g. batteries).

Your local representative is available to answer any questions you may have regarding return, recycling or disposal of our products.

Safety information

The EPC-G41 corresponds to the relevant safety regulations for data processing equipment.

If this system is taken to the installation location from a cold environment, condensation may appear. As the device must not be started until it is absolutely dry, allow a temperature adjustment time of at least two hours.

This device is equipped with a safety-tested power cable. It may only be connected to a safety plug with ground contact that is earthed in compliance with regulations.

When putting the device into place, make sure that the mounting plug apparatus and the safety plug with ground contact are readily accessible. Whenever work of any kind is done on the device, as well as when data cables are plugged and unplugged, the device must be completely disconnected from the line voltage. To do so, turn the device off and unplug the power cord.

Make sure that no foreign objects (such as paper clips) get inside the device, as electrical shocks or short circuits could result.

Keep the device's ventilation slots clear in order to ensure proper ventilation. This will avoid excessive temperature increases. Observe the indications given in the chapter “Setting up the Device”.

During storms, the data cables should not be plugged in or unplugged.

Protect the device from shock, dust, humidity and heat.

In an emergency (for example, damaged housing or damaged power supply unit, liquid spill or foreign object falling into the unit), turn the device off immediately and unplug the power cable.

There is a danger of explosion if the device's lithium battery is replaced incorrectly! The lithium battery may only be replaced with the identical type or those recommended by the manufacturer.

You can connect or disconnect USB devices during operation of your EPC-G41, provided that these devices comply with the specifications according to usb.org.

Other peripheral devices with higher power requirement (such as Powered USB printer) should be connected to or disconnected from your EPC-G41 only after the system has been switched off!

You should only connect the EPC-G41, or other information technology devices, to electrical supplies with a separate earth wire (PE). This type of electrical supply is called a TN-S power supply system. Do not use PEN conductors! Also, follow the recommendations of DIN VDE 0100 Part 540, Addendum C2. By doing so, you avoid possible malfunctions.

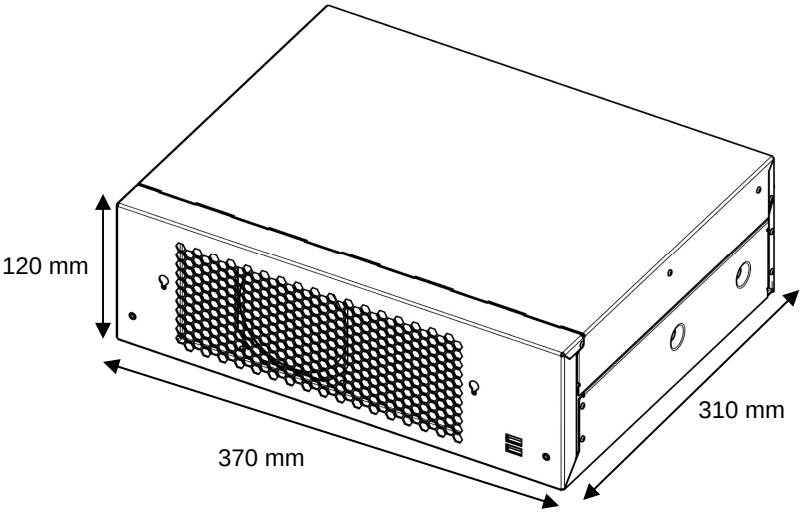
Introduction

The Development of the EPC-G41, for ATM- and Info-Systems takes place with Standard market components as mini ITX G41, TFX Power supply with housing and ventilation.

The motherboard will follow the µATX form factor (244mm x 244mm) and the usage of a TFX - Power Supply. It is also necessary to use “Low Profile” cards for the extension slots to fulfill the mechanical requirements.

All major parts as hard disk, fan and CPU of the device are easy accessible (very few screws to access)

Dimension

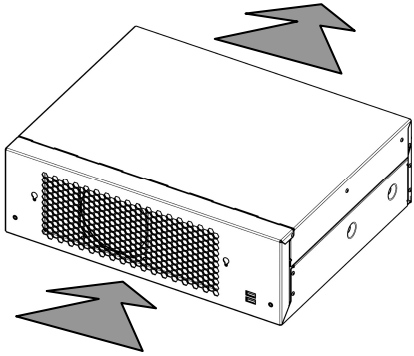


Overall dimensions W x H x D: 370mm x 120mm x 310mm

Setting up the device

Set up the EPC-G41 device so that it is not subject to any extreme environmental conditions. Protect the device from shocks, dust, moisture, heat and strong magnetic fields.

