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Procelerant CEGSXT

Extended Temp Core™2 Duo Processor COM Express Module

FEATURE SUMMARY

- Core™ 2 Duo and Celeron processor options
 - 2.26GHz Core™ 2 Duo
 - 1.2 GHz and 1.86GHz Core™ 2 Duo
 - 1.2GHz Celeron® M ULV
- GS45 Express chipset and ICH9M
- Dual-channel DDR3, up to 8GB
- Type 2 and Type 3 pinout options

The Procelerant® CEGSXT combines the next generation performance Intel® Core™ 2 Duo, Celeron® M processors and the GS45 chipset with RadiSys-designed dual channel memory to provide breakthrough processing performance on a basic size COM Express module. Featuring DDR3 memory and enhanced 3D graphics, the CEGSXT is available in both Type 2 and Type 3 COM Express pin-out options. The CEGSXT supports existing and new carrier designs while maximizing feature content.

EXTREME CAPABILITY AND SUSTAINED RELIABILITY

RadiSys Extended Temperature products are designed with higher capability components and are subjected to an extensive suite of environmental tests to demonstrate capability of operation in -25C to +70C temperature range. With thorough design verification and 100% HASS screening, OEMs can depend on the sustained reliability of the Procelerant® CEGSXT in harsh, ruggedized environments as required by Military, Aerospace, Government, Transportation and Industrial Automation applications.

CUSTOM SERVICES FROM THE COM EXPERTS AT RADISYS

In addition to the custom BIOS and carrier design services, OEMs can depend on RadiSys for custom thermal consulting or design to support their extended temperature system design. RadiSys also offers Humiseal 1B31 conformal coating option for the CEGSXT. Ask your RadiSys Sales Manager for more information.

COM EXPRESS AND REAL-TIME HYPERVISOR

The greatest challenge companies face in adopting new technology is the difficulty they experience adapting it into their current products and also in utilizing it to its fullest advantage. Multi-core processing, one of the newest technological advances in COM Express modules, operates with the greatest efficiency when utilized with RadiSys Microware® Hypervisor middleware. One of the main benefits of Hypervisor's innovation is the ability to run legacy software on the latest-generation platforms without going through complex porting development. This saves time, and resources and total cost of ownership while advancing product features and functionality.

Procelerant CEGSXT Specifications

FEATURE	FUNCTION	DESCRIPTION
PROCESSOR	SP9300	2.26 GHz Core™ 2 Duo SV processor / 6MB Cache / 1067MHz FSB /25W
	SL9400	1.86 GHz Core™ 2 Duo SV processor / 6MB Cache / 1067MHz FSB /17W
	SU9300	1.2 GHz Core™ 2 Duo processor / 3MB Cache /800MHz FSB/10W
	ICP722	1.2 GHz Celeron® M processor / 1MB Cache / 800MHz FSB/5.5W
CHIPSET	Intel GS45 Express and ICH9M I/O Hub	
MEMORY	Type	Two 204-pin right-angle SO-DIMM sockets for DDR3-1067 and DDR3-800
	Capacity	Up to 4GB per channel, for a maximum of 8GB memory
FLASH	4MB system flash for BIOS storage	
VIDEO	Intel® Gen 5.0 integrated graphics engine	Dual LVDS supports 2 x 18 bpp OR 2 x 24 bpp panel support
		VGA
		Default Output: SDTV/Standard Definition TV Also Supported: Composite, S-Video, Component Video, HDTV
	Dual-channel SDVO, multiplexed on the PCI Express Graphic port display interface	
	Three DisplayPort, multiplexed on the PCI Express Graphic port display interface	
	External	One PCI Express x16 Graphics expansion port
NETWORKING	Type 2	One 10/100/1000BaseT
	Type 3	Two 10/100/1000BaseT
AUDIO	High Definition Audio	
	Speaker Out	
STORAGE	SATA	Four SATA interfaces, each capable of supporting one SATA device Supports both 1.5 and 3.0 Gbps operation
	IDE (for type 2 only)	One IDE interface (build option) capable of supporting two UltraATA/100 devices
PCI EXPRESS	Type 2 and 3	One x16 PCI Express Graphics expansion port

