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DATASHEET

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

Procelerant CE738AE

Extended Temperature Range COM Express Module

Based on the open PICMG standard, the RadiSys Procelerant™ CE738A-E module provides low power and high performance over an extended temperature range of -25°C – 70°C, critical for temperature sensitive COM Express 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 CE738A-E COM Express module is 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 CE738AE Specifications

FEATURE	FUNCTION	DESCRIPTION
PHYSICAL	Dimensions	95mm x 125mm – COM Express Basic Form Factor
	Compliance	PICMG COM Express 1.0 Basic Form Factor, Type 2
PROCESSOR	Options	LV Pentium-M 738
	Performance	CE738A LV Pentium-M: 1.4GHz / 667MHz FSB/ 2MB 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 populated with 512MB memory
	Capacity	Up to 1GB DDR2 in a single channel
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 Chipset
	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.
POWER	Input	12V
	Dissipation	20.7W
	3D Mark (Max)	

PHYSICAL SPECIFICATIONS

ENVIRONMENT			
	Temperature	Operating	–25˚ to 70°C
		Non-Operating	-40˚ – 85°C
	Humidity	Condensing	5%-95%
		Non-Condensing	5% - 90% RH at 40C
	Shock	Operating	30G, half sine 11ms duration
		Storage	50G, half sine 11ms duration 30G
	Vibration	Operating	5-2000Hz Random, 0.5g, 10min min. in each of 3 axes
		Non-Operating	5g acceleration over 5-2000Hz Sine Wave (P-P), 1 oct/min Sine Sweep
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

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

Module Order Codes:
CE738A-E-512 1.4Ghz LV Pentium-M, -25°C - 70°C Temperature Range, 512MB

Supporting Products:
CR202-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