

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

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along with credit for buybacks and trade-ins.

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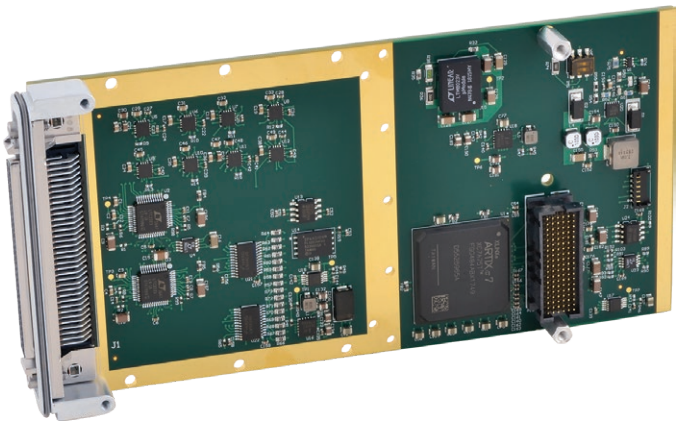
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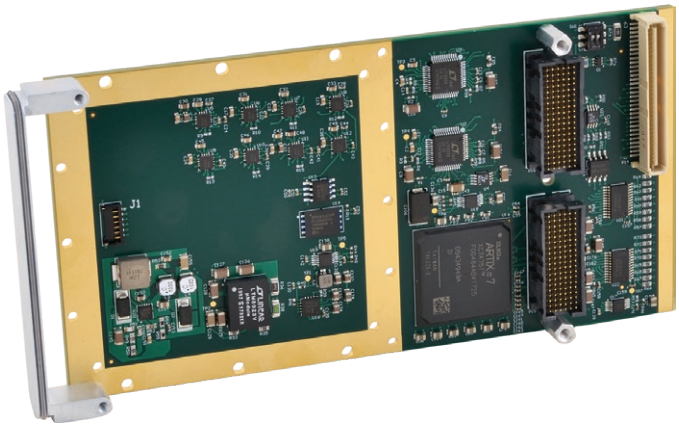
Find the *Acromag XMC730* at our website: ***Click HERE***

XMC Modules

XMC730 Multi-function I/O

CE RoHS Compliant 2 YEAR WARRANTY





Analog input ◆ Analog output ◆ Digital I/O ◆ Counter/timers ◆ Conduction-cooled option

Models

XMC730: Front I/O
XMC730E: Front I/O, extended temperature
XMC730CC: Rear I/O, conduction-cooled

Description

XMC730 mezzanine modules provide a variety of I/O functions on a single plug-in card. These new high-density modules perform both high-speed and high resolution A/D and D/A conversion and also handle digital I/O and counter/timer functions.

Now you can conserve your precious XMC slots and still get all the I/O functionality you need. The XMC730 is designed for extreme versatility with many deluxe features to meet most applications. However, the XMC730 is still very budget-friendly. A conduction-cooled version is also available.

Key Features & Benefits

Analog Inputs

- 16 differential (±10.24V, ±10.0V, ±5.12V, ±5.0V, 0 to 10.24V, 0 to 10.0V, 0 to 5.12V ranges)
- 16-bit ADC with integral sample-and-hold and reference
- 1.264µS conversion time (791KHz rate)
- 1026 sample FIFO buffer
- Programmable FIFO threshold conditions for interrupts, DMA transfers, and flags
- User-programmable channel conversion sequence and timing
- External trigger input or output
- Factory calibration constants stored in on-board flash memory for error correction

Analog Outputs

- Eight analog output channels (±3V, ±5V, ±10V, -2.5 to +7.5V, 0-5V, and 0-10V ranges)
- Individual 16-bit DACs per channel with 7.5µS settling time
- Flexible operating mode, trigger, and memory allocation
- Configurable for direct access, single burst, continuous, or streaming (FIFO) output
- Reliable software calibration with coefficients stored on-board
- FIFO for waveform generation
- Interrupt on user-programmable FIFO threshold
- Shared 64K x 16-bit sample memory

