Intel Core 2 Duo 3U SystemPak

Featuring Over 2.5 TB of Front Removable Storage in 3U cPCI

Deployable high capacity storage solutions are closer than ever before with Elma's line of E-frame development chassis. This fully configured system is housed in an open E-Frame chassis for easy access to test and monitoring points during application development and optimization. Prepare your small form factor application payloads for later insertion into a space saving 3U chassis.

Description

Achieve high capacity mission data collection with this fully integrated 3U cPCI Intel Core 2 Duo based system providing over 2.5TB of front removable storage. Featuring the Intel Core 2 Duo processor, this complete system provides high capacity storage and high bandwidth capability while conserving rack space. The system provides 32 channels of general-purpose RS485/422 Digital I/O. Customize your system with our selection of I/O preferences, storage options, single board computers and chassis to suit your needs. Available FPGA based configurable I/O cards allow maximum I/O flexibility during your application development stage. Elma provides complete operating system and driver integration with every system.

Standard Configuration Includes:

Model SEFC3BP9NIXOYLN-3U1 comes as a ready to run unit with:

- Concurrent Technologies Intel Core 2 Duo 3U single board computer, Model TP 442/342-33
- Four PMC ShuttleStors, Model 9271-6400GB-54-25-SD, each mounted on a 3U PMC to cPCI carrier card
- 32 channels of digital I/O Model 8056
- Type 39E desktop chassis, Model number 39E08BBXZY3VCXX
- Linux operating systems

The next page provides a description of components supplied with the standard configuration of the Intel Core 2 Duo 3U SystemPak.

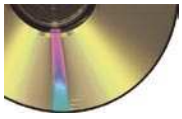
ACT/Technico™ brand of Embedded Computing Products


SBCs

I/O


Software

Design & Documentation



Chassis


Ethernet Switches

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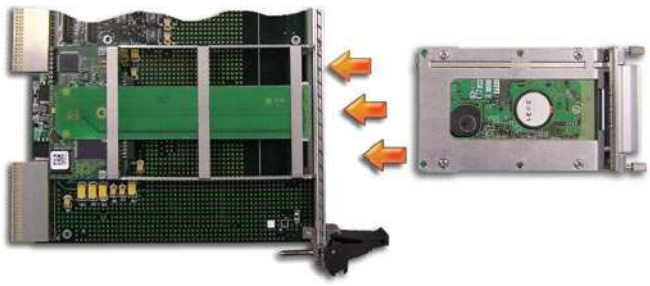
Standard Configuration Components
Single Board Computer: Intel Core 2 Duo Processor
Model TP 442/342-33

- 3U CompactPCI based form factor
- 2.16 GHz Intel® Core 2 Duo™ processor T7400:
  - 4 MB L2 cache
  - 2 GB DDR2-667 SDRAM
  - 32-bit, 33/66 MHz PCI operation
- 3.3V and 5V PCI signaling levels
- 4 x Serial ATA300 interfaces:
- 2 Gigabit Ethernet ports
- Analog and digital graphics interface
- 2 x Serial channel interface
- 4 x USB 2.0 interfaces
- Support for Linux®, Windows®, QNX®,Solaris® and VxWorks®
- Operating temperature ranges:
  - 0°C to +55°C (Standard)

Front Panel Removable Storage Bays with Hot Swap:
Model 9271-640GB-54-25-SD ShuttleStor

- Four 2.5", 320 GB hard drives
- Standard PMC Mezzanine form factor IEEE 1386.1
- Carrier mounted in this 3U cPCI system configuration
- Each ShuttleStor is mounted on a 3U cPCI Adapter card



PMC I/O Model:
8056 32 channel RS485/422 Differential PMC

- Provides 32 Channels of general-purpose RS485/422 Digital I/O
- 12K Logic Elements (8056 Populated with Altera EP1C12F324C8);
- Carrier mounted in this 3U cPCI system configuration
- PMC is mounted on a 3U cPCI Adapter card

Elma E-Frame Development Chassis
Model 39E08BBXZY3VCXX

- Chassis dimensions: 9U x 84HP x 300mm
  - Open frame for accessing boards for test and debug
- Front card cage accommodates up to eight 3U x 160mm vertically mounted boards
- Rear card cage accommodates up to eight 3U x 80mm I/O transition boards
- 1101.11-compliant profiles and card guides
- 8-slot cPCI backplane for 3U cPCI boards
  - 32-bit, 66Mhz
  - User configurable VIO
- 350W AC power supply mounted in lower rear of chassis
- Integral cooling with front & rear 12VDC fans
- Front panel System Indicators
  - Illuminated On/Off switch and reset switch
  - LEDs for DC voltages and fan fail
  - Includes voltage and Tach Scan monitors
  - Test points for voltages (front accessible jacks)

Standard Configuration Environmental Specifications

Temperature:	0°C to +50°C operating
	-20°C to +65°C storage
Humidity:	8% to 95% non-condensing operating and
	5% to 95% storage
Shock:	5 Gs @ 11ms, operating
	10 Gs @ 11ms (per ASTM 0775) storage
Vibration:	1.0 Gs @ 10 to 330 Hz operating
	1.2 Gs @ 5 to 330 Hz storage

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Elma Electronic offers a wide range of embedded computing products to help you build a system capable of meeting your requirements. Consider the following selection of options and work with one of our Embedded Computing Architects to help you build the system you need, using the Custom Configuration Key on the back page.

