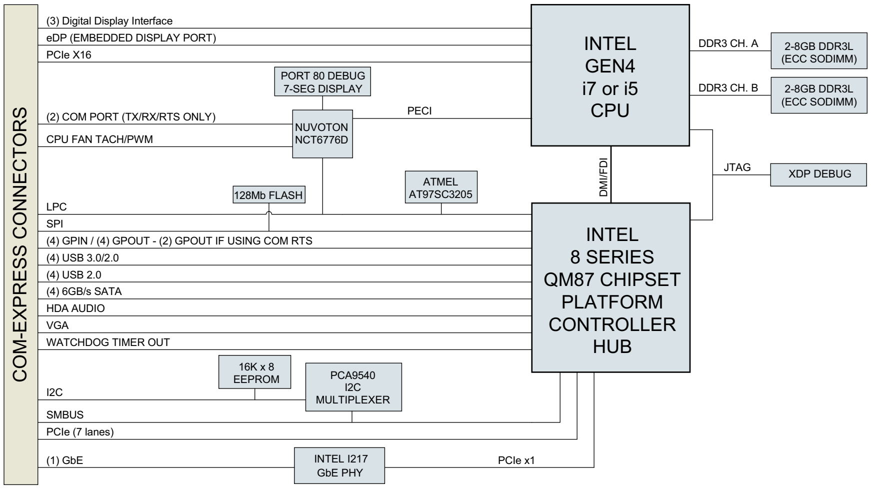
COM Express

XCOM-6400 Rugged COM Express Type 6 Module

2 YEAR WARRANTY
24 HOUR STOCK ITEM

EMBEDDED™ BY ACROMAG



4th Generation Intel® Core™ i7 or i5 CPU ◆ Basic form factor ◆ Type 6 interconnects ◆ Ruggedized

Description

Acromag's XCOM-6400 is a basic size platform (95 x 125mm) processor module with Type 6 interconnects. Several models are available with the 4th generation (Haswell) Intel Core i7 or i5 CPUs. Designed for industrial and defense applications, the XCOM-6400 has an extra rigid PCB and extended temperature support.

The 4th generation of Intel's i5 and i7 processors delivers many enhanced capabilities for media, graphics, security, and power management. Huge performance improvements were made for floating-point-intensive computations which are critical for digital signal and image processing applications such as radar and sonar. Enhanced graphics enable smoother playback of high-quality images for digital signage or displays. Better power efficiency reduces heat and allows smaller, lighter designs with more portability.

This module sets a new standard for shock and vibration by implementing a SODIMM hold down mechanism. Soldering down the memory is no longer necessary.

The XCOM-6400 also provides a heat sink capability not available on traditional COM Express designs. Conduction-cooled rails set a new standard for carrier cards.

Key Features & Benefits

- Intel 4th Gen (Haswell) multi-core processor: Core i7 CPU for high performance (47W) or Core i5 CPU for low power (25W)
- Intel 8-Series QM87 PCH chipset (formerly Lynx Point)
- Up to 16GB of high-speed DDR3L memory with SODIMM lock-down mechanism (permits user removal or upgrades)
- Advanced heat management technologies with heat spreader plates, conduction-cooled rails, and optional fan
- Up to -25 to 85°C extended operating range
- PEG/ General Purpose PCIe x16 (bifurcation/trifurcation supported)
- 7 ports of PCIe x1 (gangable into ports of greater width)
- SPI bus
- LPC bus
- SMBus (system)
- I²C (user)
- VGA Interface
- 3x Digital Display Interface
- eDP Interface (x2)
- HDA Audio Interface
- Gigabit Ethernet Medium Dependent Interface (MDI)
- 4 USB 3.0/2.0 Ports
- 4 USB 2.0 only Ports
- 4 SATA III Ports (6 Gb/s)
- 4 General Purpose Outputs
- 4 General Purpose Inputs
- Post code display (Port 80)

Acromag®
THE LEADER IN INDUSTRIAL I/O

COM Express Modules

XCOM-6400 Rugged COM Express Type 6 Module

Performance Specifications

COM Express

Form Factor
Basic form factor (95 x 125mm). 8mm stack height. Type 6 pinouts.

PICMG Compliance
Complies with PICMG COM.0.

Processor and Memory

Processor
Intel Core™ i7 or i5 processor
(4th generation, codename Haswell).

i7-4700EQ: 2.4GHz, quad core, 6Mb cache, 47W.

i5-4402E: 1.6GHz, dual core, 3Mb cache, 25W.

Chipset
Intel 8-Series QM87 PCH chipset
(codename Lynx Point).

