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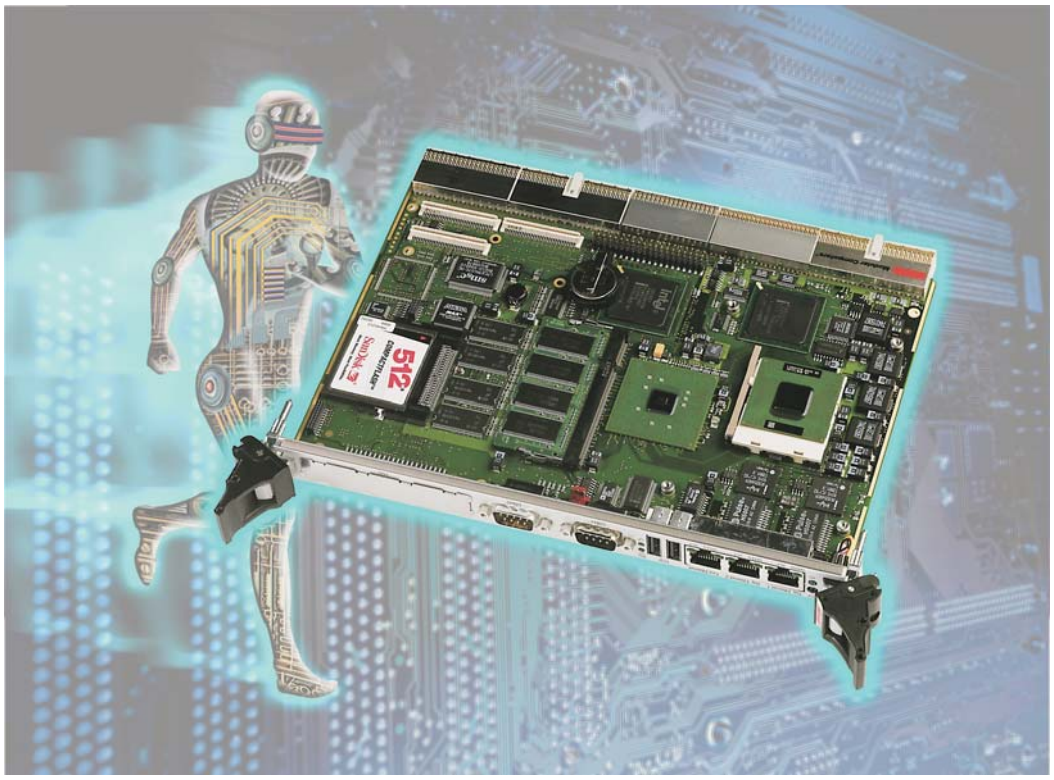
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Find the *Kontron / PEP CP605* at our website: *Click HERE*

CP605

CPU-Power based on Intel® Pentium® 4



Run fast

Act flexible

Stay slim

CompactPCI

- **Ensure** success in designing your application, the Intel® Pentium® 4 offers highest performance and data throughput
- **Eliminate** risks in your connectivity, PICMG 2.16 support, three Ethernet, five USB channels provide a future proof investment
- **Optimize** system requirements, the 4HP design allows space-minimized solutions

Intel® Communications Alliance Premier Member GOLD

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kontron

Impossible requirements?
Don’t change the requirements...

Meeting the customer’s requirements regarding time-to-market is one of the basic risks in almost all product development projects.

Impossible Requirements?
Managing a project is about managing demanding, widely different customers’ requirements and turning them into one stable future-proof solution.

This already seems to be a fairly hard job, even more as project development is usually jeopardized by various risks: the risk of not launching your product on the market fast enough; the risk of delivering a product that s not good enough; the risk of not meeting all core requirements. And the risk being forced to change your application with high investment due to increased market demands.

