VXS COM Express™ Carrier

VXS100

vadatechrc

™ THE POWER OF VISION

KEY FEATURES

- Supports Intel Core 2 Duo, Pentium M, or other Intel® family processors
- Single-slot 6U VITA 41.6 with VME-320 interface
- On-board CompactFlash (CF)
- PMC PCI-X @ 133Mhz
- Two front panel RS-232 ports
- Two front panel USB 2.0 ports
- Front panel GbE or 10/100 port (COM Express dependent)
- Additional two front panel GbE fiber or copper ports. The copper ports are also routed to P0 per VITA 41.6
- VGA
- Option for an on-board 2.5" SATA drive
- Option for a front panel CompactFlash
- DDR-II memory with ECC (COM Express module dependent)
- PCIe x16 for expansion to VXS101, VXS102 and custom I/O
- RoHS compliant

The VXS100 is a VXS COM-Express™ (Computer On Module) carrier. VadaTech provides VXS COM Express carriers designed around the customer's I/O requirements. Since CPU technology is such a dynamic and rapidly changing area, this design allows customers to easily upgrade the CPU while keeping their I/O structure intact. This helps to safeguard the customer's investment. The COM Express module is built around the Intel® family of processors and is available from multiple vendors.

The VXS100 has a PCIe x16 lane expansion bus to allow mating to the VXS102 to provide three additional PMC slots. It can also mate to the VXS101 to provide a high-end graphic solution.

There is a dedicated 64-bit PCI bus running @ 66MHz to the Tsi148 chip to allow high-speed VME-320 transactions.

The VXS100 is the most flexible and cost effective Intel® processor solution in the VXS market.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

SPECIFICATIONS

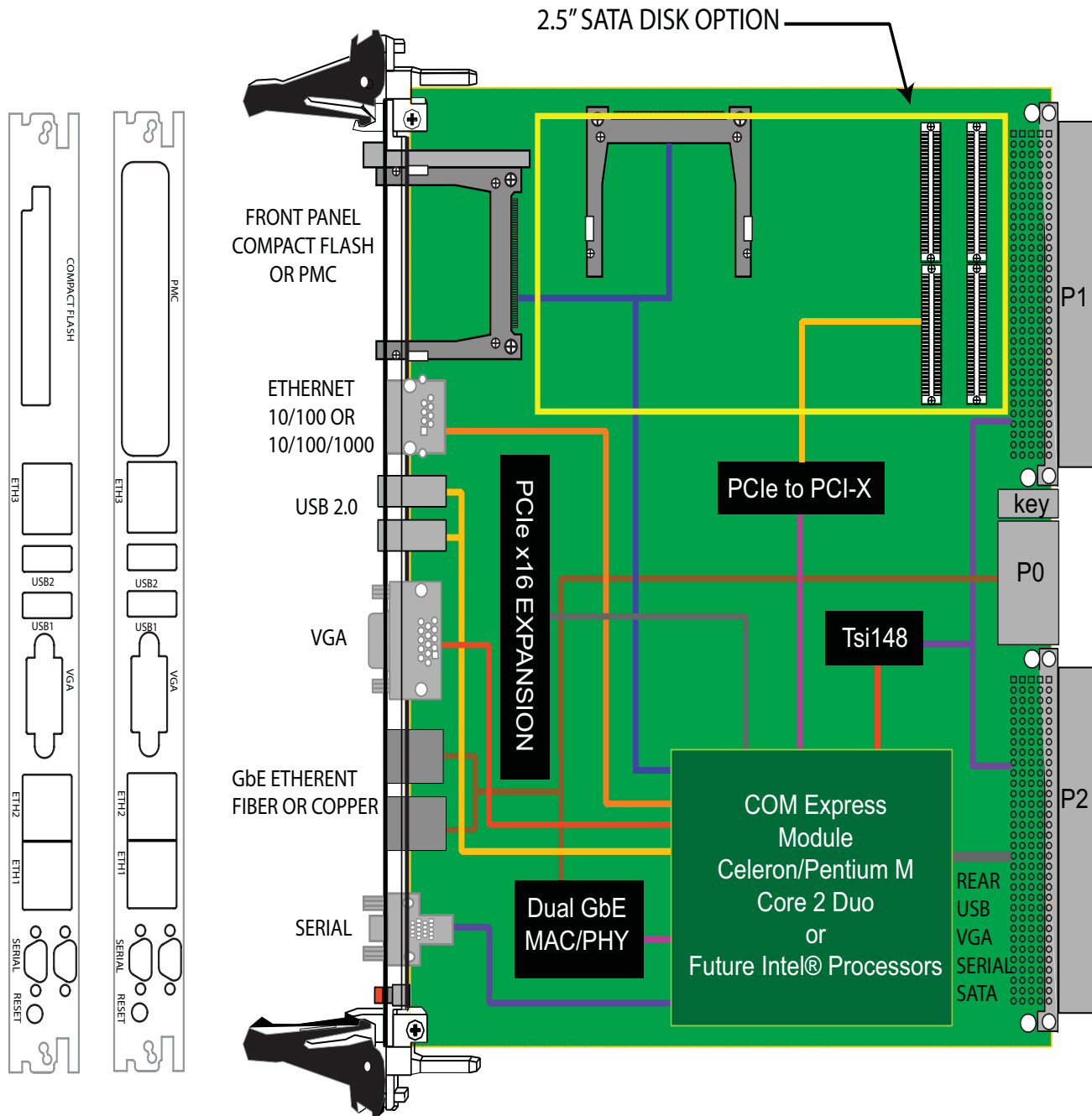| Architecture		
Physical	**Dimensions**	Width: 6.385in. (162.2 mm)
		Depth: 9.187in. (233.34 mm)
Type	**VXS**	6U VXS single slot
Standard		
VITA	**ANSI/VITA41**	VXS.0, VXS41.6 and VME-320
Configuration		
Power	**VXS100**	6W without the COM Express module
Front Panel	**Interface Connectors**	Dual RS-232 Micro-DB9
		Dual USB 2.0
		Single 10/100 or 10/100/1000 Ethernet (COM Express module dependent)
		Dual LC for GbE or Dual RJ-45 Copper for 10/100/1000
		CompactFlash (front panel option)
		VGA DB15
		Reset button
	LEDs	Link/Activity, Power Good
Environmental	**Temperature**	Operating Temperature: 0° to 55° C (Air flow requirement is to be greater than 500 LFM)
		Storage Temperature: -40° to +90° C
	Vibration	1G, 5-500Hz each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 percent, non-condensing
Software Support	**Operating Systems**	Windows, Linux, VxWorks and Solaris
Other		
MTBF	MIL Spec 217-F > 255,539 Hrs without the COM Express module	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Standards	VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards	
Compliance	RoHS	
Warranty	Two (2) years	
Trademarks and Logos	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. Computer On Module, COM Express™ is a Trade Mark of PICMG. All rights reserved. Specification subject to change without notice.	

