



PROCELERANT CE738A-E

Extended Temperature Range COM Express Module

FEATURE SUMMARY

- 1.4GHz Low Power Pentium M 738 combined with Intel 915GM Chipset on a COM Express Module
- Extended Temperature Range: -25°C to 70°C
- Intel ICH6M I/O Hub
- PICMG COM Express Compliant
- Basic Form Factor (95 x 125mm)
- Type 2 COM Express Pin-out
- Intel 82573 10/100/1000BaseTX Ethernet controller
- One SODIMM Socket for up to 1GB Memory
- Flexible PCI-Express Options
 - 3*PCI-Express x1
 - 1*PCI-Express x16
- Integrated Graphics
- Dual SVDO
- Analog VGA
- LVDS
- COM Express Standard Features
 - 8 USB Ports
 - 2 SATA Ports
 - 1 ATA 100 Port
 - PCI 32-bit/33MHz PCI Bus
 - 8 GPIO Lines
- Phoenix BIOS with ACPI 2.0 Power Management
- Win XP/ Win XP Embedded / Red Hat Desktop Linux
- Optimized Passive and Active Heatsinks Available
- ROHS Compliant

PRODUCT DESCRIPTION

Based on the open PICMG standard, the RadiSys Procelerant CE738A-E modules are rugged, low power, high performance COM Express modules with key features vital for today's embedded applications. Paired with a RadiSys Procelerant CR carrier board, the RadiSys family of COM Express modules provides a final production or a design-specific development platform

PICMG STANDARD

COM Express is the PICMG standard for a Computer-On-Module (COM) base on new serial differential signaling technologies such as PCI Express, Serial ATA, USB 2.0, LVDS, and Serial DVO. The COM Express modular concept enables OEMs to reduce time to market by reducing the time spent on processor design and enabling OEMs to focus on their core competencies and product differentiation. The modularity provides the ability for an OEM to plan for feature changes, demand fluctuations and performance upgrades without having to re-design their product. The RadiSys COM Express modules can reduce service repair inventories, simplify debugging and reduce field service time contributing to the success of the product over its lifetime.

APPLICATIONS

RadiSys CE738AI COM Express modules are ideal for rugged embedded applications that require extended temperature operations in addition to the small footprint and modular flexibility benefits of COM Express. These modules are compact and reliable solutions for meeting the rigors of transportation, military, industrial and medical applications requirements.

CARRIER DESIGNS SUPPORTED BY RADISYS

Whether customers design their own carrier board or utilize RadiSys Design Services to design one, RadiSys supports the design each step of the way. Tools such as the Carrier Design Guide and Thermal Design Guide, as well as schematics and Gerber files are available for customers committed to using RadiSys Procelerant CE processor modules. Ask your RadiSys Sales Manager for more information.



Procelerant CE738A-E Specifications

Physical	Dimensions	95mm x 125mm – COM Express Basic Form Factor
	Compliance	PICMG COM Express R1.0 Basic Form Factor, Type 2
Processor	Options	LV Pentium-M 738
	Performance	CE738AI LV Pentium-M: 1.4GHz / 667MHz FSB/ 2MB Cache
	Clock Speed /	
	FSB / Cache	
	Package	BGA
	Power	10W (Processor only)
Chipset	Supplier	Intel 915GM and ICH6M I/O Hub
	Features	Integrated video, PCI, IDE, PCI-Express, SATA, USB, LPC, GPIO
Memory	Type	Single 200-pin SODIMM socket, supports 400, 533, and 667MHz Memory
	Capacity	Up to 1GB DDR2 in a single channel (Market Availability)
BIOS	Type	1MB, Phoenix Technologies
Audio	Compliance	AC '97 Intel High Definition Audio via ICH6M I/O Hub
Video	Type	Dual Independent Displays via Intel 915GM Chipst
	Features	Dual SVDO, LVDS 18-bit dual channel, Analog VGA, TV Out
	External	PCI-Express x16 Graphics Port, Multi-plexed on SDVO interface pins
Networking	Type	IEEE 802.3 10/100/1000BaseT Compliant Physical Layer via Intel 82573V - Utilizes (1) PCI-Express x1 interface
I/O	USB	Eight USB 2.0 / 1.1 Ports
	SATA	One SATA 150 Port
	IDE	One Ultra ATA 100/66/33 Ports
	OTHER	LPC, Smbus/I2C Bus,
Super I/O	BIOS Support	National Semiconductor PC8374, Ask about support for Winbond W83627HF-AW
Expansion	PCI Express	3*PCI-Express x1 and 1*PCI-Express x16
	PCI	PCI 2.3 32-bit 33MHz, four logical devices
Connectors	COM Express	(2) 220 pin COM Express standard connectors. Module connector pn: Tyco 3-1827231-6, Carrier connector pn: Tyco 3-3-1827233-6
Power	Input	12V
	Dissipation:	20.7W
	3D Mark (Max)	
Environment	Temperature	-25° to 70°C (operating), -40° – 85°C (non-operating)
	Humidity	5%-95% Condensing (Operating), 5% - 90% RH Non-Condensing at 40C
	Shock	Operating: 30G, half sine 11ms duration, Storage: 50G, half sine 11ms duration 30G
	Vibration	5-2000Hz Random, 0.5g, 10min min. in each of 3 axes (Operating), 5g acceleration over 5-2000Hz Sine Wave (P-P), 1 oct/min Sine Sweep (Storage)
Regulatory	Safety	UL60950-1, EN60950-1, IEC60950-1
	EMC	EN55022, EN55024, and FCC Part 15, Subpart B, Class B
Warranty	Standard	Two years, parts only

Ordering Information

Toll-Free: 800-950-0044

Phone: 503-615-1100

Support: 866-385-6167

Call for pricing and availability. Refer to the order codes below.

ORDER CODEs / description:

Module Order Codes:

CE738A-E-512 1.4Ghz LV Pentium-M, Extended Temperature Range, 512MB

Supporting Products:

CR100-2DVI: Development ATX Carrier Board with Dual DVI Connectors

CR100-PCIE16: Development ATX Carrier Board with 16-bit PCI-Express

CE-PHSA: Passive Heatsink & Assembly

CE-PHS17A: Low Profile Passive

CE-TIM: Thermal Interface Material, required with Heatsinks

CE-DVI-VGA: DVI to VGA cable

CE-TIMHeatsink and Assembly

CE-AHS: Active Heatsink and Assembly

CE-TIM: Thermal Interface Material, Required for Heatsink Assembly

CE-DVI-VGA: DVI to VGA Cable



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