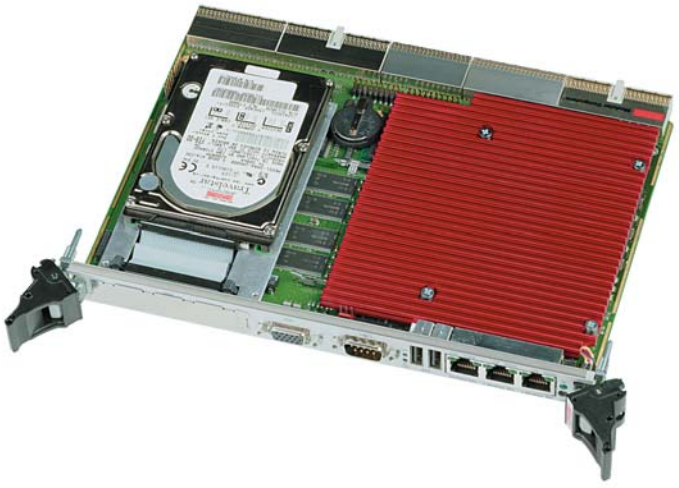
Run Fast
The combination of Intel®’s latest processor, the Pentium® 4 with the 845GV chipset delivers outstanding performance allowing you to set the pace for innovative applications today by offering enough headroom for the emerging next generation requirements. While minimizing deployment risks by providing a broad range of software support the CP605 eases the process of product integration and maximizes your competitive advantage to meet your time-to-market window.

Act Flexible
Because of the flexible board design the CP605 can be equipped with both processor types - the mobile and desktop variants of the Pentium® 4.
Due to this design compatibility the CP605 offers unique flexibility to match to an innumerious range of different application requirements. Without compromising on the latest processor performance, the CP605 enables optimized solutions for cost sensitive applications, as well as for demanding requirements, where power consumption and higher temperature environments can’t be disregarded.

Connectivity based on high sophisticated communication technology is the key aspect for being competitive in a wide range of networking applications. By providing five high-speed USB 2.0 channels, three Ethernet interfaces (two even as Gigabit Ethernet) and up to four serial ports the CP605 supports comprehensive connectivity features. Furthermore, operating in a PICMG 2.16-compliant system the CP605 ensures the flexibility to open your design for future extensions.

Stay Slim
Investing in a new project is always costly, whether it’s time or money. Extending the lifetime of an application to the possible maximum is therefore a critical issue to save the development investments.
Delivering a stable product based on Intel®’s embedded product line the CP605 ensures long term availability and eliminating your risk of redesigning your application.

The ever-growing market demands call for an open, high performance, expandable platform - meet the challenge, stay slim, act fast and flexible.



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Specifications

... find the matching product

Processor

Intel® Pentium® 4, 478-pin package FC-PGA
Mobile Pentium® 4 Processor-M 1.7 GHz and 2.2 GHz for high performance
Mobile Pentium® 4 Processor-M 1.2 GHz for extended temperature range
512 KB full speed L2 on-die cache
400 MHz processor side bus
Passive heat sink for processor, forced air cooling required in the chassis

Memory

- 400MHz processor side bus, Intel® 845GV GMCH
- 512MB up to 1GB soldered PC266 DDR SDRAM (no ECC)
- Max. memory up to 2 GB via DDR SODIMM modules on 200-pin socket (no ECC)
- 8 Mbit Firmware Hub (FWH) for BIOS
- 8 Mbit Firmware Hub for general purpose
- Optional CompactFlash module
- 2x 256 Byte EEPROM for CMOS data storing (no battery operation)
- 2x 256 Byte EEPROM for user purpose

I/O

- Four 16C550 compatible UARTs (COM1-4)
- Keyboard on rear and onboard connector and mouse interface on rear
- Floppy disk controller on rear
- Parallel port ECP/EPP compatible, on rear
- Five USB interfaces, two front, two rear and one onboard connector for internal devices
- Two 10/100/1000 MB/s Gigabit Ethernet ports via Intel 82541PI, routed to front or to PICMG 2.16 rear pins.
- One 10BASE-T/100BASE-TX Fast Ethernet port integrated in the ICH 4 controller (82559 style).
- VGA Video Controller integrated in 845G, resolution up to 2048 x 1536 x 60Hz x 8bit, shared memory up to 64MB

