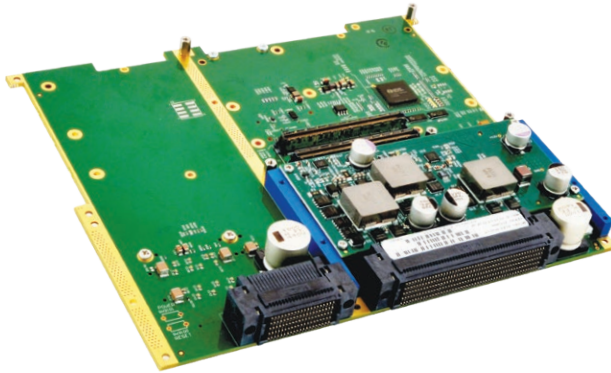


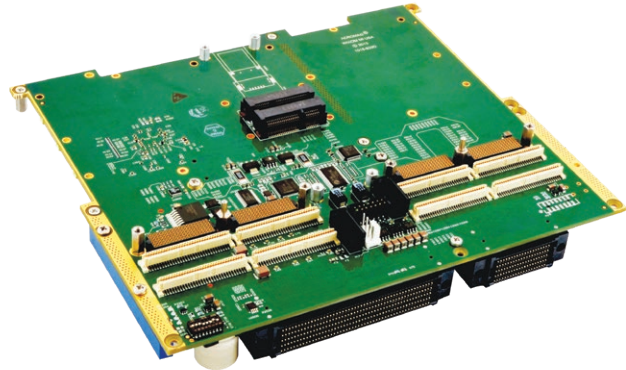


ACEX-4600 COM Express Module Type 6 Rugged Carrier Cards

TOP VIEW



BOTTOM VIEW



Supports Type 6 COM Express module ♦ Single/dual PMC/XMC sites ♦ High-density, high-speed connector

Description

Acromag's ACEX-4600 Type 6 COM Express carrier cards employ a number of key features that are critical for successful use in the rugged environments of defense/industrial applications.

High-density connectors (Samtec® SEARAY™) provide all field connections to standard I/O, CPU, and PMC/XMC module(s). This connector offers both a high-density (500 connections) and high-speed interface (10GHz) required to support Type 6 COM modules. The SEARAY connector supports both board-to-board and cable interfaces.

These carrier cards are ready for conduction cooling. Developers can install a CPU, carrier and expansion boards into a completely sealed enclosure. Acromag has developed a heat dissipation approach that meets the cooling needs of all three components.

Another vital feature is the on-board DC/DC power supply. The carrier card operates from a single external 10–32V DC power source. All internal supply voltages are derived from this single external DC power source and built onto the carrier card.

An engineering development system, Model ACEX-4600-DLS, simplifies development and testing. The system provides a connector break-out board that plugs into the carrier card.

Key Features & Benefits

Carrier Functions

- Type 6 COM Express module site for compact or basic size processor board
- Two Mini PCIe sites for I/O expansion
- Single or dual PMC/XMC sites
- High-density, high-speed connector for CPU, I/O, and PMC/XMC interface

CPU Supported Functions

- Two Gigabit Ethernet ports
- PCIe port x 4
- Four USB 3.0 ports
- Two USB 2.0 ports
- Three Digital Display Interfaces
- Two SATA III ports
- Audio Line in/out
- Two RS232/RS485 serial ports
- Eight GPIO
- System temperature sensor (on-board)
- Two fan control line (on-board)
- System battery (on-board)
- Power monitoring LED (on-board)

Form Factor

- One PMC/XMC – (125mm x 170.73mm)
- Two PMC/XMC – (200mm x 170.73mm)

Power

- Input Power 10–36VDC (on-board DC/DC, fused)
- Reset button

Environmental

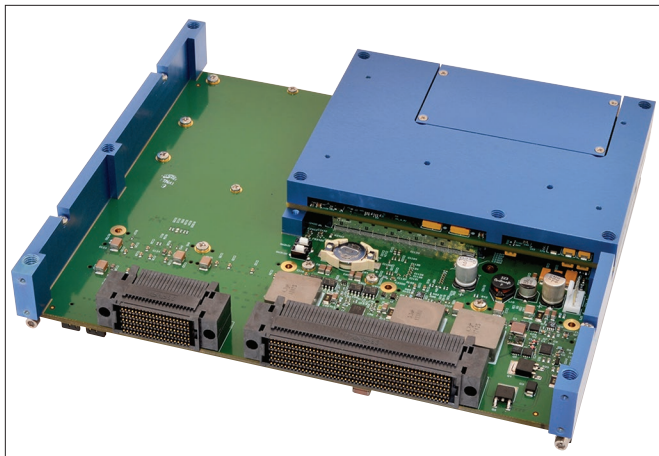
- -40 to 85°C operation
- -50 to 100°C storage

