A5001

32 Channel 5V / 260mA Board

32	RJ45	10
No. of Channels	Connectors	No. max of boards per crate

The A5001 is a 32-channel low-voltage power supply board for the CAEN EASY family, providing 0–5 V / 260 mA per channel with positive polarity, independent floating returns and ±12 V inter-channel isolation. Outputs are available through RJ45 connectors, with 1 mV / 10 µA set and monitor resolution, typically below 20 mVpp ripple, and 1.3 W maximum output power per channel at the connector. Hardware overvoltage protection is set at 5.5 V typical, with programmable trip time. The 8 TE / 6U board supports remote operation through an R6060C Branch Controller and is designed for magnetic fields and moderate radiation environments.

CAEN
Tools for Discovery

Overview

Product Highlights

- 32 independent channels, 0–5 V / 260 mA
- Operation in magnetic field and moderate radiation environments
- 1 mV / 10 µA set and monitor resolution
- Remote control via R6060C Branch Controller (up to 6 EASY crates)
- Individual floating returns with ±12 V inter-channel isolation
- RJ45 output connectors
- Low ripple and high long-term stability
- 8 TE / 6U form factor

Product Description

The A5001 is a 32-channel low-voltage power supply board of the CAEN EASY (Embedded Assembly SYstem) family, designed to operate in magnetic fields and moderate radiation environments. Based on CAEN's patented rad-tolerant and magnetic-field-resistant technology, EASY boards can be installed directly in the hostile area, close to the detector and front-end electronics, while being controlled remotely from the control room.

Each of the 32 channels provides 0–5 V / 260 mA with positive polarity and an independent floating return, isolated up to ±12 V from the other channels. The maximum output power is 1.3 W per channel at the connector, and outputs are delivered via RJ45 connectors for compact and straightforward cabling.

The channels combine low noise with high precision and stability. Voltage ripple is typically below 20 mVpp in the 10 Hz–20 MHz band. Accuracy is ±0.1% ± 20 mV on both voltage setting and monitoring, ±1% ± 50 µA on current monitoring, and ±1% ± 100 µA on current setting. The output remains stable within 5 mV over one day and within 10 mV over one week, with a temperature coefficient of ±100 ppm/°C and a load regulation better than 0.05%. Each channel is protected by a hardware overvoltage protection set at 5.5 V (typical) and by a programmable trip time.

The A5001 is managed remotely through the R6060C Branch Controller, located in the control room. Each branch controller handles up to 6 EASY crates, and all board channels are seen as channels of the R6060C, which is configured for the EASY crate layout using the CAEN software tools.

The board is housed in an 8 TE wide, 6U-high mechanics weighing 3.6 kg and operates from –20 °C to +50 °C. It is CE compliant, under the EMC Directive 2014/30/EU and the Low Voltage Directive 2014/35/EU, and RoHS compliant.

AT A GLANCE

No. of Channels	**32**
Connectors	**RJ45**
No. max of boards per crate	**10**
Width (slots)	**2**
Max power per channels	**1.3 W**
Iset/Imon resolution	**10 µA**

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Technical Specifications

Polarity	Positive; Individual Floating (±12V isolation)
Output Voltage	0 ÷ 5V
Max Output Current	260 mA
Max Output Power (connector output)	1 .3W
Vset/Vmon Resolution	1 mV
Iset/Imon Resolution	10 µA
Voltage Ripple (10Hz ÷ 20MHz)	Typ: <20 mVpp
Vout/Vmon, Vset/Vout	± 0.1% ± 20 mV
Iout/Imon, Iset/Iout	± 1% ± 1 mA
Hardware OVV Protection	5.5 V typ
Trip	0 to 999.9s; 1000s = Infinite; step 0.1s
Stability	<5mV (Vset = 5V – No Load – one day after 1 hour warm up)
Long Term Stability	<10mV (Vset = 5V – No Load – one week after 1 hour warm up)
Temperature Coefficient	±100ppm/°C
Load regulation	< 0.05%

Ordering Information

ORDERING CODE	DESCRIPTION
WE5001XAAAAA	A5001 – EASY5000 L.V. channels 5V / 0.2A / 1W floating – (32 ch)

1. Ordering codes and descriptions are reproduced from the product record. Availability is confirmed at order entry.

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