Intel DH82QM87 Platform Controller Hub.

Memory
Up to 16GB total of 1600 DDR3L ECC memory.

Interfaces

Graphics
Intel integrated graphics processor.
3x digital display interface (DVI or DisplayPort).
eDP interface (x2)

Audio
HDA audio interface

LAN Port
Gigabit Ethernet Medium Dependent Interface (MDI)

Serial ATA Interface
4 SATA III Ports (6 Gb/s)

PCIe Interface
PEG / general-purpose PCIe x16
(bifurcation/trifurcation supported).

PCIe x1 (gangable into ports of greater width).

USB Interface
4 USB 3.0/2.0 ports
4 USB 2.0 ports.

Other Interfaces
SPI bus.

LPC bus.

SMBus (system).

I^2C (user).

I/O
4 general-purpose outputs,
4 general-purpose inputs.

Environmental

Operating temperature
Standard temperature models: -20 to 70°C.
Extended temperature models: -25 to 85°C.

NOTE: CPU internal temperature cannot exceed 100°C.

Storage temperature
-55 to 85°C.

Relative humidity
90% at 60°C non-condensing.

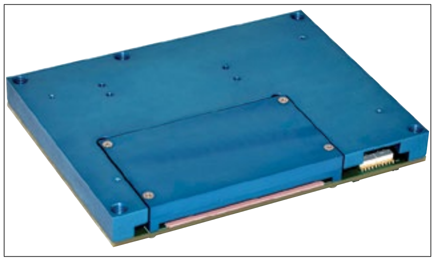
Ruggedization
Thicker PCB.

High shock and vibration SODIMM hold-down mechanism and heat sink.

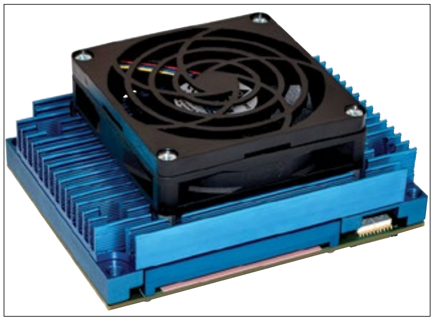
Shock
50g peak-to-peak, 11ms duration,
MIL-STD-202G Method 213B.

Vibration
11.96 gRMS, 50-20,000 Hz, each axis,
MIL-STD-202G Method 214A.

Power Inputs from carrier board:
12V (+/- 5%): Consult factory.
5V_SBY (+/- 5%): Consult factory.
3V_RTC (2.0 – 3.3V): Consult factory.



COM Express module as it ships with pre-installed heat spreader plate and removable memory hold-down.



Module with optional XHSP-6400 heat sink and fan.

Ordering Information

COM Express Module

XCOM-6400-ABBD-X
Please specify options A, BB, D, and X defined below.
(e.g. XCOM-6400-116E-L or XCOM-6400-304-LF)

<u>A = CPU Option</u>
1: i7 - 4th gen, 2.4GHz, quad core, 6Mb Cache
3: i5 - 4th gen, 1.6GHz, dual core, 3Mb Cache

<u>BB = Memory Option</u>
04: 4GB
08: 8GB
16: 16GB

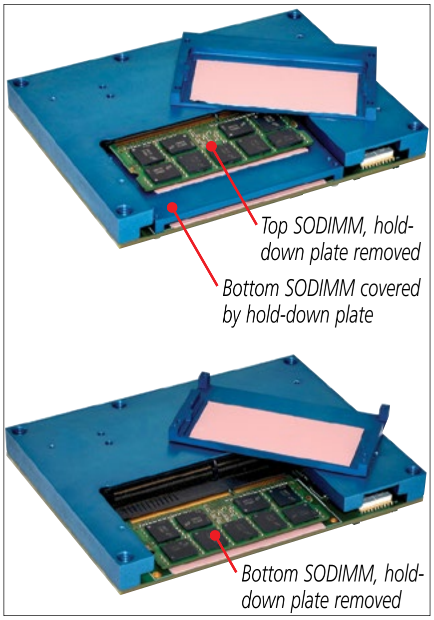
<u>D = Operating Environment Option</u>
Leave blank for standard temperature operation
E: Extended temperature operation

<u>X = Solder Option</u>
L: Lead solder
LF: Lead-free solder

Accessories

For more information, see www.acromag.com.

XHSA-6400
Active heat sink with fan



Top SODIMM, hold-down plate removed

Bottom SODIMM covered by hold-down plate

Bottom SODIMM, hold-down plate removed

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ISO9001
AS9100

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