PROCELERANT™

CE915GM COM EXPRESS MODULE

PRODUCT NOTES

CE760A-0, CE738A-0, CE373A-0, CE370A-0, CE738A-E-512

What's new in the product family

New COM Express modules

This release introduces four new Procelerant™ CE915GM COM Express™ embedded computing modules with simplified BIOS maintenance, improved thermal performance, and improved compatibility with ATX power supplies. All modules are RoHS compliant.

New Model	Previous Model	Description
CE760A-0	CE760	CE915GM with Intel 2GHz Pentium M 760 BGA processor, memory module not included
CE738A-0	CE738	CE915GM with Intel 1.4GHz LV Pentium M 738 BGA processor, memory module not included
CE373A-0	CE373	CE915GM with Intel 1.0GHz ULV Celeron M 373 BGA processor, memory module not included
CE370A-0	CE370	CE915GM with Intel 1.5GHz Celeron M 370 BGA processor, memory module not included
CE738A-E-512	CE738	CE915GM with Intel 1.4GHz LV Pentium M 738 BGA processor, extended temperature range (-25ºC to 70ºC), and 512MB memory module

Enhancements

Simplified BIOS maintenance

A new BIOS operation mode header on the COM Express modules enables two maintenance tasks that previously required more complicated steps involving the CR100 carrier board.

- The CMOS RAM can be cleared by inserting a jumper on pins 3 and 4 of the new header.
- BIOS recovery can be initiated by inserting a jumper on pins 2 and 3 of the new header.

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New reset and POST LEDs

New LEDs, reset and POST, provide visual indications of the system status when the module has not yet been installed in a chassis. The LEDs are on the lower edge of the modules to the right of the BIOS ROM chip.

The reset LED illuminates while the system resets. The POST LED turns on and off four times during boot up to identify eight different stages of the power on self tests. This information is helpful If the CE915GM module is installed on a carrier board that does not have PCI or LPC interfaces to accommodate a POST80 diagnostic card.

Technical publications changes

- A stand-alone reference manual for the CR100 carrier board was developed for a previous release, and is available for download from the RadiSys Web site. Redundant information has been pulled out of the *CE915GM Product Manual* and *COM Express Carrier Board Design Guidelines* to simplify these manuals and avoid confusion.

- The online help in the BIOS setup utility, available when pressing F2 during boot up, has been updated and provides information about available options in the BIOS setup. As a result, the lengthy BIOS configuration screens have been removed from the *CE915GM Product Manual* to simplify the manual.

Resolved limitations over earlier CE915GM models

The following issues that were identified on the previous CE915GM models have been resolved in the new models.

Incompatability with some ATX-compliant power supplies

The CE915GM models were incompatible with some ATX-compliant power supplies, such as the Sparkle® FSP350-601U.

Resolution: The new CE915GM models fully comply with the Intel® *ATX12V Power Supply Design Guidelines*.

Issue No: RSYS00008589

Thermal performance issues at maximum temperature

When operating the CE760 and CE373 modules at the maximum-rated ambient temperature of 60° C, processor-intensive applications caused the core frequency to be reduced temporarily to avoid overheating. A reduction in the core frequency results in slower processor performance.

Resolution: A new backer plate is supplied with CE-AHSA, CE-PHSA and CE-PHS17A thermal solutions for all of the new CE915GM models. The backer plate substantially improves thermal performance, and has resolved this issue.

Issue No: RSYS00010289

Application notes

Using a USB optical disk drive to install the operating system

Follow the steps below if you are using a USB optical disk drive (CD-ROM or DVD) as a bootable drive to install the operating system.

1. With the USB drive disconnected, power on the system.

2. Press F2 to enter the BIOS setup utility.

   - On the Boot > Boot Order menu, set the Boot Priority Order to [USB CD-ROM] first.

   - *Optional step:* on the Configuration > USB Configuration menu, set HDD Boot Translation to [Force63]. This allows the system to detect the USB drive faster. Change this setting back to [Auto] when ready to boot from the hard disk.

3. Power on the USB drive and insert the CD-ROM/DVD. Make sure the drive detects the presence of the disk.

4. Connect the USB drive's cable to the USB port on the carrier board's rear I/O panel.

5. With the USB drive still running, reset the system.