

Power and Flexibility

Orion's CPC7625 is a high-performance Intel® based Core™2 Duo Platform, CompactPCI® Single Board Computer (SBC). As a single-width, 3U height board, this high-performance SBC is designed for embedded applications that require significant processing power yet little physical space. Additionally, the conduction-cooled rugged version satisfies the most demanding environmental applications.

The CPC7625 is designed for both commercial and rugged environments applying BGA CPU packaging and all soldered down components.



By incorporating the power of the Intel Core 2 Duo™ and the unparalleled complement of configurable I/O via the "**Personality Modules**", we can adapt to almost any Military, Industrial or Commercial application.



The CPC7625's Ethernet, serial, USB, SATA, GPIO and PMC Pn4 IO are all accessible through CompactPCI connector J2.



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CPC7625

**Rugged Conduction or Air Cooled 3U
Intel Core 2 Duo SBC for CompactPCI**

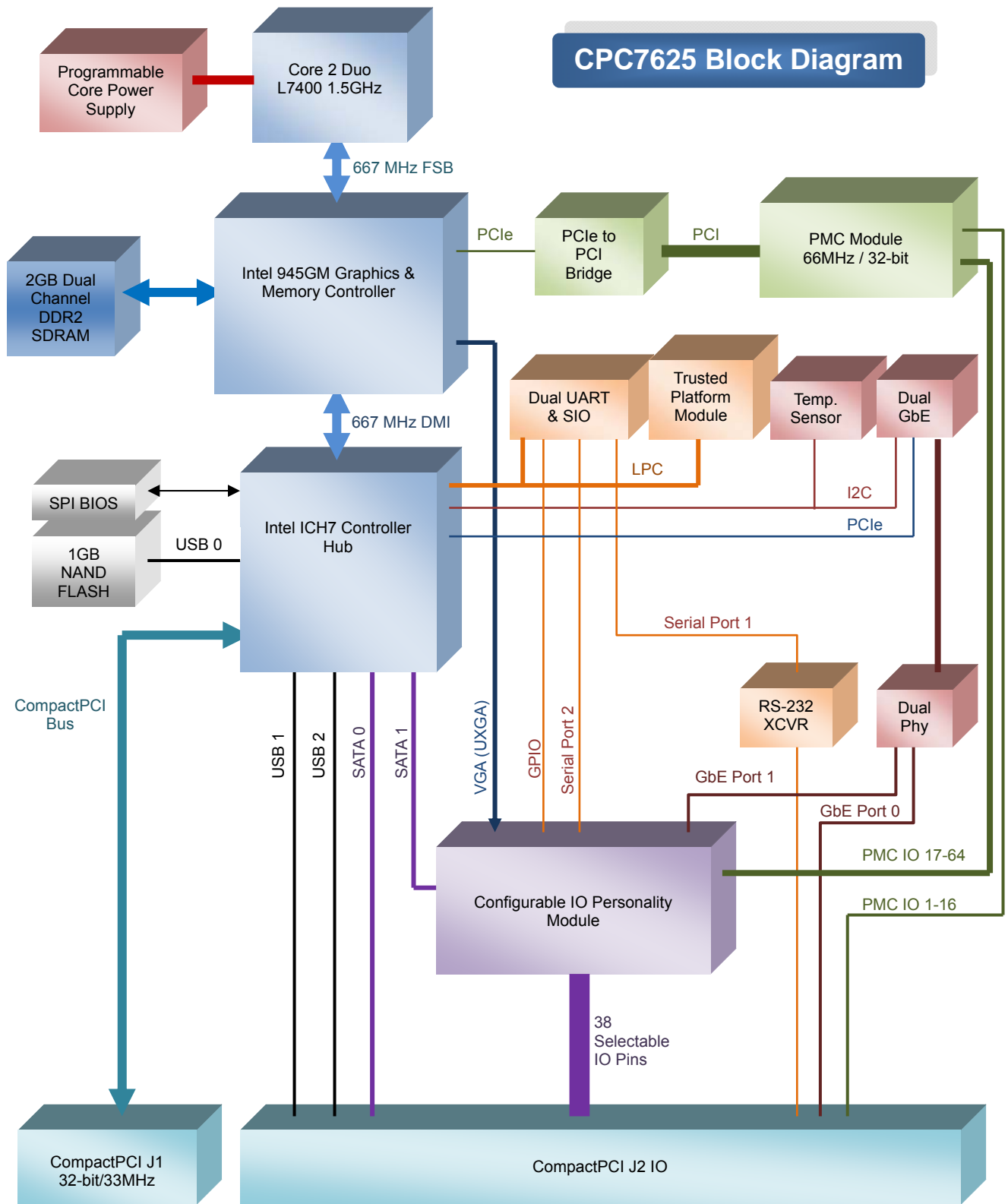


Features:

