

ACROMAG – NEW SFF Embedded Computer Mates COM Express Type 10 CPU with Four Industrial I/O Modules for Signal Processing and Control Tasks

Acromag's new fanless PC is SWaP-C optimised with an efficient Intel® Atom® CPU module and four AcroPack ruggedised mini PCIe I/O expansion slots for a variety of data acquisition applications.

Acromag introduces a new rugged, small form factor (SFF) embedded computer system with modular I/O for signal processing, communication, and control functions. The ARCX1100 is optimised for size, weight, power, and cost (SWaP-C) with a COM Express Type 10 CPU and four slots for Acromag's plug-in AcroPack® I/O modules. Overall size with an integrated removable SSD bay is just 19.3 x 19.3 x 8.2 cm and 2kg. Fanless, extended temperature operation from -40 to 71°C is supported with an Intel® Atom® E3950 (Apollo Lake) processor and four AcroPack I/O modules installed. Peripherals include two RJ45 gigabit Ethernet, two USB 3.0, two RS232, mini DisplayPort, and audio ports, plus M.2 and SATA data storage connectors. Four 68-pin VHDCI connectors securely route field I/O to the AcroPack modules without any loose internal cables to interface a mix of analogy, digital, serial, FPGA, avionics, and other I/O signals.

Designed for defence, industrial, and mobile embedded computing systems, the ARCX1100 is ideal for test & measurement, data acquisition & control, communication, avionics, simulation, and signal processing applications. The rugged design is engineered to withstand 50g shock and 5g vibration. More than 25 AcroPack modules are available to perform A/D, D/A, discrete I/O, RS232/485, MIL-STD-1553, CAN bus, Gigabit Ethernet, and other functions. Third-party mPCIe modules are supported for use in the AcroPack slots. Power is sourced from a 10-36V DC supply. A water-resistant connector cover is also available to seal and secure the cabling.

Compact, rugged, and extremely versatile, the ARCX1100 provides high-performance embedded computing in a simple, affordable package. The modular design combining a low-power mini COM Express processor with up to four AcroPack I/O modules offers unprecedented flexibility and upgrade-ability without compromising reliability.

AcroPack mezzanine modules improve on the mini PCI Express by adding a down-facing 100-pin connector that securely routes the I/O through a carrier card to its integrated external connectors; therefore, eliminating internal cables and metalwork modifications. Carrier cards for rackmount, field-deployable, industrial chassis, desktop, and small mezzanine computing platforms let you combine up to four I/O function modules on one computer board. More than 25 models are available for data acquisition, signal processing, test & measurement, command/control, and network communication applications. Furthermore, software tools support embedded applications running on Linux®, Windows®, or VxWorks® operating systems.

ACROMAG is represented in Australia and New Zealand by Metromatics

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