CCAR-L1000

COM Express Carrier Board

Features

- ATX form factor
- Two 220-pin COM Express standard connectors
- Multiple front and rear I/O connectors
- Rear panel interfaces
  - Mouse and keyboard
  - Serial
  - Ethernet
  - USB
  - VGA
  - Audio
- On board interfaces
  - USB
  - Serial
  - Parallel
  - Graphic
  - LCD brightness
  - LVDS LCD Panel
  - LCD/inverter power
  - Audio
  - Front audio
  - CD-In
  - S/PDIF In/Out
  - IrDA
  - SATA
  - IDE (40 pin)
  - FDD
  - Digital I/O
  - Power
- Expansion
  - 1x PCI Express ×16 slot
  - 2x PCI Express ×1 slots
  - 4x PCI 2.3 slots
  - 1x CompactFlash socket

The CCAR-L1000 is a COM Express carrier for basic COM Express module, Type 2. It supports the COM Express modules of the bCOM2-L1000 series.

Powered with an ATX power supply, the CCAR-L1000 is ready to start when equipped with a bCOM2-L1000 module (inclusive processor and memory).

The CCAR-L1000 is the ideal platform to evaluate, benchmark or to execute software development and tests for application software before the final base board is available. It helps to accelerate the project design process.

CCAR-L1000 offers a wide range of standard PC features along with expansion capability via plug-in cards.

The board allows configuring RAID on Serial ATA drives and supports RAID 0 and RAID 1.

RAID 0 (Striped Disk Array without Fault Tolerance) uses two identical hard disk drives to read and write data in parallel, interleaved stacks. Data is divided into stripes and each stripe is written alternately between two disk drives.

RAID 1 (Mirror Disk Array with Fault Tolerance) copies and maintains an identical image of the data from one drive to the other drive.

Deliverables

The board package contains a user manual, one IDE cable, one bracket mounted with two USB ports, one SATA cable, one SATA power cable, one Main Board Utility CD, one I/O shield and a Quick Reference guide.

Customization Service

GE Fanuc Intelligent Platforms has over 20 years of expertise in designing and manufacturing sophisticated I/O functions used in industrial, medical, telecom, aerospace and military applications. This capability, together with our thermal management knowledge, enables GE Fanuc Intelligent Platforms to offer world-class design and manufacturing service of custom base boards.

For detailed functions of the bCOM2-L1000 COM Express module see the datasheet.

NOTE: COM Express module, seen in photo, is not standard to the carrier, and must be purchased separately.

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Specifications

Audio
- Realtek ALC655 AC97 audio codec
- 6-channel audio output
- 2 W amplifier for speaker-out

Serial ATA Interface
- SATA with speed up to 3 Gb/s
- Four L-type connectors

IDE Interface
- One IDE channel supports up to two IDE devices
- Supports up to Ultra ATA 100

BIOS
- FWH/LPC interface
- Supports up to 4 Mbit Flash ROM
- PLCC32 socket
- Supports WP# jumper
- Carrier board ROM enable/disable function

I/O Chip 1 Features
- Winbond 83627HG-AW controller
- LPC interface
- Supports Smart fan
- Default I/O port address "4eh"

I/O Chip 2 Features
- Fintek F81216D
- Serial interface controller
- Supports 4 CO ports
- Supports IrDA
- Watchdog timer function
- Default I/O port address "2eh"

Damage Free Intelligence
- Monitors system temperature and overheat alarm
- Monitors system fan speed and failure alarm

Temperature
- Operating: 0° C to +60° C
- Storage: -40C° to +85° C

Humidity
- Operating: 10% to 90%

Vibration
- Amplitude: 1.5 mm
- Frequency: 5-55-5 Hz
- Time: 360 min per 72 cycles in each 3 axes

Regulatory
- EMC
  - EN55022, EN61000-3-2, EN61000-3-3
  - EN55024, FCC Part 15 Class B

Rear Panel I/O Ports
- 1x mini-DIN-6 PS/2 mouse port
- 1x mini-DIN-6 PS/2 keyboard port
- 3x DB-9 serial ports
- 1x DB-15 VGA port
- 1x RJ45 LAN port
- 4x USB 2.0/1.1 ports
- Mic-in, line-in and line-out

I/O Connectors
- 2x connectors for 4 additional external USB 2.0/1.1 ports
- 1x connector for an external serial port
- 1x LCD brightness control connector
- 1x LVDS LCD panel connector
- 1x LCD/inverter power connector
- 1x digital I/O connector
- 1x digital I/O power connector
- 1x front audio for line-out and mic-in jacks
- 1x CD-in internal audio connector
- 1x S/PDIF-in/out connector

I/O Connectors (cont)
- 1x speaker out connector
- 1x connector for IrDA interface
- 4x serial ATA connectors
- 1x 40-pin IDE connector
- 1x FDD connector
- 1x parallel connector
- 1x 24-pin ATX power connector
- 1x 4-pin 12V power connector
- 1x Wake-On-Ring connector
- 1x front panel connector
- 3x fan connectors

Expansion slots
- 1x CompactFlash socket
- 1x PCI Express x16 (Graphics or Dual SDVO)
- 2x PCI Express x1
- 4x PCI slots (PCI 2.3, 32-bit, 33 MHz)

COM Express Connectors
- Two 220-pin COM Express standard connectors
- Module connector pin: Tyco 3-631849-6

PCB
- 4 layers, ATX form factor
- 30.5 cm x 24.4 cm (12" x 9.6")

Ordering Information

COM Express Carrier for the bCOM2-L1000 Series of COM Express modules

CCARL1000 : COM Express Carrier for COM Express series bCOM2-L1000 without COM Express module

About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanuc.com.

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Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

www.gefanuc.com