

Embedded Computing & I/O Solutions

# COM Express Products Catalog

**Rugged Design**

**Small Footprint**

**I/O Expansion**



**CPU Modules and Carriers**

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## Your Complete COM Express Embedded Computing System



**Fit for your defense and industrial applications, this rugged small form factor computing system is ready to deploy in your more extreme operations.**

**Designed to withstand harsher treatment from the bottom-up, our COM Express products start with a thicker circuit board. Add extended operating temperature support, for optimal performance wherever you need it, and no internal cabling for a reliable connection every time.**

### 1. High-Performance CPUs

Our XCOM-6400 processor module is built for performance and efficiency. Featuring 4th Generation (Haswell) Intel® Core™ i7 or i5 multi-core processors, these boards can get the job done with less power. Choices include: quad core 2.4GHz Core i7 or dual core 1.6GHz Core i5.

These processor modules include up to 16GB of removable high-speed DDR3L ECC memory that is just as secure as if it was soldered on. Our exclusive SODIMM hold-down mechanism helps dissipate heat and lock the memory in place for a tight, reliable connection. Put through shock and vibration testing, this technology meets MIL-STD-202G specifications with the memory contacts remaining fully connected during operation.

### 2. Carrier Cards Designed for Deployment

While most COM Express carrier cards are built only for development, our ACES Series carrier cards are ready for action in the field. Dependable under the most demanding conditions with rugged components that are critical for success in brutal environments. Tough yet flexible, the I/O expansion capabilities include up to four mPCIe sites and up to two XMC/PMC sites.

High-density, high-speed connectors provide a sturdy interface for communication with your field devices. A single connector can conveniently route all of the field connections to the CPU, a PMC/XMC module, and standard I/O peripherals such as: Ethernet; USB; PCIe; video; audio; SATA; serial; GPIO; and more. The use of high-density connectors simplifies integration with military-grade front panels and custom enclosures.

## COM Express Processor Modules and Carrier Cards



Acromag's rugged COM Express products are designed with extra-rigid PCBs and extended temperature support for extreme industrial and defense applications. Select from processing boards powered by high-performance Intel multi-core CPUs and carrier cards featuring Mini PCIe or PMC/XMC sites supporting Type 6 and Type 10 interconnects.



XCOM-6400

### Type 6 COM Express Modules with Intel Core i7 or i7 CPU

Designed to provide maximum computing power, these i7 processor modules are well-equipped for high-speed imaging, analysis, and control applications.

When power efficiency is critical, these i5 processor modules are the ideal choice. They deliver plenty of punch with less heat for smaller systems and mobile applications.

- Basic size platform (95 x 125mm)
- Intel 4th-generation (Haswell) processor
  - Core i7 CPU, quad-core, 2.4GHz, 47W
- or*
- Core i5 CPU, dual core, 1.6GHz, 25W
- Up to 16GB of removable DDR3L memory with SODIMM lock-down mechanism



ACEX-FP

### COM Express Carrier Front Panels and Power Filters

For deployment in defense and aerospace applications where secure connections are critical, Acromag simplifies the implementation of military-grade cylindrical connectors. Front panels and a power filter bridge board are available for a perfect connection to the carrier.

- Front panels with MIL-DTL-38999 connectors
- Power filter/bridge for transient suppression



ACEX-4620

### Type 6 COM Express Carriers: Two Mini PCIe sites and Two XMC/PMC sites

If you need additional I/O signal processing or an FPGA co-processor, these carrier cards deliver the flexibility. You can plug in two PMC or XMC modules to perform the required functions.

- Hosts compact or basic Type 6 CPU module
- Single / dual PMC/XMC mezzanine module slots for I/O expansion or FPGA co-processors
- Rugged design suitable for field deployment



ACEX-4610



ACEX4040

### Type 10 COM Express Carriers: Four Mini PCIe sites

The ACEX4040 carrier card allows you to quickly combine a COM Express Type 10 CPU module with a mix of I/O modules for custom computing applications.

- Mini ITX form factor
- mPCIe or AcroPack mezzanine module slots
- Rugged design suitable for field deployment



# COM Express Systems

## Module and Carrier Assembly

### SODIMM Hold Down

Keeping your removable memory secure, for a fit as stable as soldered-on.

### XCOM-6400 Module

1

An ultra-efficient combination of a 4th Gen Intel multi-core processor and up to 16GB of removable high-speed DDR3L memory.

2

### ACEX4600 Carrier

Rugged build with plenty of I/O peripheral support through a high-speed, high-density connector.

