

Cool XpressRunner-GS45

PCI/104 Express Single Board Computer
Intel® Core™ 2 Duo Processor



Features

Intel Core 2 Duo Processor, 2 GByte soldered DDR3-1066 RAM (max.)

SXGA: 2048 x 1536 pixel, Dual channel LVDS and CRT

Gigabit Ethernet, 8 x USB 2.0

2 x RS232, RS485

2 x SATA

Opt. ext. temperature range @ 1.2 GHz

Specifications

Board Format PCI/104-Express, 115.6mm x 95.9mm

Processor Intel Core 2 Duo SP9300, 6 MB cache
Intel Celeron M 722, 1 MB cache

Speed SP9300: 2.26 GHz
M722: 1.2 GHz

FSB 1066 MHz

Core logic Mobile Intel® GS45 Express Chipset

RAM 2 GB soldered DDR3 (max.)

RAM clock 1066 MHz

Graphics up to 256 MB RAM,
up to 2048 x 1536 pixel at 75 Hz,
supports 3D, DirectX and OpenGL

CRT Analog VGA

LVDS Dual channel

USB 8 USB 2.0 host ports,
with boot device support

Ethernet 1000 BaseT with i82567

Serial 2 RS232 or RS485 ports,selectable in BIOS

SATA 2 SATA ports

Sound High definition audio, 5+1
Input, output, mic.

RTC Backup Battery

Watchdog Yes

Status LED Power, Watchdog, Ethernet,
IDE and life signalization

PCI Bus 5 V compliant.

PCI Express Bus 4 x1 lanes, configurable as x4
1 x16 lane, usable for graphics, also
configurable as x8, x4, x2 lanes

Power Supply +5 V only. All necessary voltages are
generated on-board.

Power Consumption maximum from 11W with Celeron M722 up
to 33W with Core2Duo SP9300

Power Managment BIOS supports ACPI power saving modes

Operating temperature 0°C...+60°C (commercial, all versions)
-20°C...+60°C (industrial, all versions)
-40°C...+85°C (extended, optional)

MTBF 166 504 hours @ 25 °C

Cooling The Cool XpressRunner-GS45 must
always be operated with sufficient cooling
measures. A heat spreader is delivered with
the board.
Warranty will be void if operated without
cooling.

BIOS Phoenix FirstBIOS
BIOS parameters are also saved in EPROM

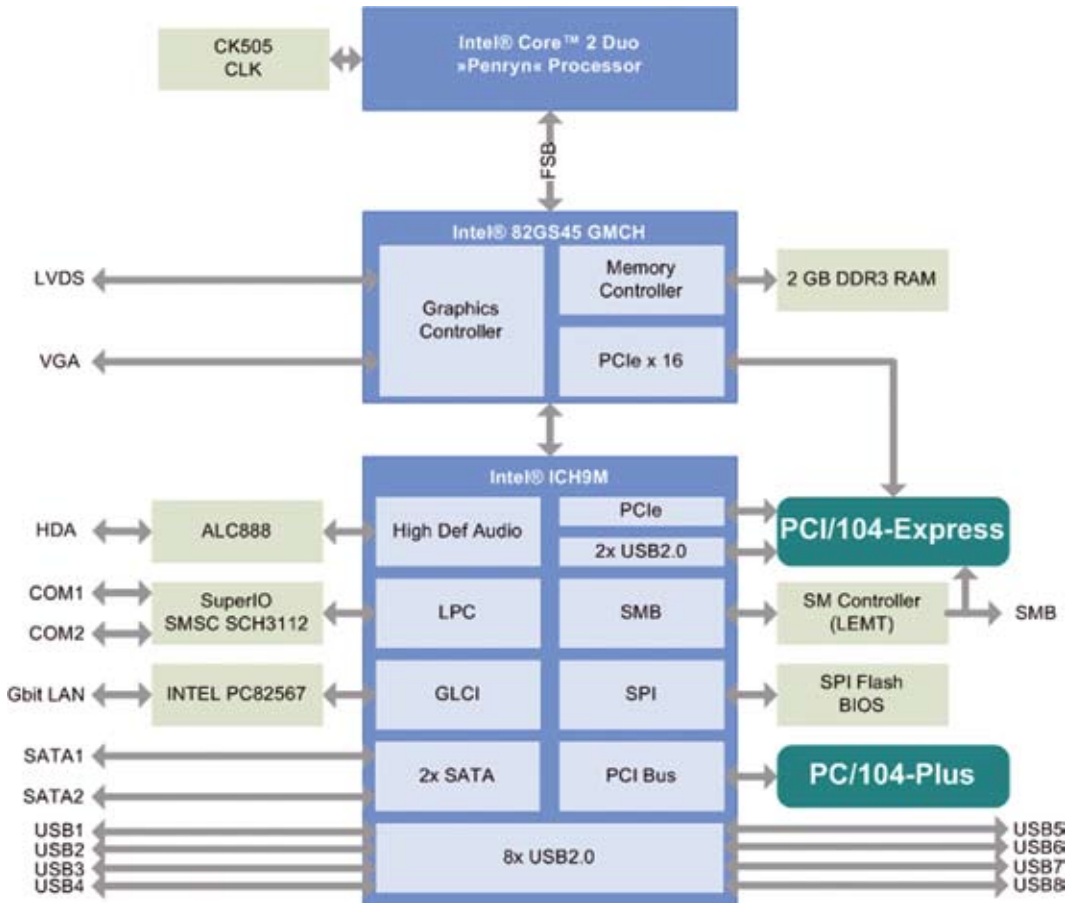
LEMT Yes

Supported OS Windows, Linux

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Block Diagram



Ordering Information

Ordering Number	Description
712-0001-10	CPU module with Celeron M 722 processor, 1.2GHz and 1GB DDR3 RAM, including heat spreader, 0°C...+60°C
712-0004-10	Like 712-0001-10 but with Core 2 Duo SP9300, 2.26 GHz, 0°C...+60°C
812-0001-10	CPU Module with Celeron M722, 1.2 GHz, -20°C...+60°C
812-0004-10	Like 812-0001-10 but with Core 2 Duo SP9300, 2.26 GHz, -20°C...+60°C
912-0001-10	CPU Module with Celeron M722, 1.2 GHz, -40°C...+85°C using suitable cooling measures. See www.lippertembedded.com/cooling

Other processor and memory configurations are available on request.