PMC slot

32bit / 33MHz interface, 5V (3.3V on request), rear I/O Pn3 to J5

Front Panel Functions

COM1:	9-pin D-Sub (RS232, RS422, RS485)
either COM2:	9-pin D-Sub (RS232, RS422, RS485)
or VGA:	15-pin D-Sub SVGA connector
Ethernet:	3x RJ-45
USB:	2x 4-pin connectors
PMC:	opening for PMC front panel
LEDs:	three times LAN activity and speed, one blue control LED for hot swap, two green LEDs for temperature status and general purpose
Reset:	Reset button, guarded
Micro switch:	for hot swap

On-board Interfaces

- Two IDE connectors supporting Ultra DMA one 40pin/2.54mm and one 44 pin/2mm for onboard 2.5 HDD or Flash module
- CompactFlash type II socket
- 22-pin connector with all LPC signals
- USB connector
- PS/2 keyboard connector
- Memory extension connector
- PMC interface

CompactPCI Bus Interface

PICMG 2.0 Rev. 3.0 compatible, 5V signaling
32 or 64-bit/33 MHz, REQ/GNT for 7 slots
Operating in system slot as system master and in peripheral slot in PCI passive mode (no communication to CompactPCI bus).

Supervisory Functions, Clock/Calendar

Watchdog, software configurable, 125 msec to 256 sec
generates IRQ, NMI or hardware reset
Hardware monitor LM81 for thermal control, fan speed
and all onboard voltages, Processor temperature
monitoring MAX1617 (on-die and board)
RTC and CMOS RAM with backup, battery replaceable

Rear I/O via J3/(J4)/J5

J3: PICMG 2.16, one EIDE, floppy, COM2, keyboard, mouse, USB
J4: Parallel port, GPIO, IPMI fan control signals
J5: VGA-CRT, two Ethernet channels without LEDs, USB, COM1, COM3 and COM4 (TTL signals), control signals, PMC rear I/O

Network Security Function (optional)

Hifn 7951 Network Security Processor supporting:
major security protocols including IPSec, PPTP, L2TP, PPP, IKE
- encryption (DES, triple-DES, RC4)
- authentication (SHA-1 and MD5)
- compression (LZS and MPPC)

IPMI (optional)

Onboard independent IPMI V1.5 compliant baseboard management controller (BMC) with Zircon LT controlling all onboard voltages, processor temperature and external fans if connected to the rear I/O interface.

Compliancy

CompactPCI Core Specification PICMG 2.0 Rev. 3.0
CompactPCI Hot Swap Specification PICMG 2.1 R2.0
CompactPCI System Management PICMG 2.9 R1.0
CompactPCI Packet Switching Backplane PICMG 2.16 R1.0

General

Dimensions:	233 x 160 x 20.5 mm, 6U, 4HP
Weight:	533g
MTBF:	119,743h according Telcordia SR-232 Issue 1 @ 30 °C

Software Support

Phoenix BIOS with POST codes, serial port remote control with CMOS setup access, BIOS parameters saved in EEPROM, diskless, keyboardless, videoless operation LAN boot support.
Board identification number accessible via EEPROM
Support for Windows® 2000/XP/XP Embedded, Linux®, VxWorks®

Power Consumption

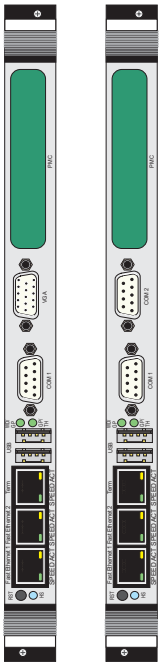
	2.2 GHz Mobile	1.7 GHz Mobile
5V	25-30 W	15-25 W
3.3V	8-12 W	8-12 W
12V	1.5 W	1.5 W