2.5″ SATA DISK OPTION

FRONT PANEL
COMPACT FLASH
OR PMC

ETHERNET
10/100 OR
10/100/1000

USB 2.0

VGA

GbE ETHERENT
FIBER OR COPPER

SERIAL

COMPACT FLASH

PMC

ETH3

USB2

USB1

VGA

ETH2

ETH1

SERIAL

RESET

PCIe x16 EXPANSION

PCIe to PCI-X

Tsi148

Dual GbE
MAC/PHY

COM Express
Module
Celeron/Pentium M
Core 2 Duo
or
Future Intel® Processors

P1

key

P0

P2

REAR
USB
VGA
SERIAL
SATA

FIGURE 1. VXS100 Functional Block Diagram

ORDERING OPTIONS

VXS100 - ABC - DEF - GHJ

A = COM Express™ Module

0 = None
1 = 1.66 GHz Core 2 Duo processor
2 = 2.0 GHz Core 2 Duo processor
3 = 1.4 GHz Pentium M processor
4 = 2.0 GHz Pentium M processor
5 = 1.4 GHz Low Voltage (LV) Pentium M processor
6 = Reserved (future Intel® processor)
7 = Reserved (future Intel® processor)
8 = Reserved (future Intel® processor)
9 = Reserved (future Intel® processor)
10 = Customer specified‡

B = System DDR2 SDRAM Memory***

0 = No system memory
1 = 512 MB DDR2 memory
2 = 1 GB DDR2 memory
3 = 2 GB DDR2 memory
4 = 4 GB DDR2 memory

C = Front Panel CF or PMC Option

0 = PMC option
1 = CF with no CF card loaded
2 = CF with 1 GB card
3 = CF with 2 GB card
4 = CF with 4 GB card
5 = CF with 8 GB card
6 = CF reserved
9 = CF with Micro Drive

D = SATA Option*

0 = None
1 = 80 GB
2 = 100 GB
3 = 120 GB
4 = 200 GB
5 = Reserved
6 = Reserved

E = Front Panel GbE Interface

1 = Fiber LC/SX transceivers (850 nm)
2 = Fiber LC/LX transceivers (1310 nm)
3 = Copper (10/100/1000)
4 = Reserved

F = P0 Option

0 = None
1 = Loaded

G = Companion Module§

0 = None
1 = VXS101
2 = VXS102
3 = Reserved
4 = Reserved
5 = Reserved

H = VME-320 Interface§§

0 = Installed
1 = None

J = Conformal Coating

0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

NOTES

*The SATA option comes with the front panel CF. If the front panel CF is not needed contact Sales.

**Vadatech can design custom Rear Transition Modules (RTMs) for this product

***ECC Memory available (contact Sales)

§The module is double-width when the VXS101 or VXS102 is mated to it

§§The Tsi148 is the VME-320 interface. Not installing the Tsi148 will remove the VME-320 interface to the backplane.

‡ Customers can specify VIA/Celeron or other CPU (contact Sales)