Accessories

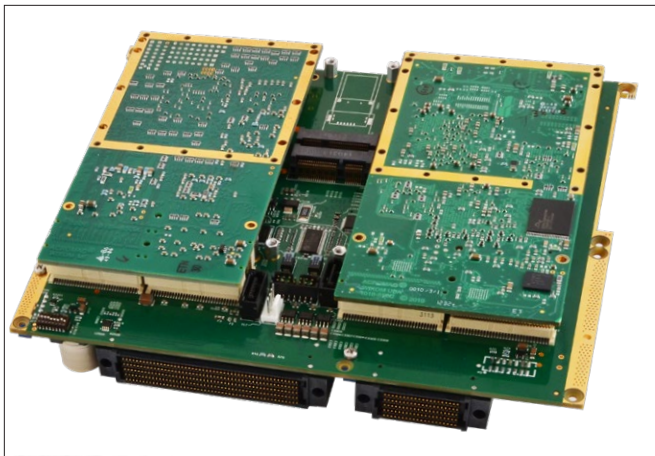
- Front panel with 38999-type cylindrical connectors
- Conduction cooling kit

COM Express

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



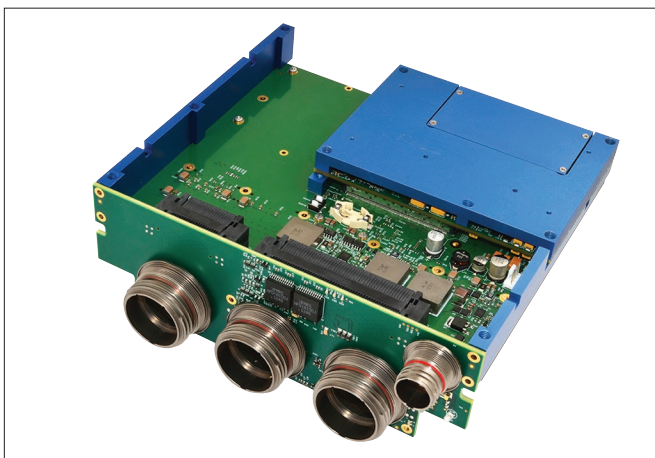
ACEX-4610 single-width carrier card shown with optional ACEX-CC-01 conduction cooling kit rails and XCOM-6400 COM Express module