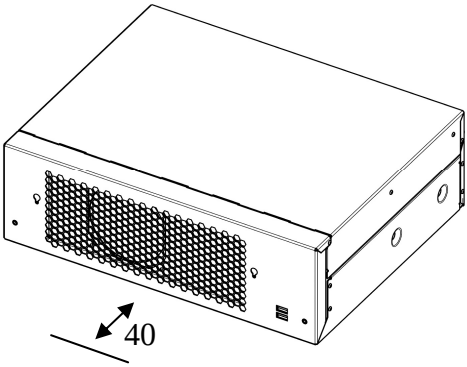
The ventilation will work in the following described schematic:
air intake at the front of the PC
air exit at the back side of the PC.



All used fans inside of the PC are regulated according temperature conditions to keep the noise emission at a low level

Always be sure that all ventilation slots of the EPC-G41 are not blocked, thus ensuring that the device always has sufficient ventilation.

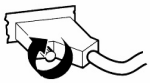
To guarantee a free intake of the air is 40mm free space in front of chassis necessary.



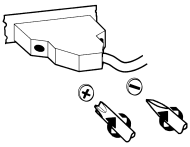
Wiring the EPC-G41

Install the system using the steps below in the order in which they are described:

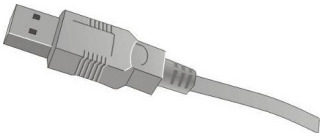
- Verify that the power is switched off. The Green power LED should be off.
- Plug in the data cable and tighten it in place. Except for USB ports which support hot-plug, system must be powered off before connecting or disconnecting data cables and power cord.



Interface jacks with knurled thumb screws can be tightened sufficiently by hand.



Interface plugs with metal screws can be tightened using a screwdriver. Never use a screwdriver on plastic screws. These can be tightened and loosened by hand.



USB plugs do not latch in place when plugged in, and can be unplugged with a gentle pull.

Technical Data

Motherboard Data

- Microprocessor

  Intel Desktop Processor, LGA775
  - E7400 Core2Duo 2.8GHz,
  - E5300 Pentium dual core 2.6GHz,
  - E1500 Celeron dual core 2.2GHz,

- Chipset

  Intel G41, ICH7
  800/1067/1333 MT/s (200/266/333 MHz) FSB

- BIOS

  SPI Flash, 16Mbit
  Plug-and-Play 1.1, APM, ACPI, DMI

- Main Memory

  Maximum 4GB on 1x DIMM socket
  - DDR3 SDRAM, 1066/800MHz
  - Support 1 GB / 2 GB / 4 GB RAM modules
  - Support 1Gb, 512Mb DDR3 technologies for x8 and x16 devices.
  - Single-channel

- Video

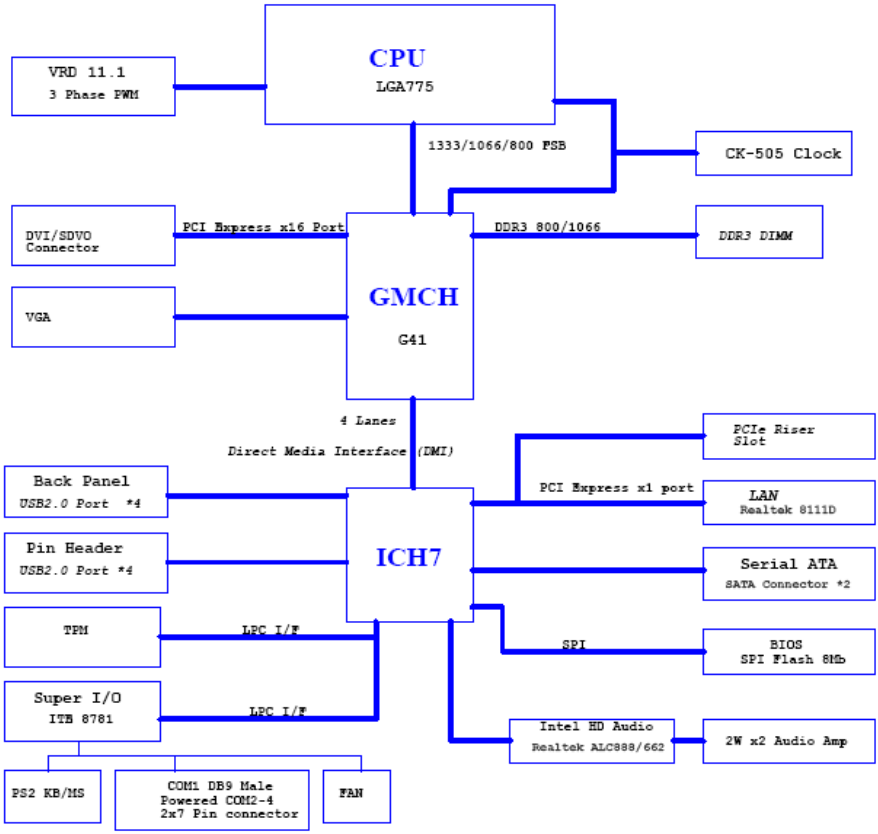
  Integrated Graphic Controller, 2D & 3D graphics, video overlay, 3D render engine
  Dual independent display support