Single Board Computers

- SBCs are available featuring the latest in Intel and Freescale processors in 3U and 6U Eurocard form factors
- Rear transition modules for rear I/O connectivity – direct attach RTMs are available

Ethernet Switches

- Ethernet switches are available featuring from 8 to 30 ports in front and back panel combinations via RJ45 ports and via the backplane
- 3U and 6UEurocard form factors.
- 10/100/1000 copper ports or fiber ports
- Layer 3 managed and Layer 2 unmanaged switches
- Rear transition modules for rear I/O connectivity – direct attach RTMs available

Storage

- Solid state drive based storage for rugged environmental requirements and rotating drives for benign environments
- 3U, 6U Eurocard and PMC form factors
- PATA (IDE), SATA and SCSI drive options
- 6U network attached (NAS) RAID storage

I/O Options

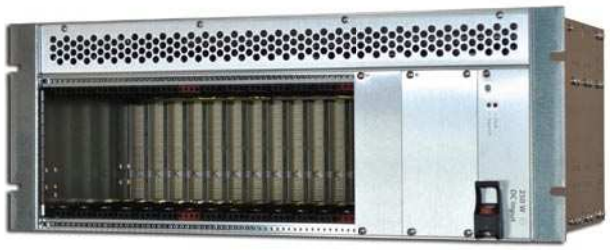
- PMC based I/O options including:
- Fast and Gigabit Ethernet ports
- SCSI, Audio, Video, DI/O, A/D, D/A, Data Acquisition,
- Motion Control
- Mil-Std 1553, Arinc 429, AFDX
- RTM based I/O options
- Async serial ports: Four, RJ-45, labeled as COM 2-5
- 10/100/1000 Ethernet BaseTX, RJ-45 ports
- PMC carrier cards for added I/O capability
- Configurable I/O options

Assemble an I/O solution to suit your application requirements using our FPGA based configurable I/O PMC solutions.

Assemble an I/O solution to suit your application requirements using our FPGA based configurable I/O PMC solutions.

3U cPCI Chassis Options

- Compact Type 15C Chassis
  - 19" Rack mount/ Desktop fully compliant to IEEE 1101.10/.11
- 4, 6, 8 or 16 slot backplanes
- 3 x 90 CFM removable fans cooling front to rear
- Wide range of Power supply inputs and mounting options
- Shelf Management compliant to PICMG 2.9 IPMI



Rugged Options

- Most Elma chassis and payload products are available in rugged versions including conduction cooled models, extended temperature and extended shock and vibration models
- Conformal coating
- Rugged systems can be tested to meet specified environmental requirements under full application load

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Software

• In addition to Linux, we can ship a system with a VxWorks boot image, run time license and drivers fully integrated and tested. Please inquire about support for other operating systems.

Linux™

WIND RIVER
VxWorks

SEFC3BP9NIXOYLN-3U1 Order Information

To order the configuration described in the box, please use the order number listed at right.

Description	Order Number
• Single board computer • Four ShuttleStors with front panel removable storage on 3U cPCI carrier cards • 32-channel RS485/422 digital I/O board • Type 39E E-Frame chassis • Linux operating system and driver set	SEFC3BP9NIXOYLN-3U1

Custom Configuration Key

Different configurations are possible, although not all options are compatible. Please contact one of our Embedded Computing Architects to discuss specific requirements and learn about other embedded system solutions, or visit our website at www.elmasystems.com.

__ __ __ __ __ __ __ __ __ __ __ __ __ __ __ __ - __ __ __ * (16-18 Project Spec.)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

1,2, 3) System Type
• SAV = ATR Convection
• SAD = ATR Conduction
• SR2 = 12R2
• SR1 = 12R1
• S11 = Type 11
• S12 = Type 12
• S14 = Type 14
• S15 = Type 15
• S32 = Type 32
• S39 = Type 39
• SEF = E-Frame

4) Bus Architecture
• V = VITA
• C = CPCI
• A = ATCA
• M = MTC
• X = No Architecture
• Y = Hybrid
• Z = Custom

5) Board Size
• 3 = 3U
• 6 = 6U
• 8 = 8U
• F = Full size
• M = Mid size
• Z = Custom

6) BP Bare board
• B = CPCI
• C = H110
• E = 2.16
• K = VITA 31.1
• T = VXS
• N = VME64X
• P = VPX
• Q = J1 only
• X = No Architecture
• Y = Hybrid
• Z = Custom

7) Storage
• R = RAIDStor NAS
• E = Eurocard Direct Attached
• P = PMC
• M = Multiple / Combination
• X = No Storage
• Z = Custom

8) Size
• 1 = 1U
• 2 = 2U
• 3 = 3U
• 4 = 4U
• 5 = 5U
• 6 = 6U
• 7 = 7U
• 8 = 8U
• 9 = 9U
• A = 10U
• B = 11U
• C = 12U
• D = 13U
• E = ½ ATR
• F = ¾ ATR
• G = 1 ATR
• H = 1 ½ ATR
• Z = Custom

9) RTMs
• N = No
• Y = Yes

10) SBC
• P = PowerPC
• I = Intel
• O = Other
• M = Multiple / Combination
• X = No SBC

11) Switch
• C = Copper ports
• F = Fiber ports
• B = Copper / Fiber
• M = Multiple / Combination
• X = No Switch

12) I/O PMC
• S = SCSI
• R = Serial
• E = Ethernet
• O = Other
• X = No I/O PMC
• M = Multiple / Combination
• Z = Custom

13) Adapters / Carriers
• Y = Yes
• N = No

14) Operating Systems
• V = VxWorks
• L = Linux
• W = Windows
• S = Solaris
• O = Other
• X = No OS

15) Application Software
• Y = Yes
• N = N