- ◆ Intel Core 2 Duo L7400 1.5GHz 4MB L2 Cache
- ◆ System Host Controller
- ◆ Conduction or commercial air-cooled versions
- ◆ Extended Temperature (-40C to +85C) Rugged design
- ◆ 15W typical power dissipation
- ◆ Personality Module for flexible J2 IO signaling options
- ◆ VGA (UXGA) Video support
- ◆ 2GB soldered DDR2 SDRAM (5300)
- ◆ Up to 16GB soldered NAND FLASH
- ◆ Trusted Platform Module
- ◆ PCI 66MHz bit PMC slot
- ◆ **Two** Gb Ethernet (10/100/1000) ports
- ◆ **Two** USB 2.0 ports
- ◆ **Two** SATA ports
- ◆ **Two** Serial ports (one RS-232, 2nd configurable)
- ◆ **Six** configurable GPIO (may generate interrupts)
- ◆ PMC rear I/O
- ◆ PICMG CompactPCI 2.0 R3.0 compliant
- ◆ PCISIG PCI R2.2 compliant
- ◆ RTC
- ◆ Single-slot 3U
- ◆ On-board temperature monitoring
- ◆ Multiple Operating System Support
- ◆ Phoenix BIOS
- ◆ Orion's Three-Year warranty & support

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CPC7625 Block Diagram



Hardware Specifications

Processor:

Core 2 Duo :	<u>Intel L7400</u>
Core Frequency	1.5GHz
Inst. Cache:	32KB
Data Cache:	32KB
L2 Cache:	4MB
L2 Cache Frequency:	Core Frequency (1.5GHz)

Processor Bus:

L7400 Front Side Bus (FSB) Frequency:	667MHz
FSB Width:	A36/D64

CompactPCI Bus:

cPCI Bus Frequency:	33MHz
cPCI Bus Width:	32-bit
cPCI Signal Voltage:	Universal +3.3V, +5.0V
cPCI Compliance:	PICMG CompactPCI 2.0 R3.0
PCI Compliance:	PCISIG PCI R2.3
System Controller:	Yes

Local PMC Bus:

PMC Bus Frequency:	66MHz or 33MHz
PMC Bus Width:	32-bit
PMC Signal Voltage:	+3.3V
PCI Compliance:	PCISIG PCI R3.0
PMC IO access:	CompactPCI J2

Memory:

DRAM Memory Type:	DDR2 SDRAM (DDR2-5300)
DRAM Memory Size:	Up to 2GB (1GB per core)
On-Board FLASH:	Up to 16GB NAND
Boot FLASH:	1MB SPI Serial Flash

Security:

Trusted Platform Module:	Atmel AT97SC3204 (I2C)
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Peripherals:

Two 10/100/1000 Ethernet Ports:

Controller:	Intel 82571EB
Configuration:	Auto Negotiating 10/100/1000
Access:	CompactPCI J2, Transition module

Dual Serial Ports:

Controller Type:	LPC Super IO Dual UART
Configuration:	DTE
Access:	CompactPCI J2
Signal levels:	Port 1: RS-232 Port 2: Configurable by Personality Module

General Purpose I/O:

Controller Type:	LPC Super IO
Access:	CompactPCI J2
Configuration:	6 configurable GPIO (Inputs may generate Interrupts)
Signal levels:	Configurable by Personality Module

Two USB 2.0 Ports:

Controller:	Integrated Intel ICH7 Controller Hub
Configuration:	Host, USB 2.0
Access:	CompactPCI J2

Two SATA Ports:

Controller:	Integrated Intel ICH7 Controller Hub
Access:	Port 1: CompactPCI J2 Port 2: Transition module

Video:

Controller:	Integrated Intel 945GM GMCH
Access:	CompactPCI J2 (Personality Module)
Type:	VGA (UXGA)

Miscellaneous:

Real Time Clock:	Integrated Intel ICH7 Controller Hub
Reset:	J2 reset generates CompactPCI reset when System Controller.
LEDS:	◆ Power Good LED ◆ SATA Active LED ◆ 6 Ethernet LEDS

Specifications:

Power:	<u>Typical</u>	<u>Max</u>
PCI +3.3v:	TBD	TBD
PCI +5v:	TBD	TBD
PCI +12/-12:	PMC Only	PMC Only
Power Dissipation:	TBD	TBD

Environmental:

Operating Temperature:	0° to 60°C (Commercial) -40° to 85°C (Conduction)
Storage Temperature:	-40° to 85°C
Relative Humidity:	5% to 95% non-condensing
Board Size:	Single-slot 3U CPCI 160mm x 100mm
Weight:	TBD oz, TBD grams (with conduction cooled heatspreader)



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Ordering Information

CPC7625-xxxx

Base Model Number _____

Processor/Temperature Options _____

- 0 = Commercial Temperature, Air Cooled, 1.5GHz Intel L7400
- 1 = Extended Temperature, Air Cooled, 1.5GHz Intel L7400
- 2 = Extended Temperature, Conduction Cooled, Rugged 1.5GHz Intel L7400
- A = Customer Specific Board Configuration

Memory Options _____

- 0 = 2GB DDR2 (512MB per core), 2GB User NAND Flash
- 1 = 2GB DDR2 (1GB per core), 8GB User NAND Flash
- 2 = 2GB DDR2 (1GB per core), 16GB User NAND Flash
- ** = Will have different meaning if Processor/Temperature option is an "A"

Reserved

Must be 0

Reserved

We will gladly modify any of our products to meet your requirements. Just ask.

At Orion Technologies, our goal is to serve you, our customers. We are dedicated to finding high-quality, cost-effective solutions to meet your application. We will modify any Orion Technologies product or will design a custom solution to fill your requirements.

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