  Analog Display
  - 350MHz, 24-bit RAMDAC
  - Up to 2048x1536 @ 75 Hz
  - DDC2B Compliance

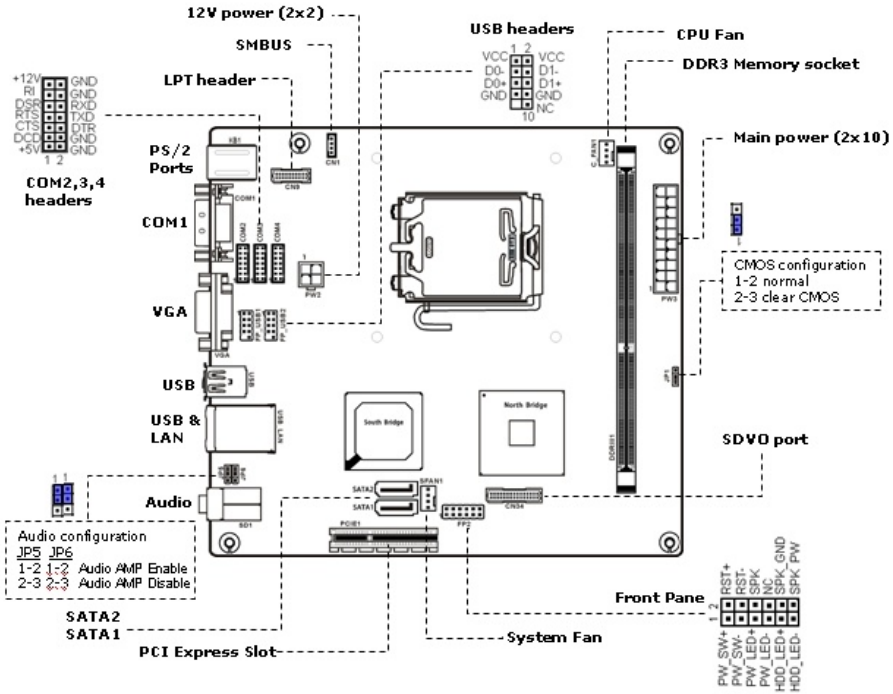
	Digital Display ▪ SDVO ports in single mode / DVI Interface ▪ 200 MHz dot clock ▪ Flat panels up to 1280x1024 @ 60 Hz
• Audio	ALC622 HD Audio Codec Stereo power amplifier ▪ 1.8W / channel for 8 ohms speaker
• LAN	PCI Express Ethernet controller 10/100/1000 Mb
• TPM	Infineon SLP9635
• NVRAM	4Kb Ferro-Electric RAM (SMBUS)
• Wake On Feature	Wake On LAN, Wake On Modem, Wake On Time
• Expansion Slot	PCI Express 1.0a ▪ x4 PCIe Riser slot that carries 3 PCI Express root ports ▪ Support single-lane PCIe add-on card
• Mass Storage	3½" 160 GB standard, 500 GB as an option, second 3½" 160 GB or 500 GB as an option
• Interface, Front Panel	2x USB
• Interface, Back Panel	1x Keyboard, PS/2 1x Mouse, PS/2 1x VGA 4x USB (on-board)

	2x USB (via cable) 1x Ethernet (LAN) 1x Standard Serial, COM1 (on-board) 1x MIC/Line In, Line/Speaker Out 1x DVI (via cable+Level-shifter board) - optional
• Interface, Internal	1x PCIe x4 slot (for 1-lane PCIe add-on card only) 2x SATA connector 2x USB header, 2 x 5 pin header, 2.54mm pitch (1x used for Front USB, 1x for Rear USB) 1x Wake-on-LAN 2x Fan connector supporting fan speed control thru PWM, 1 x 4 pins 1x Front Panel Interface (incl PC Speaker) 1x SMBUS 1x SDVO/DVI header 1x Parallel port header 3x COM port header (1x used for COM2)
• BIOS	Standard PC BIOS with extentions to support the defined hardware
• Operating Software	Windows XP, LINUX

Block Diagram



Jumper Settings and Connectors Layout



Climatic requirement

Operating conditions	in accordance with EN 60721-3-3 class 3K3
Air temperature	+5°C up to +40°C
Humidity	5%r.h. (1g/m3) – 85%r.h. (25g/m3)
Temperature change	0.5 K/min (max. 7.5K/30min)
Air pressure	70kPa – 106kPa

Storage conditions	in accordance with EN 60721-3-1 class 1K2
Air temperature	+5°C up to +40°C
Humidity	5%r.h. (1g/m3) – 85%r.h. (25g/m3)
Temperature change	0.5 K/min

Transport conditions	in accordance with EN 60721-3-2 class 2K2
Air temperature	-25°C up to +60°C
Humidity	15%r.h. (1g/m3) – 98%r.h. (32g/m3)
Temperature shock	-25°C / 25°C

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