Digital I/O

- 16 bidirectional input/output channels (direction configured in 8-channel groups)
- TTL-compatible thresholds
- Programmable change-of-state/level interrupts
- Failsafe power-up and system reset

Counter/Timers

- Multi-function 32-bit counter/timer
  - Quadrature Position measurement
  - Pulse Width modulation
  - Watchdog timer
  - Event counter
  - Frequency measurement
  - Pulse-width or period measurement
- One-shot and repetitive one-shot pulse waveform generation
- Programmable interface polarity
- Internal or external triggering
- CMOS compatible thresholds

General

- DMA transfer support to move data between module memory and PCIe bus
- Software development tools for VxWorks®, Linux®, and Windows® environments

Acromag® THE LEADER IN INDUSTRIAL I/O

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XMC Modules

ISO9001
AS9100
MADE IN USA

Performance Specifications

Analog Input

Input channels:
16 differential, voltage (non-isolated).

Resolution: 16 bits.

Conversion rate: 791,139.24Hz maximum.

Settling time:
Full-scale step 420 ns to 0.005% of FSR.

Input ranges:
Software-selectable on a per channel basis.
Bipolar: ±10.24V, ±10.0V ±5.12V, ±5.0V.
Unipolar: 0 to 10.24V, 0 to 10.0V, 0 to 5.12V.

Calibrated error:
±3.125 LSB max. (0 to 5.12V).
±2.125 LSB max. (all other ranges).

Analog Output

Output channels:
8 single-ended voltage (non-isolated).

Resolution: 16 bits.

Settling Time:
12.5 µs 20 V step to 1 LSB maximum.
8.5 µs 10 V step to 1 LSB maximum.
7.5 µs typical.

Output ranges (software-selectable):
Bipolar: ±10V, ±5V, ±3V, -2.5 to +7.5V.
Unipolar: 0 to 10V, 0 to 5V.

Output current: ± 10mA maximum (minimum load resistance of 1KΩ with a 10V output).

Calibrated error: ±2.125 LSB (±0.0032% FSR) max.

Digital I/O

Input/output range: 0 to 5V.

Signal thresholds:
VIH: 2.0V minimum.
VIL: 0.8V maximum.
IOH: 24 mA maximum.
IOL: 24mA maximum.
VOH: 3.7V minimum VCCA.
VOL: 0.55V maximum VCCA.

Minimum pulse: 32nS.

Debounce: Filters signals with duration <2.4 µs.

Counter/Timer

Configuration: 32-bit timer.

Counter input: TTL input port.

Counter output: MOSFET output port.

Counter output pull-up voltage:
+5V or 12V with 1K pull-up, set by DIP switch.

Internal clock: 62.5MHz, 15.625MHz, 7.8125MHz, 3.90625MHz, 1.953125MHz.

XMC Compliance

Complies with ANSI/VITA 42.0 specification for XMC module mechanicals and connectors.

Complies with ANSI/VITA 42.3 specification for XMC modules with PCI Express interface.

Electrical/mechanical interface:
Single-Width Module.

PCIE Compliance

Conforms to PCI Express Base Specification, Revision 2.1.

Gen1 PCIe interface.

BAR0 memory size: 1M Byte.

Environmental

Operating temperature:
XMC730: 0 to 70°C (200 LFM airflow).
XMC730E: -40 to 85°C (200 LFM airflow).
XMC730CC: -40 to 85°C (cold plate).

Storage temperature: -55 to 100°C.

Relative humidity: 5 to 95% non-condensing.

Shock, operating:
Designed to comply with VITA 47 Class OS1.

Vibration, random operating:
Designed to comply with VITA 47 Class V1.

Power:
3.3V ±5%: 0.567A typical, 0.7A maximum.
VPWR ±5%: 0.10A typical, 0.11A maximum.
+12V ±5%: 0.03A typical, 0.0374 maximum.

