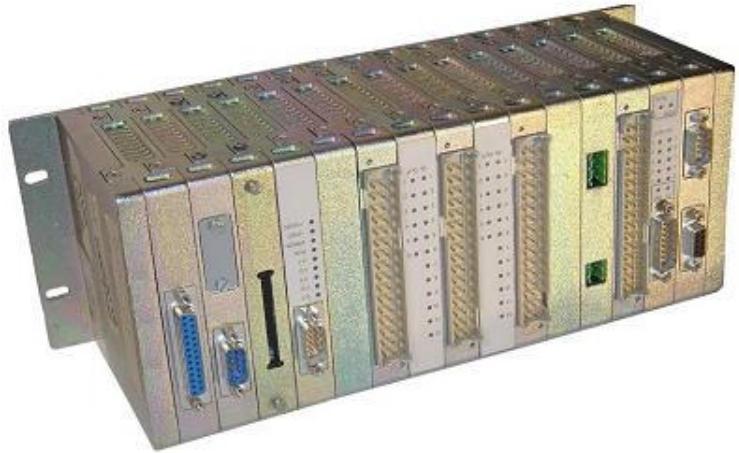


Features



RAPIDLY ASSEMBLED
rugged computers
For RAIL and MIL applications

General Features:

- MODULAR AND STACKABLE CONSTRUCTION
- SUPPORTING TAILORED CONFIGURATIONS
- HIGH DENSITY I/O CONNECTORS
- COMPLIANT WITH EN 50155 ROAD & RAIL
- COMPLIANT WITH MIL-STD-810F, 461E AND GAM 13
- DOS - WINDOWS CE - LINUX - QNX - VX WORKS OPERATING SYSTEMS
- 802.11 Wi-Fi
- GSM/GPRS/EDGE/UMTS CELLULAR SUPPORT
- GPS
- ISOLATED POWER SUPPLY
- VIBRATION RESISTANT RIGID ENCLOSURE STRUCTURE
- EXTENDED TEMPERATURE RANGE

Modular Flexible Design. Thanks to its modular concept and the PC 104 standard based modules, a complete computer system can be assembled in a very short time. And the built system is already compliant to rail, road MIL STD norms !

Robust. it withstands extreme operational conditions on board of any type of vehicles.

Fan-less. Designed to operate without the need of a cooling fan and a relevant filter, avoids excessive heating of the inside due to an obstructed air filter.

Multiple Operating System. Windows XP Embedded, CE or Linux can be installed in the Stack 104 platform.

Multiple I/O. Fast Ethernet, CAN BUS, Isolated Multi-Serial Ports, Isolated Digital I/O and hi-speed USB 2.0 ports are available in all models.

Extended temperature range. Ideal for vehicles operating in any climate.

Applications:

- I/O INTENSIVE MOBILE COMPUTING
- HIGH VOLTAGE TRAIN SYSTEMS
- ISOLATED CONTROLLERS
- HIGH AVAILABILITY SYSTEMS
- VIDEO SURVEILLANCE

The Stack104 is a modular system architecture that leverages the inherent stacking nature of PC/104 modules. The system can be expanded by adding more modules to the core that consists of a CPU head and power supply devices required in every system. The use of high density connectors makes the Stack104 ideal for applications that require a high I/O density or high levels of isolation such as can be found on feeder driven trains or metros. Eurotech can assist or quickly create tailor-made systems leveraging on the vast board-level product portfolio

STACK 104

Architecture

A STACK 104 system is based on modular PC/104 boards each installed in a purpose-built frame stacking together with flanged end plates. A high resistance Zinc, Aluminium, Magnesium and copper alloy (ZAMAC) is used that makes the system lightweight and durable in harsh and high vibration installations.

A system consists of three subsections, the CPU head, a power supply and I/O boards. Various CPU and power supply sub-systems are available, each targeting different applications. A variety of I/O modules can be integrated in to expanding stacking STACK 104 system to complete the functionality requirements.

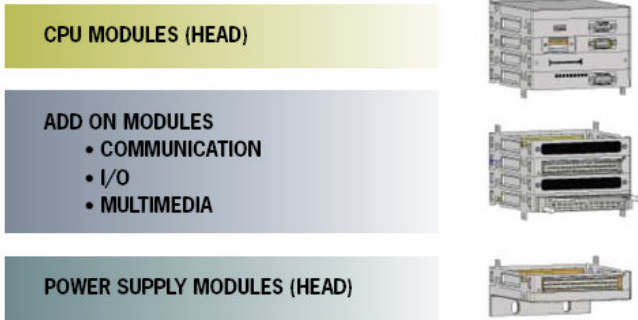
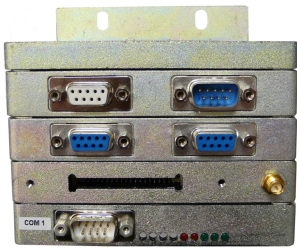


