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Data Sheet

August 13, 2026

RTD EMBEDDED TECHNOLOGIES

RTD Embedded Technologies NTS01-ESC629ER 2-Channel DC Servo Motor Interface Board

The RTD Embedded Technologies NTS01-ESC629ER is a 2-channel DC servo motor interface board designed for industrial applications. It provides precise control and feedback for DC servo motors, enabling accurate positioning and motion control in embedded systems. Ideal for robotics, automation, and other demanding control applications.



MODEL

**RTD Embedded
Technologies
NTS01-ESC629ER**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

NTS01-ESC629ER

LISTING

<https://aumictechlabs.com/products/nts01-esc629er-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The RTD Embedded Technologies NTS01-ESC629ER is a 2-channel DC servo motor interface board built on the PC/104 form factor for stackable embedded systems. It delivers independent motion control across two channels using LM629 motion control chips, enabling precise position, velocity, and acceleration regulation. Each channel features a full H-bridge capable of driving 24V or 48V DC motors up to 10A peak current, with 6A sustained output using the standard heatsink. The board accepts motor supply voltages up to 60V and includes a dedicated +12V @ 0.5A onboard supply for small motors. Incremental encoder inputs support both 5V and 12V encoders with industrial-grade filtering and EN61000-4-4 protection for noisy environments. A 50-pin

header exposes 24 TTL-level digital I/O lines, while a 10-pin motor control port provides PWM/DIR and H-bridge control signals for external power stages. Operating range spans 0° to +70°C. The compact PC/104 footprint integrates directly into PC/104, PC/104-Plus, PCI-104, and PCIe/104 stacks without requiring external carrier boards.

Features & description

From manufacturer datasheet

Features

- Two independent LM629 motion channels on PC/104
- Onboard MOSFET H-bridges 60 V, 10 A
- PWM/DIR and left/right half-bridge outputs for remote stages
- Incremental encoders 5 V; EN 61000-4-4 protected
- +12 V at 0.5 A auxiliary (or +5 V) for remote devices
- 24 TTL I/O, 8255, 50-pin RTD DIO pinout

NTS01ESC629ER Characteristics / Specifications

PARAMETER	VALUE
Model	NTS01-ESC629ER
Manufacturer	RTD Embedded Technologies
Instrument Type	PC/104 Two Channel DC Servo Motor Controller
Series	ESC629ER
Alias	NTS01-ESC629ER; ESC629ER; ESC629ER-8
Bus	PC/104 form factor, stackable
Motor Channels	2 independent
Motion Processor	two LM629 precision motion controllers
Control Modes	position, velocity, and acceleration
Onboard Bridges	two full MOSFET H-bridges
Bridge Voltage	60 V
Bridge Current	10 A maximum
Encoder Inputs	incremental, 5 V range
Encoder Supply Options	+5 V or +12 V incremental encoders
Encoder Immunity	EN 61000-4-4 buffering and protection
Auxiliary Supply	+12 V at 0.5 A for external devices
Remote Drive Port	PWM/DIR and H-bridge left/right half signals, both channels
Digital I/O	24 TTL, 8255 based
DIO Connector	50-pin header, RTD digital I/O standard pinout
Rugged Option	IDAN-ESC629HR stackable enclosure
Status	phased out / EOL
LM629 Position Range	-1073741824 to 1073741823 counts
LM629 Velocity Range	0 to 16383 counts/sample (1/2 ¹⁶ count/sample resolution)
LM629 Acceleration Range	0 to 16383 counts/sample/sample
LM629 Feedback	incremental encoder quadrature with index

PARAMETER	VALUE
LM629 Algorithm	PID with programmable integration limit
LM629 PWM	8-bit PWM sign/magnitude motor drive (LM629)
LM629 Sample Derivative	2048/fCLK to (2048*256)/fCLK (256 us to 65536 us at 8.0 MHz)
Form	single-board DC servo solution
Related Dash	ESC629ER-8 family listing on RTD legacy menu
Host Interrupt	LM629 host interrupt output for status events
Intended Motors	DC and brushless DC servo with incremental encoders Notes Specs from RTD/systerra ESC629ER product text and the LM629 datasheet referenced by RTD for motion-control limits. NTS01 denotes this listing's packaging of ESC629ER. Confirm bridge current derating, encoder supply jumper (+5 versus +12 V), and whether onboard bridges or the remote drive port are used.

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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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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.