

# CR300 - Radisys

## COM Express ATX Carrier Board

The Radisys ATX carrier boards are development platforms that enable customers to begin development on an application specific design with Radisys COM Express modules quickly and easily. The CR300 provides COM Express Type 6 support in addition to a wide range of device connectivity for prototype and development ease and flexibility.



## Configuration Options

The CR300 supports PICMG COM Express 2.0 Type 6 Basic (95mm x 125mm) and Compact (95mm x 95mm) modules.

## Radisys COM Expert Services for Carrier Design

Manufacturers can depend on Radisys to support their COM Express and carrier design at every stage, whether they utilize Radisys Design Services or design their own carrier board. Design tools such as the COM Express Design Guidelines, as well as the carrier schematics and Gerber files, are available for customers designs using Radisys COM Express modules.

## FEATURES

- ATX Form Factor COM Express Carrier Board
- PICMG COM Express Revision 2.0 Compliant
- Supports Type 6 Basic (95x125mm) and Compact (95x95mm) Form Factor Modules
- Two PCI Express x16 (mechanical) slots – one with x16 PEG support, one supporting x4 PCI Express lanes
- One PCI Express x8 slot implemented as DDI slot
- One PCI Express x4 slot
- Four user selectable Super I/O chips: SMSC3116, SMSC47N217, WPCN383, W83627DHG-PT
- One RJ45 connector on rear I/O for 10/100/1000BASE-T Ethernet port
- One 24-bit dual channel LVDS header
- Two HDMI/Display Port connectors
- One RS-232 compliant D-SUB9 and one D-SUB15 VGA port at rear I/O
- Additional RS-232 and PS/2 connectors based on selected Super I/O support
- Cirrus Logic CS4207 HDA codec with microphone-in, line-in, and line-out external audio jack.
- Four SATA 2.0 compliant connectors (1.5Gbps and 3.0Gbps)
- Eight USB ports: four USB 2.0 and 3.0, four USB 2.0
- One I2C header
- One SMBus header
- One FPIO header

## SPECIFICATIONS

Feature	Function	Description
<b>Module Support</b>	Form Factor	ATX
	COM Express Type	COM Express 2.0 Type 6 Basic and Compact modules
<b>Expansion Slots</b>		One PCI Express x16 slot, supporting external PEG usage, PCI Express Lanes 16-31
		One PCI Express x16 slot, supporting x4 PCI Express lanes mapped to lanes 0-3
		One PCI Express x8 slot implemented as DDI, supports external DDI-HDMI-DP and SDVO cards
		One PCI Express x4 slot mapped to lanes 4-7
<b>Connectors</b>	COM Express	440-pin 8mm COM Express female connector
	Network	One 10/100/1000BaseT via rear panel RJ-45 with 2 LED status indicators
	SUPER I/O	Supports 4 user selectable Super I/O chips: SMSC3116, SMSC47N217, WPCN383, W83627DHG-PT
	HDMI/DP	Two dual mode display ports
	LVDS	One 24-bit dual channel LVDS connector, can support single-channel or dual-channel, 18-bit or 24-bit LVDS
	SATA/SAS	Four 7-pin SATA/SAS connectors
	USB	Six USB Ports locate at rear I/O, four supporting USB2.0 and USB3.0, two support USB 2.0 only. One 9-pin USB header on board supporting two USB 2.0 ports
	RS-232	One RS-232 compliant serial port via D-Sub9 connector at rear I/O supported by module. One serial port via 3-pin header supported by module. Eleven serial ports via on-board header supported by specific Super I/Os.
	VGA	One D-sub VGA connector
	PS/2 KB Mouse	Two PS/2, keyboard and mouse headers. Must be supported by Super I/O.
	Audio	1 standard microphone-in, line-in, and line-out external audio jack for Cirrus Logic CS4207 HDA codec
	LPC	One LPC slot for Super I/O-based extension cards
	SMBus	One SMBus 5-pin connector with SMBus alert
	I2C Bus	One I2C 4-pin connector
	Other features	One LC4128V Lattice CPLD for 80 Port decodes, One AD7475 Thermal Sensor for temperature monitor and fan control.
Other sockets	One PLCC32 socket for 8Mbit PLCC32 Firmware Hub, one 64Mbit/32Mbit SPI ROM in SO16 package, one EEPROM for carrier configuration image storage	
Fans	Four 4-pin fan connectors	

Power	ATX 24-pin power connector, 6V-16.8V 8-pin DC-in connector
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## Physical Specifications

<b>Physical</b>	Dimensions	12" wide by 9.6" deep (305mm x 244mm)	
	Compliance	ATX form factor	
<b>Power Requirement</b>	Input	Standard ATX power supply	
<b>Environment</b>	Temperature	Operating	+0°C to +60°C, de-rated 1.1°C per 300m over 2300m, or +-40°C to +85 with commercial Super IO disabled
		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 <sup>2</sup> /Hz ramping up to 0.04g <sup>2</sup> /Hz 20 – 1000 Hz 0.04g <sup>2</sup> /Hz 1000 – 2000Hz 0.04g <sup>2</sup> /Hz ramping down to 0.01g <sup>2</sup> /Hz	
	Non-Operating	Random 5Hz – 2KHz, 9.7grms, 10 min in each of 3 axes 5 – 20Hz: 0.006g <sup>2</sup> /Hz ramping up to 0.06g <sup>2</sup> 20 – 1000Hz 0.06g <sup>2</sup> /Hz 1000 – 2000Hz: 0.06g <sup>2</sup>	
<b>Regulatory</b>	Safety	UL60950-1, EN60950-1, IEC60950-1	
	EMC	EN55024, FCC Part 15, Subpart B, Class B, and EN55022	
<b>Warranty</b>	Two years		

### MORE DETAILS

### Order Code

- CR300: Type 6, ATX Carrier, PCI Express x16

### SUPPORT DOWNLOADS

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