



Procelerant CR202/CR203

COM Express ATX Carrier Board

FEATURE SUMMARY

- PICMG COM.0 Express Revision 1.0 Compliant
- One COM Express module:
 - Basic and Extended Form Factor Modules
 - Type 2 and Type 3 modules
- ATX Form Factor 12" wide by 9.6" deep (305mmx244mm)

The RadiSys Procelerant® ATX carrier boards are development platforms that enable customers to initiate proprietary, customer-specific designs with RadiSys COM Express modules easily and quickly. The CR202 and CR203 both provide a wide range of device connectivity and also the flexibility to enable comprehensive system prototyping

Configuration Options

The CR202-PCIE16 supports Type 2 Modules.

The CR203-VGA supports Type 3 Modules.

Start Your Design Today

Pair the CR202-PCIE16 with a Procelerant® Z500, CEGM45, CEZ5XL and other Type 2 modules or the CR203-VGA with a Type 3 CEGM45 module and experience time-saving standard platform design across all your applications.

Carrier Designs Supported by RadiSys

Manufacturers can depend on RadiSys to support their design at every stage, whether they are utilizing RadiSys Design Services or designing their own carrier board. Design tools such as the Procelerant® COM Express Design Guidelines, as well as the schematics and Gerber files, are available for customers committed to RadiSys Procelerant® COM Express modules.

Procelerant CR202/CR203 Specifications

CR202-PCIE16 CONFIGURATION FOR TYPE 2 MODULES

| FEATURE | FUNCTION | DESCRIPTION |
|------------------------|--|---|
| MODULE SUPPORT | Form Factor | Basic and Extended |
| | Pin-out | Type 2 |
| EXPANSION SLOTS | One PCI Express x16 slot, supports MEC-Dual-DVI, MEC-Dual-LVDS and external PEG usage | |
| | One PCI Express x4 slot, supports PCI Express Card and ExpressCard/54 modules | |
| | One PCI Express Mini Card slot for PCI Express- or USB-based devices (configurable option) | |
| | Two PCI Express x1 slots | |
| | One PCI 3.3V 32-bit 33MHz slot | |
| CONNECTORS | COM Express Module | 440-pin 8mm COM Express female connector |
| | Network | One 10/100/1000BaseT via rear panel RJ-45 |
| | SATA/SAS | Four onboard headers |
| | USB | Total of 8 ports |
| | VGA | One rear panel connector |
| | RS-232 | Two serial ports with two DE9M connectors on the rear I/O panel |
| | Floppy | Onboard header |
| | Parallel Port | Onboard header |
| | CD-ROM | Onboard header |
| | PS/2 | Two rear panel connectors |
| | Fans | Six total: Three 3 pin, Three 4 pin |
| | Power | ATX |
| | GPIO | One 8-pin onboard header |
| | SMBus/I2C | Onboard header |
| | LPC | One LPC slot for Super I/O-based extension cards |
| | IDE | One 40-pin onboard header |
| | Compact Flash | One Type II Socket |
| Audio | 1 standard microphone-in, line-in, and line-out external audio jacks for HDA codec | |

| | |
|--------|---|
| TV out | One 7-pin connector, composite, S-video, and component video |
| LVDS | One 41-pin onboard header for single-channel or dual-channel, 18-bit or 24-bit LVDS |

CR203-VGA CONFIGURATION FOR TYPE 3 MODULES

| FEATURE | FUNCTION | DESCRIPTION |
|------------------------|--|---|
| MODULE SUPPORT | Form Factor | Basic and Extended |
| | Pin-out | Type 3 |
| EXPANSION SLOTS | One PCI Express x16 slot, supports MEC-Dual-DVI, MEC-Dual-LVDS and external PEG usage | |
| | One PCI Express x4 slot, supports PCI Express Card and ExpressCard/54 modules | |
| | Two PCI Express x1 slots | |
| | One PCI Express Mini Card slot for PCI Express- or USB-based devices (configurable option) | |
| | One PCI 3.3V 32-bit 33MHz slot | |
| CONNECTORS | COM Express Module | 440-pin 8mm COM Express female connector |
| | Network | Three 10/100/1000BaseT via rear panel RJ-45 |
| | SATA/SAS | Four onboard headers |
| | USB | Total of 8 ports |
| | VGA | Onboard PCI-based VGA controller. One rear panel connector |
| | RS-232 | Two serial ports with two DE9M connectors on the rear I/O panel |
| | Floppy | Onboard header |
| | Parallel Port | Onboard header |
| | CD-ROM | Onboard header |
| | PS/2 | Two rear panel connectors |
| | Fans | Six total: Three 3 pin, Three 4 pin |
| | Power | ATX |
| | GPIO | One 8-pin onboard header |
| | SMBus/I2C | Onboard header |
| | LPC | One LPC slot for Super I/O-based extension cords |
| Audio | 1 standard microphone-in, line-in, and | |

line-out external audio jacks for HDA codec

LVDS

One 41-pin onboard header for single-channel or dual-channel, 18-bit or 24-bit LVDS

PHYSICAL SPECIFICATIONS

| | | | | |
|--------------------------|-------------------|---------------------------------------|---|--|
| PHYSICAL | Dimensions | 12" wide by 9.6" deep (305mm x 244mm) | | |
| | Compliance | ATX form factor | | |
| POWER REQUIREMENT | Input | Standard ATX power supply | | |
| ENVIRONMENT | Temperature | Operating | +0°C to +60°C, de-rated 1.1°C per 300m over 2300m | |
| | | Storage | -40°C to +85°C, 5°C per minute maximum excursion gradient | |
| | Humidity | Operating | 5% to 95% RH non-condensing 95% RH at +30°C, linearly derated to 25% RH at 60°C | |
| | | Storage | 5% to 95% RH non-condensing | |
| | Altitude | Operating | up to 4570 meters | |
| | | Storage | up to 12,000 meters | |
| | Shock | Operating | 30G, half sine, 11ms duration, 3 times per face | |
| | | Non-Operating | 40G, half sine, 11ms duration, 3 times per face | |
| | Vibration | Operating | Random 5Hz – 2KHz, 7.7 grms, 10min in each of 3 axes 5 – 20Hz 0.004g ² /Hz ramping up to 0.04g ² /Hz 20 – 1000 Hz 0.04g ² /Hz 1000 – 2000Hz 0.04g ² /Hz ramping down to 0.01g ² /Hz | |
| | | Non-Operating | Random 5Hz – 2KHz, 9.7grms, 10 min in each of 3 axes 5 – 20Hz: 0.006g ² /Hz ramping up to 0.06g ² 20 – 1000Hz 0.06g ² /Hz 1000 – 2000Hz: 0.06g ² | |
| | REGULATORY | Safety | UL60950-1, EN60950-1, IEC60950-1 | |
| | | EMC | EN55024, FCC Part 15, Subpart B, Class B, and | |

WARRANTY

Two years

Order Code - Type 2 Modules:
CR202-PCIE16: Type 2, ATX Carrier, PCI Express x16

Order Code - Type 3 Modules:
CR203-VGA: Type 3, ATX Carrier, VGA



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