	Type 2	One PCI Express x1 Interface Four x1 PCI Express link expansion ports, configurable as: <ul style="list-style-type: none"> • Four x1 • One x4 • One x2 and two x1 • One x3 and one x1
	Type 3	Four x1 PCI Express link expansion ports, configurable as: <ul style="list-style-type: none"> • Four x1 • One x4 • One x2 and two x1 • One x3 and one x1
PCI	One PCI 2.3 compliant 32-bit, 33MHz bus	
USB	Eight USB 2.0 expansion ports	
LPC	One LPC interface	
POWER	+12 power rail, primary input Supports 6.0V-16.8V (SL9400, SP9300, SU9300, ICP722) Supports 6.0V-15.5V (T9400 only)	
POWER MANAGEMENT	ACPI 3.0 supporting states S0, S3, S4, S5, G3, and C0, C1, C2, C3, C4/C4E	
MISCELLANEOUS	One SMBus Eight GPIO (four GPI and four GPO) One I2C	
BIOS	Phoenix® EmbeddedBIOS® with StrongFrame® Technology	
OS	Windows XP® Embedded Windows XP® Professional Windows Vista® Ultimate Edition Red Hat® Enterprise Linux RadiSys® Microware® OS-9 Microware® Hypervisor	

PHYSICAL SPECIFICATIONS

PHYSICAL	Dimensions	95mm x 125mm
	Compliance	PICMG COM.0 COM Express R1.0 Basic Form Factor
	Optional Conformal Coating	Humiseal 1B31

ENVIRONMENT

Cooling	Forced air	Class EAC1 as defined in the ANSI/VITA 47-2005
	Conduction	Class ECC1 as defined in the ANSI/VITA 47-2005
Temperature	Operating	Up to 2300m (7500ft) -25°C to +70°C, derated 1.1°C per 300m over 2300m
	Non-operating	-40°C to +85°C
Shock	Operating	40G, half sine shock pulse, 11ms duration, 3 times per face
	Non-Operating/Unpacked	50G, half sine shock pulse, 11ms duration, 3 times per face
	Transportation/Packaged	Fixtured assembly: 50G, 17.4 ms trapezoidal pulse Drop test, 10-up bulk packaging, 30in free-fall, one drop on each of six faces
Vibration (random)	Operating	Random 5Hz to 2KHz, 12.07 grms, 1hr in each of 3 axes 5Hz - 40Hz: 0.04g ² /Hz 40Hz to 100Hz: 0.04g ² /Hz ramping up to .01g ² /Hz(3dB/oct) 100Hz - 1000Hz: 0.1g ² /Hz 1000Hz - 2000Hz 0.1g ² /Hz ramping down to 0.025g ² /Hz (6dB/oct)
	Non-Operating/Storage	Random 5Hz to 2KHz, 12.07 grms, 1hr in each of 3 axes 5Hz - 40Hz: 0.04g ² /Hz 40Hz to 100Hz: 0.04g ² /Hz ramping up to 0.1g ² /Hz (3dB/oct) 100Hz to 1000Hz 0.1g ² /Hz 1000Hz - 2000Hz 0.1g ² /Hz ramping down to 0.025g ² /Hz (6db/oct) 5 - 500Hz swept sine, 2.5 (0-p), 25.4mm(p-p) MAX displacement, 5 min dwell at 3 resonances in each of 3 axes
Humidity	Operating	5% to 95% non-condensing. 95% RH@30C, linear derating to -25°C to +70°C
	Non-Operating/Storage	5% to 95% non-condensing
Altitude	Operating	To 15,000ft (4570m) Up to 2300m (7500 ft), -25°C to +70°C Derated -1.1 C per 305 m (1000

		ft) above 2300 m (7500 ft)
		Non-Operating/Storage To 40,000ft (12000m)
REGULATORY	Safety	UL60950-1, EN60950-1, IEC60950-1
		Shall meet RoHS at time of production
	EMC	EN55024, EN55022, and FCC Part 15, Subpart B, Class B
WARRANTY	Standard	Two years, parts only

Ordering Information

Module Order Codes:

CEGSXTT2-SP9-0: Type2, -25C to +70C, 2.26GHz Core™ 2 Duo SP9300 SV, Computer
CEGSXTT3-SP9-0: Type3, -25C to +70C, 2.26GHz Core™ 2 Duo SP9300 SV, Computer
CEGSXTT2-SL9-0: Type2, -25C to +70C, 1.86GHz Core™ 2 Duo SL9400 LV, Computer
CEGSXTT2-SU9-0: Type2, -25C to +70C, 1.2GHz Core™ 2 Duo SU9300 ULV, Computer
CEGSXTT2-722-0: Type2, -25C to +70C, 1.2GHz Celeron® 722 ULV, Computer

Supporting Products:

CR202-PCIE16: Type 2, ATX development carrier, PCI Express x16
CR203-VGA: Type 3, ATX development carrier, VGA
CEGSXT-AHS: CGSXT active heatsink assembly



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