

# bCOM6-L1200

## Rugged COM Express Module

GE Intelligent Platforms' bCOM6-L1200 is a rugged, Type 6 COM Express module designed for harsh environments, offering ultimate durability and varying levels of performance-per-watt.

Our rugged processing solutions deliver best-in-class performance, provide low total cost of ownership, offer flexible options, and are backed by GE's commitment to customer satisfaction.

GE COM Express modules are perfect for OEMs designing computing platforms into equipment for industrial or harsh environments, and when reducing the overall design cycle and lowering validation costs are of key importance.

### Best-in-class performance and reliability

As the leader in rugged COM Express technology, GE understands that processors deployed in harsh environments need to deliver the utmost performance at the level of performance-per-watt selected, at all times, under any condition. Our bCOM6-L1200 COM Express module is engineered specifically to meet that need.

Onboard components are specifically selected for their reliability in demanding conditions. Unlike solutions designed for benign environments, our processor and memory are soldered to the board for maximum resistance to shock and vibration. Extended mechanical construction protects the module, which is designed for optional conformal coating for even greater resistance to moisture, dust, chemicals, and temperature extremes.

Both GE and its customers trust rugged COM Express to meet the exacting specifications of critical infrastructure applications.

### Longer lifecycles and lower product costs

COM Express architecture separates the processor and carrier card. This extends the useful life of the subsystem by allowing a simple, cost-effective upgrade of the processor alone. The long-term cost of ownership is reduced while ensuring that performance keeps pace with changing needs.

### Commitment to customer satisfaction

Today's organizations are operating lean, engineering resources are scarce, and time-to-market is critical. Therefore, GE complements the performance and practical benefits of our COM Express modules with world-class domain expertise and a focus on exceptional customer service. To help you get to market faster and lower your development costs, we can assist you with in-house carrier design work, or build a custom carrier specifically for you.

FEATURE	BENEFIT
Rugged design with soldered components	<ul style="list-style-type: none"> <li>Reliable computing capabilities for applications needing higher immunity to shock and vibration</li> </ul>
VIA Nano™ or VIA Eden™ processors in varying levels of performance-per-watt	<ul style="list-style-type: none"> <li>Deliver high performance coupled with low power consumption</li> <li>Configure the module for the level of performance-per-watt your application requires</li> </ul>
Dynamic thermal management	<ul style="list-style-type: none"> <li>Enables controlled system shutdown to avoid damage to equipment</li> <li>Offers cost saving by allowing simulation in the lab before conducting field tests</li> </ul>
Flexible options	<ul style="list-style-type: none"> <li>Additional shock and vibration protection,</li> <li>Extended operating temperature range for environments with temperature extremes</li> <li>Conformal coating for protection against dust, moisture and chemicals</li> </ul>



# bCOM6-L1200 – Rugged COM Express Module

## Specifications

### Processor

- Via Nano and X2 processor, soldered
  - Nano U3400, 800MHz, 3.5W
  - Nano U3100, 1.3 (+1.6) GHz, 9W (14W)
  - VIA Eden U4100 X2 800MH, 6W
  - VIA Eden U4200 X2 1.0GHz, 9W
  - VIA Nano U4300 X2 1.2GHz, 13 W

### Chipset

- VIA VX900
- 1066 / 800 / 533 MHz FSB

### Memory

- Supports up to 8GB of DDR3 up to 1066 data rate
- Soldered, non-ECC

### Graphics Features

- Integrated graphics interface
  - 1x VGA
  - 3x DDI in variable configurations
  - 1x LVDS interface (18 or 24 bits)

### Audio

- Supports HDA

### LAN Port

- 1x Gigabit Ethernet port

### Serial ATA Interface

- Supports 2x serial ATA interfaces
- Supports RAID 0 and RAID 1, port multiplier

### USB Interface

- Supports eight USB 2.0 ports (opt. one USB Device)

### Others

- States: S0, S1, S2, S3, S4, S5
- Watchdog Timer
- LPC Bus
- 2x Serial
- SPI
- System Management
- Alarm sensors for temperature, chipset