### PMC/XMC Modules

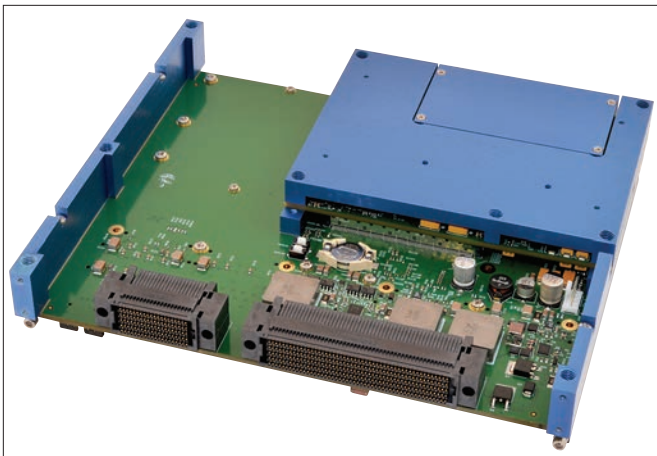
Flexibility is key with the ACEX4600 carrier cards able to support up to two PMC or XMC modules.

### Mini PCIe Modules

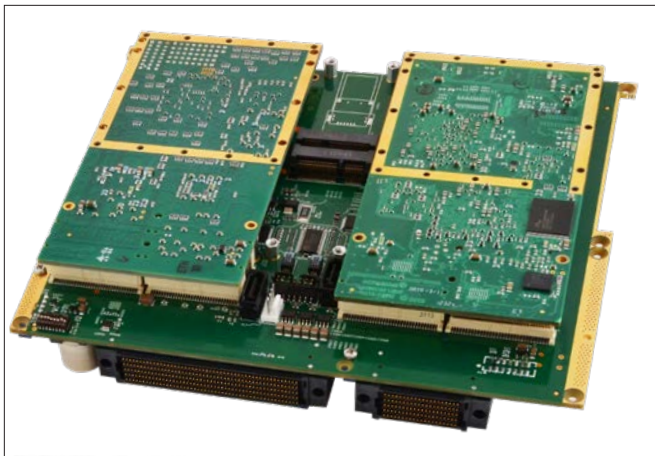
Support for two Mini PCIe modules come standard on the ACEX4600 carrier cards.

# COM Express Systems

## ACEX-4600 COM Express Module Type 6 Rugged Carrier Cards



ACEX-4620 double-width carrier card shown with optional ACEX-CC-01 conduction cooling kit rails and XCOM-6400 COM Express module



ACEX-4620 carrier card with one PMC and one XMC module installed



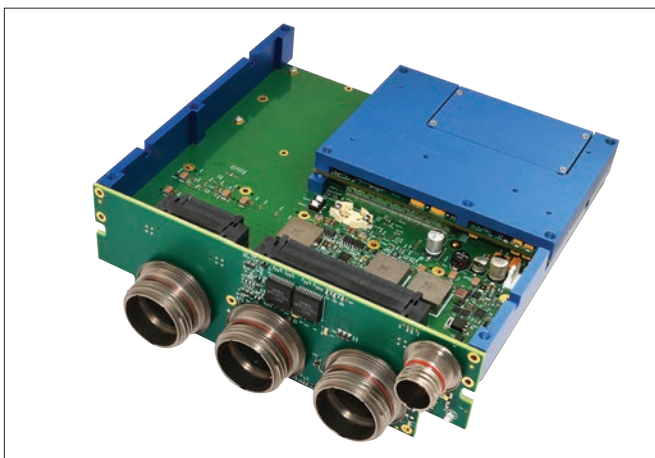
ACEX-4610 single-width carrier card shown with optional ACEX-CC-01 conduction cooling kit rails and XCOM-6400 COM Express module



ACEX-4610 carrier card bottom view showing PMC/XMC slot

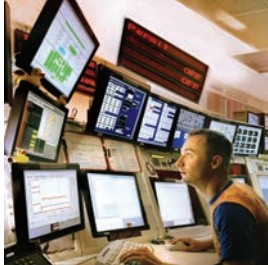
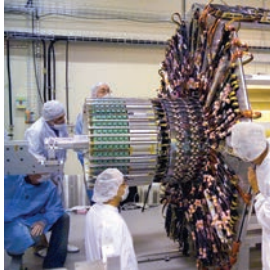
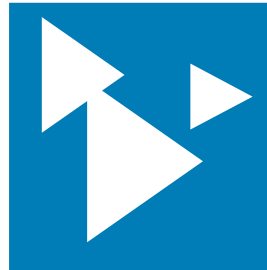


ACEX-FP-01 front panel with ACEX-FP-PF power filter/bridge board mounted on an ACEX-4610 single-width carrier card



ACEX-FP-02 front panel with ACEX-CC-01 conduction rails and XCOM-6400 CPU module mounted on an ACEX-4620 double-width carrier card

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