Ordering Information

XMC Modules

XMC730: Multi-function I/O module with front I/O 68-pin SCSI-2 connector. Lead free.

XMC730E: Multi-function I/O module with front I/O 68-pin SCSI-2 connector plus extended temperature. Lead free.

XMC730CC: Multi-function I/O module with rear P16 and P4 connectors. Conduction-cooled and lead free.

Software (see software documentation for details)

PMCSW-API-VXW: VxWorks® software support package

PCISW-API-WIN: Windows® DLL Driver software package

PCISW-API-LNX: Linux® support (website download only)

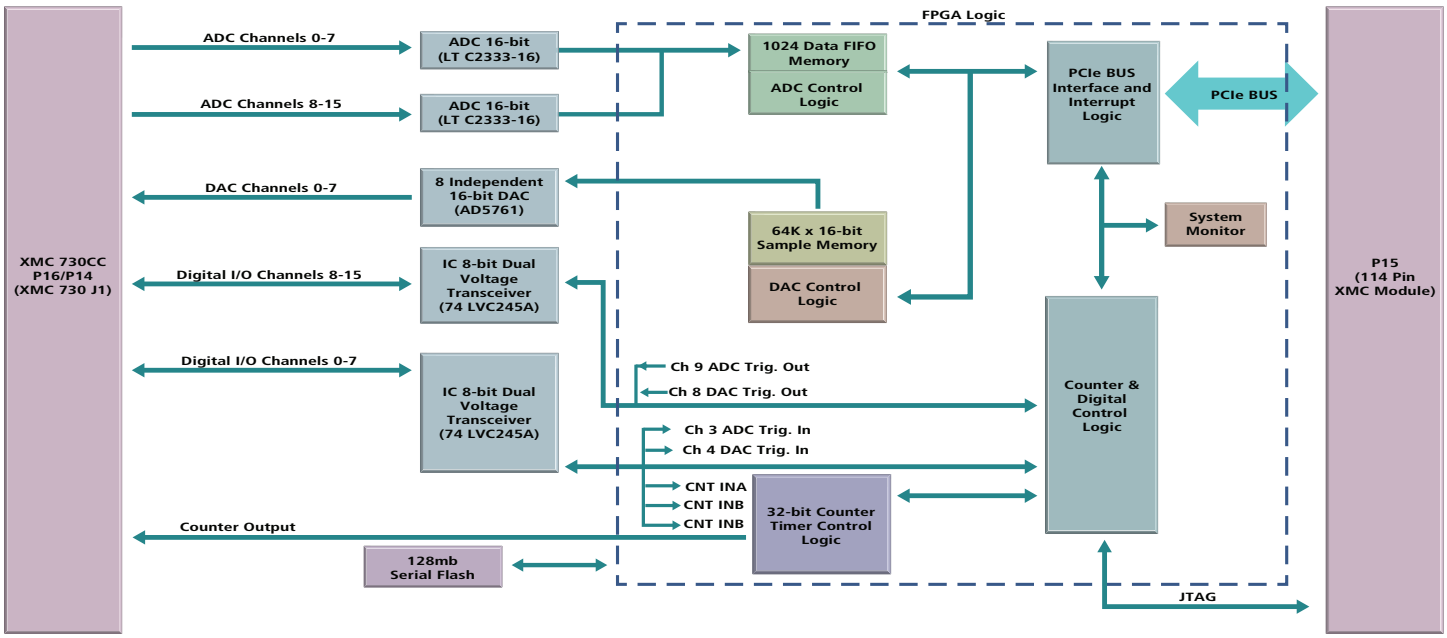
Accessories

5025-288: Termination panel, SCSI-3 connector, 68 screw terminals.

5028-432: Cable, shielded, SCSI-3 connector both ends.

Carrier Cards

VPX Carrier Cards | PCIe Carrier Cards



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Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

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Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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