Figure 1 –Stack 104 assembly concept

Stack 104 Modules Specifications

CPU (HEAD)



MODEL

CPUARM – 9

CPU4 – VORTEX 486

CPUGX2

SPECIFICATIONS

CPU ARM9 PXA 255 400 MHz
 DRAM 4Mb
 Compact Flash up to 8 GB
 5 RS 232-c
 1 Ethernet
 1VGA Interface

CPU VORTEX300 MHz(SX)/800 MHz (DX)
 DDRAM 128Mb (SX) or 256Mb (DX)
 Flash up to 8 Gb
 1 Ethernet 10/100
 WiFi (802.11 b/g)
 Bluetooth
 1 RS232 + I2C
 1 RS485
 2 USB 1.1
 1SVGA (CRT or LVDS or TFT or PAL) Interface

CPU AMD Geode GX2
 DDRAM 128 MB
 Compact Flash up to 8 GB
 1 Ethernet 10/100
 Wi-Fi (802.11 b/g)
 Bluetooth
 1 RS232 + I2C
 1 RS485
 2 USB 1.1
 1 SVGA Interface

POWER SUPPLY (HEAD)



MODEL

24-48 VDC – 25W

72-110 VDC – 25W

24-48/72/110/220 VDC - 30W

SPECIFICATIONS

Isolation: 1500 V
 Input Voltage: 24-48V DC
 Output Voltage: +5V or +12V
 Output Power: 25 W max Stackable

Isolation: 1500 V
 Input Voltage: 72-110V DC
 Output Voltage: +5V or +12V
 Output Power: 25 W max Stackable


Isolation: 2500 V
 Input Voltage: 24-48V or 60-125V or 220V DC
 Output Voltage: +5V or +12V
 Output Power: 30 W max Non Stackable

COMMUNICATION

	MODEL	SPECIFICATIONS
	QUAD RS 232	4 RS232 500 V Insulation
	QUAD RS 485	4 RS485 Isolation 500 V Insulation
	QUAD CURRENT LOOP	4 Current Loop 500 V Insulation
	GPS /GSM/GSM-R	GSM/GPRS/UMTS GSM-R 900/1800/1900 MHz 12 Channels GSP receiver Support for 3.3V active antennas
	CAN BUS	CAN BUS 2.0 redundant insulated CANOPEN STACK on board
	POE Switch *	4 POE links 10/100 Mbps 1 No POE Link for computer connexion Stackable Require Specific version of 30WPSU

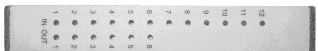
* Availability: 2nd quarter 2009

MULTIMEDIA

	MODEL	SPECIFICATIONS
	MPEG 4 Frame Grabber	Dual Chips 69000 HiQVideo Accelerator 4 Input Channels: NTSC/PAL/SECAM Compression: MPEG4 1 channel full screen or 4 Channels on ¼ screen each @ 25 fps
	CERBERE Module*	3 Channels, 4CIF with video processing and Mass storage 1 Ethernet link Stackable

* Availability: 2nd quarter 2009

I/O

	MODEL	SPECIFICATIONS
	16 DIGITAL INPUT	Input Voltage 24-48, 72,110VDC @ 10 mA LED Status indicator Option Isolation : 1500V
	12 DIGITAL INPUT	Input Voltage 24-48, 72-110, 220VDC @ 10 mA LED status indicators Isolation : 2500V
	8 RELAY OUTPUT	Output type : Relays 24/220 VDC @2A max Isolation : 1500V
	6 RELAY OUTPUT	Output type : Relays 24/220 VDC @2A max Isolation : 2500V
	12 INPUT/ 4 OUTPUT ANALOG	12 Input 4-20 mA or 0-10v 4 Output 4-20 mA Isolation : 500VDC

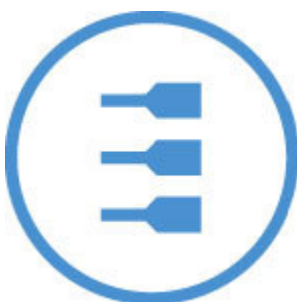
COMMON TO ALL MODULES

OPERATING SYSTEM	DOS – Embedded Windows - Linux – QNX – VX Works
OPERATING TEMPERATURE	-25° to +70°C (-13° to +158°F)
STORAGE TEMPERATURE	-40° to + 85°C (-40° to +185°F)
HUMIDITY	95% relative humidity non condensing
ENVIRONMENTAL	IP 30
STANDARDS	EN 50155 EN 60250 GAM EG13 , (MILSTD equivalent)
WEIGHT	~ 300g (0.66 lbs) per module

PERIPHERALS AND ACCESORIES

PLC KERNEL	Required LINUX OS
CERBERE Libraries	Specific Video processing libraries for Cerbere Modules

STACK 104



ETH_STACK104_DS090209

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