### Extension

- 1x PCI Express x8/x4
- 3x PCI Express x1 or 1x PCI Express x3

### I/O Interface

- 8x GPIO ports or SD-Card Interface

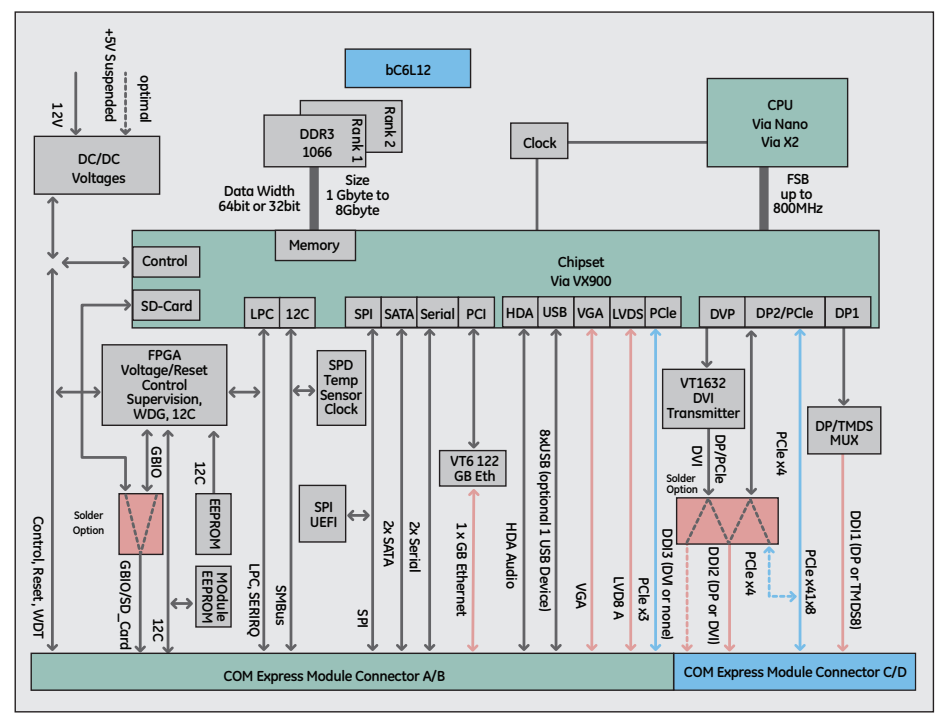
### Power

- Input: 12V, 5 VSB optional

### Environmental

- Operating: 0° to +65° C (standard)
- Operating: -40° to +85° C (extended; CPU dependent)
- Storage: -40° to +125° C
- Operating humidity: 10% to 90%
- Note: maximum operating temperature range is depending on the selected processor version.

## Block Diagram



### Shock / Vibration

- Increased shock and vibration immunity; depends on carrier / system design

### BIOS

- AMI
- SPI interface

### PCB

- Dimensions: 95 mm x 125 mm (3.74" x 4.9")
- COM Express basic form factor
- Compliance: PICMG COM Express R2.0

### Software Support

- Windows XP, Windows 7, Linux, VxWorks

## Options

### Ruggedization

- Conformal coating
- Level A and F
  - Shock: 20 g, 11 ms
  - Vibration: 5 - 100 Hz, 0.04 g<sup>2</sup> / Hz, 60 minutes per axis
- Level D
  - Shock: 40 g, 11 ms
  - Vibration: 5 - 2000 Hz, 0.1 g<sup>2</sup> / Hz, 60 minutes per axis

## Ordering Information

### BC6L12E6B21PA

Dual core 800 MHz, 4GB Memory, standard temperature range

### BC6L12G6B21HF

Dual core, 1.2GHz, 4GB Memory, extended temperature range

### CEC02

Standard bCOM6-L1200 COM Express carrier without COM Express module

## GE Intelligent Platforms Contact Information

Americas: 1 800 433 2682 or 1 434 978 5100

Global regional phone numbers are listed by location on our web site at [www.ge-ip.com/contact](http://www.ge-ip.com/contact)

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