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Data Sheet

August 15, 2026

KONTRON / THALES / MATRIX

Kontron / Thales / Matrix MD-DAADIO8NAP Combination Board

The Kontron/Thales/Matrix MD-DAADIO8NAP is a combination board designed for versatile data acquisition and distribution applications. It integrates analog and digital I/O capabilities, providing a compact solution for embedded systems. Ideal for industrial automation, aerospace, and defense applications, this board offers high reliability and performance in demanding environments.

**MODEL****Kontron / Thales /
Matrix MD-
DAADIO8NAP****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****MD-DAADIO8NAP****LISTING**<https://aumictechlabs.com/products/md-daadio8nap-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Kontron/Thales/Matrix MD-DAADIO8NAP is a double-height VMEbus combination board integrating analog-to-digital converters, digital-to-analog converters, and programmable input/output functions for data acquisition and distribution in embedded systems. Selective population of functional sections enables cost-effective configuration tailored to specific application requirements, reducing system complexity versus multi-board implementations.

Technical Specifications Analog-to-Digital Converter Resolution: 12-bit Conversion time: 12 μ s or 8 μ s typical Input configurations: 32 single-ended, 32 pseudo-differential, or 16 differential inputs

Input voltage ranges: 0–10 V, ± 5 V, ± 10 V (jumper selectable) Maximum tolerable input voltage: ± 35 V Programmable gains: 1, 2, 4, 8, 16, 10, 20, 40, 80, 160 (software controlled, dynamically changeable per channel) Digital-to-Analog Converter Resolution: 12-bit Output channels: 8 voltage channels Output ranges: 0–5 V, 0–10 V, ± 5 V, ± 10 V per channel (jumper selectable) Data format: Straight binary, offset binary, or two's complement (independently jumpered) Multiplying DAC with external reference capability Voltage-to-current adapter supporting 4–20 mA, 0–20 mA, or 5–25 mA operation Output short circuit protection: Indefinite duration (voltage and current) Remote sensing: User selectable per channel Programmable Input/Output Total I/O lines: 48 TTL lines Port configuration: Six ports, individually software configurable as input or output Interrupt lines: 8 on Port A, individually maskable and configurable for pattern recognition Key Features Single board consolidates multiple analog and digital functions Jumper-selectable input modes and voltage ranges accommodate diverse signal conditioning needs Dynamic gain adjustment between channel samples optimizes measurement range per acquisition All DAC outputs drive to zero on reset independent of operating mode Software-controlled port configuration eliminates hardware redesign cycles Typical Applications Real-time data acquisition systems with mixed analog/digital I/O requirements Embedded process control and instrumentation VMEbus-based test and measurement platforms requiring flexible signal routing Compatibility & Integration VMEbus double-height form factor. Integrates with standard VMEbus backplanes and crate systems.

MDDAADIO8NAP Characteristics / Specifications

PARAMETER	VALUE
Model	MD-DAADIO8NAP
Instrument Type	6U VMEbus analog and digital combination board
Family	Matrix / Kontron / Thales MD-DAADIO
Form Factor	double-height 6U VMEbus
Dac Channels	8 voltage outputs (8NAP; no current-loop adapters installed)
Dac Resolution	12 bit per channel
Dac Ranges	0 to 5 V, 0 to 10 V, plus or minus 5 V, plus or minus 10 V, jumper per channel
Dac Drive	5 mA; plus or minus 10 V into 2 kohm
Multiplying Dac	outputs scalable to external AC or DC reference
Dac Codes	straight binary (unipolar), offset binary or twos complement (bipolar)
Reset Behavior	automatic 0 V output on reset and power-up
Adc Resolution	12 bit (8 bit software selectable on family ADC)
Conversion Time	12 us on 8NAP (family also offers 8 us converter)
Analog Inputs	32 single-ended, 32 pseudo-differential, or 16 differential
Adc Ranges	0 to 10 V, plus or minus 5 V, plus or minus 10 V jumper
Programmable Gain	1, 2, 4, 8, 16 and 10, 20, 40, 80, 160
Input Survival	plus or minus 35 V without damaging the board
Pio Lines	48 TTL lines installed (8NAP)
Pio Interrupts	Port A, 8 lines, maskable pattern or state interrupts
Throughput Class	pipelined family ADC up to 160 kHz with 8 us converter
Current Loop	none on NAP build; family VCA supports 4-20 / 0-20 / 5-25 mA
Manufacturer	Matrix Corporation, later Kontron / Thales
Literature	MD-DAADIO family description and IOC-DAADIO-VME-A analog/digital board listing

PARAMETER	VALUE
Sibling	MD-DAADIO8NFP and MD-DAADIO2NFP in the same combination-board family

MDDAADIO8NAP Specifications

PARAMETER	VALUE
Applications	VME data acquisition, analog stimulus, industrial I/O, and mixed analog/digital control in 6U VMEbus crates.
Key Features	Eight 12-bit voltage DAC channels (8NAP build)
Jumper unipolar/bipolar DAC and ADC ranges	Double-height 6U VMEbus combination board
Technical Specifications	Model: MD-DAADIO8NAP

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

From Matrix/Kontron MD-DAADIO family text (Artisan 8NAP configuration: 8 voltage DAC, 12 us ADC, 48-line PIO, no current loop) and Beyond Electronics IOC-DAADIO-VME-A feature list for the same 6U combination architecture. Finer INL/DNL belong on the hardware user manual.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.