Environmental

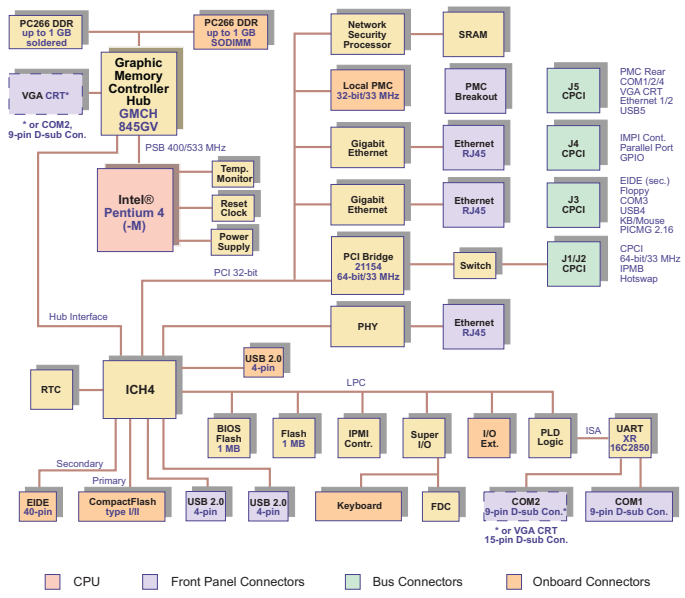
Operating temp.:	0 °C to +60 °C standard -25 °C to +75 °C E1 (optional)
Storage temp.:	-55 °C to +85 °C
Climatic Humidity:	non condensing 93% at 40 C (acc. to IEC 60068-2-78)
Altitude:	50,000 ft. (15,240 m)

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Frontpanel



Functional Block Diagram



NOTE:- a choice of either a VGA CRT connector or a 2nd COM port is available for the Front Panel

Ordering Information

Product	Description	Order No.
CP605 [1]	System Master, socket for Pentium® 4 / Mobile Pentium® 4-M, 512 MB DDR memory soldered	30240
CP605 [1]	System Master, socket for Pentium® 4 / Mobile Pentium® 4-M, 512 MB DDR memory soldered, PICMG 2.16	30554
CP605 [1]	System Master, socket for Pentium® 4 / Mobile Pentium® 4-M, 1024 MB DDR memory soldered	30556
CP605 [1]	System Master, socket for Pentium® 4 / Mobile Pentium® 4-M, 1024 MB DDR memory soldered, PICMG2.16	30557
PENTIUM4-M-1.7G-P4	Mobile Intel® Pentium® 4 Processor-M Processor 1.7 GHz (478-pin FCPGA-package)	25216
PENTIUM4-M-2.2G-P4	Mobile Intel® Pentium® 4 Processor-M Processor 2.2 GHz (478-pin FCPGA-package)	26005
CP605-FP4-COM2	4HP Frontpanel with option COM2	25211
CP605-FP4-VGA	4HP Frontpanel with option VGA/CRT	25212
CP605-RIO	Assembly of connectors J3, J4, J5 and rear I/O configuration, for CP605 **without** PICMG2.16	26971
CP605-RIO-NOJ4	Assembly of connectors J3, J5 and rear I/O configuration, no J4, for CP605 **without** PICMG2.16	26972
CP605-RIO216	Assembly of connectors J3, J4, J5 and rear I/O configuration, for CP605 **with** PICMG2.16	26961
CP605-RIO216-NOJ4	Assembly of connectors J3, J5 and rear I/O configuration, no J4, for CP605 **with** PICMG2.16	26962
CP605-MK2.5 [1]	Mounting kit for 2.5 hard disk or ATA flash onboard, mounting within 4HP	25215
SODIMM-DDR-512	512 MB SODIMM-DDR running with 266 MHz	27488
SODIMM-DDR-1024	1024 MB SODIMM-DDR running with 266 MHz	27490
CP-RIO6-05	4HP Rear I/O Module for CP605, 3x Eth (1xFastE, 2xGigE), 4xCOM RS232	26801
CP-RIO6-05	4HP Rear I/O Module for CP605, 1x Eth (1xFastE, PICMG 2.16), 4x COM RS232	26802
KIT-CP605	Drivers, Windows® 2000/XP setup utilities, user's manual in PDF format on CD	25218
VXW-BSP-CP605	VxWorks® 5.5 Board Support Package for use with Tornado 2.2	25278
LIN-BSP-CP605	Linux Board Support Package for use with RedHat or SUSE distribution	25959

Note: 1) for mounting an onboard 2.5" hard drive the CP605-MK2.5 must be orederd in conjunction with the CP605 (the CP605-MK2.5 can't be ordered separately), with CP605-MK2.5 the PMC-socket can't be used

please ask for order numbers for other configuration combinations regarding memory, IPMI or extended temperature range E1 (-25 ºC to +75 ºC)

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