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



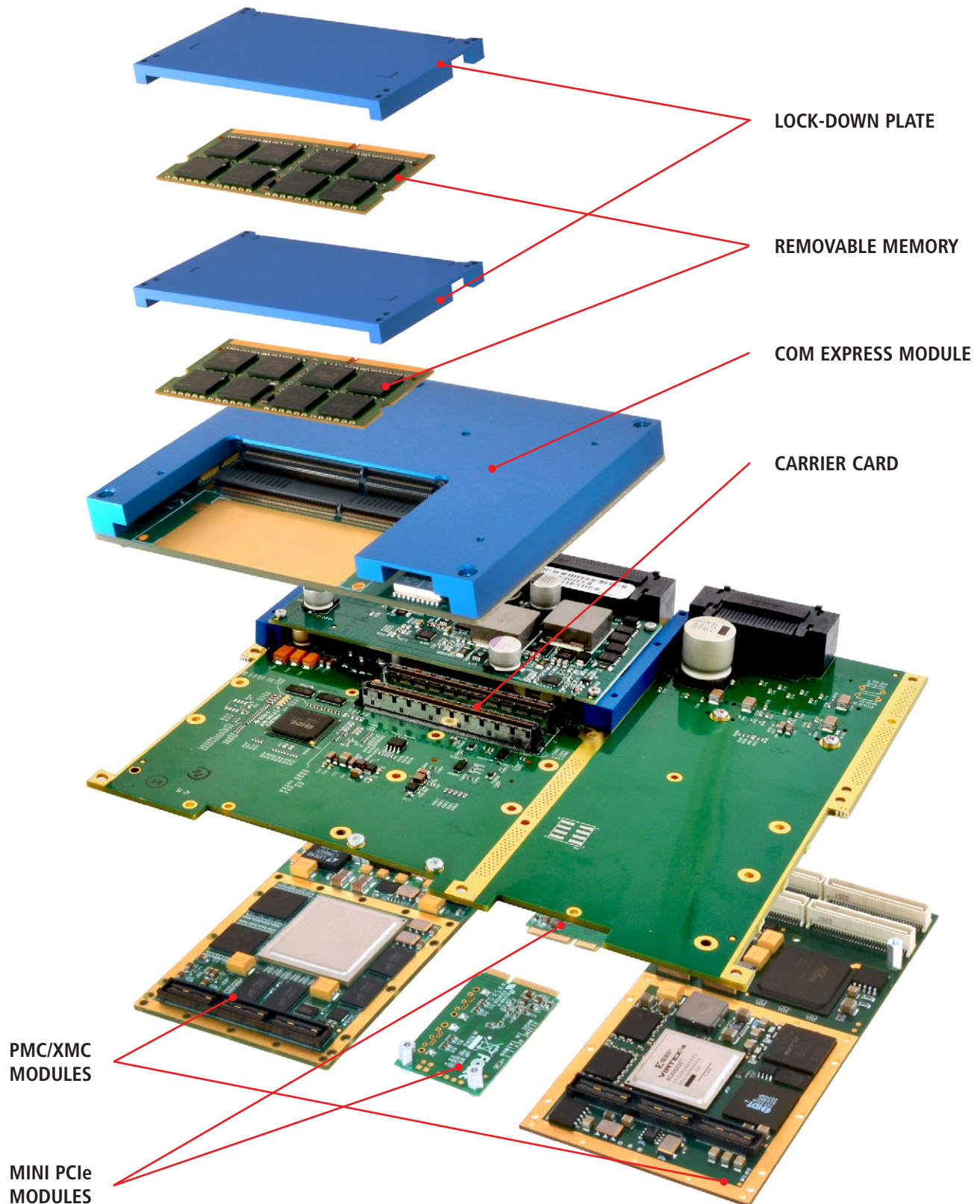
ACEX-FP-01 front panel with ACEX-FP-PF power filter/bridge board mounted on an ACEX-4610 single-width carrier card



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

COM Express

ACEX-4600 COM Express Module Type 6 Rugged Carrier Cards





ACEX-4600 COM Express Module Type 6 Rugged Carrier Cards

Performance Specifications

■ General

Form Factor

ACEX-4610: 125mm x 170.73mm.

ACEX-4620: 200mm x 170.73mm.

PICMG Compliance

Complies with PICMG COM.0.

Processor

Hosts basic or compact Type 6 COM Express module.

Software Support

See COM Express module.

■ I/O

Mini PCIe Expansion

Two Mini PCIe sockets, 30mm x 51mm.

PMC/XMC Expansion

Single or dual slots depending on model.

Connector Types

Ethernet: two RJ45 ports.

PCIe x 4

Four USB 3.0 ports.

Two USB 2.0 ports.

Video: three digital display interfaces.

Audio: input/output

SATA: two SATA III ports.

RS-232/485: two serial ports.

GPIO: 8 channels.

■ Environmental

Operating temperature

-40 to 85°C.

Storage temperature

-50 to 100°C.

Relative humidity

20 to 80% non-condensing.

Power

10–36VDC (on-board DC/DC, fused).

Shock

Operating:

30g peak acceleration, 11ms duration.

Non-operating:

50g peak acceleration, 11ms duration.

Vibration (5Hz-2kHz)

Operating:

0.015" (380µm) peak-to-peak displacement,
2.5g max acceleration.

Non-operating:

0.030" (760µm) peak-to-peak displacement,
5.0g max acceleration.

Ordering Information

■ Carrier Cards

[ACEX-4610-LF](#)

Single-width Type 6 COM Express carrier card with one PMC/XMC slot and two Mini PCIe slots

[ACEX-4620-LF](#)

Double-width Type 6 COM Express carrier card with two XMC/PMC slots and two Mini PCIe slots

NOTE: Contact factory for lead solder options.

■ Accessories

[ACEX-CC-01](#)

Conduction cooling kit for AEX-4610/4620

[ACEX-FP-01](#)

[ACEX-FP-02](#)

Front panel with 38999-type cylindrical connectors for single-width (-01) or dual-width (-02) carrier card

[ACEX-FP-IO-01-LF](#)

[ACEX-FP-IO-02-LF](#)

Front panel with 38999-type cylindrical connectors for single-width (-01) or dual-width (-02) carrier card with IO mezzanine board support

[ACEX-FP-PF](#)

Power filter/bridge board

NOTE: For COM Express Development System see

[ACEX-4600-DLS](#).

ISO9001
AS9100



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