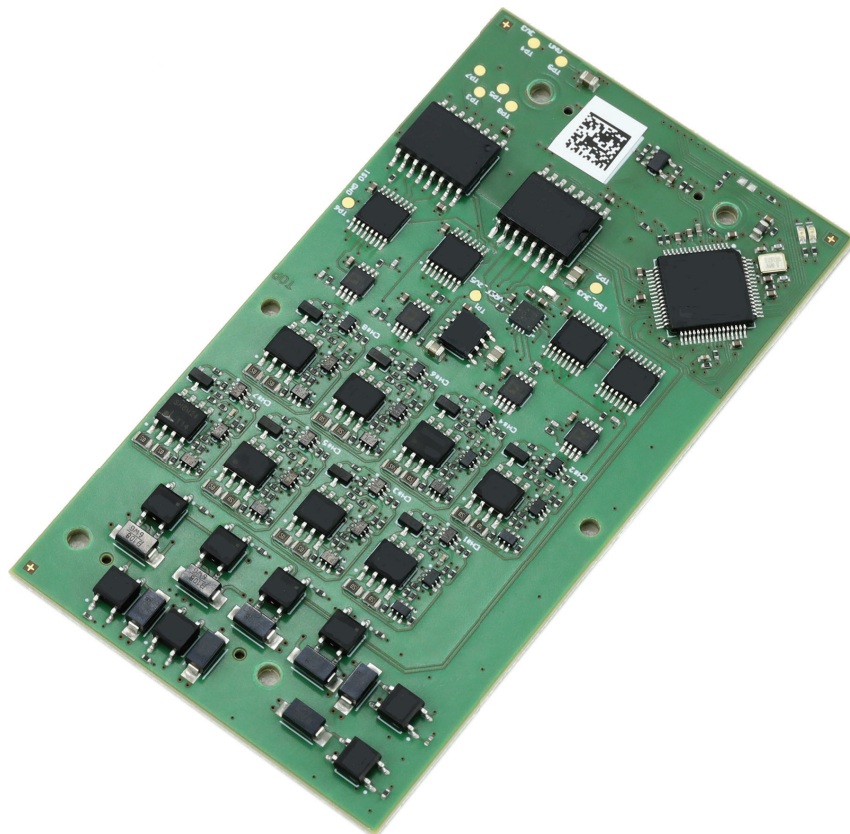


## DSIO8

Discrete Signal I/O Module



- 8 bi-directional discrete input/output channels
- ABD100 compliant switching thresholds
- Local microcontroller supporting advanced functions
- Compatible with TechSAT PCIe-2G (PCI) and FAST-2G (Ethernet) carriers
- Fully integrated in TechSAT's Simulation and Test Environment ADS2™



# DSIO8

## Discrete Signal I/O Module

### Description

The DSIO8 module is a member of TechSAT's Modular IO (TSMIO-2G) product family, second generation. TSMIO-2G modules can be mounted either on a PCIe carrier (PCIe-2G Carrier) or on the Ethernet carrier (FAST-2G Carrier). All members of the TSMIO-2G family are fully integrated into the TechSAT ADS2 Simulation and Test Environment as well as provided as standalone products with a fully featured user API.

The DSIO8 module is a discrete input/output board with up to 8 channels. Each channel can be programmed to behave as ABD100 GND/OPN, 28V/OPN, or GND/OPN input and output.

In addition, each channel is also configurable for High Side or Low Side operation with software configurable switching threshold. The user can select one pull resistor per channel (pull-down for HS operation, pull-up for LS operation).

One common reference voltage for outputs and pull resistors provides the high current paths. The output switches and pull resistors are connected to the reference voltage. Each output is rated for sinking/sourcing up to 500 mA continuously with a cumulative sink/source current of 2 A per module.

### Operation

The channel direction (input/output), behavior (GND/Open, 28V/Open, or GND/Open) as well as switching thresholds are configured via API calls.

A *data read* request will return all channel values (true/false and the actual measured voltage level).

For channels configured as output, the value at the interface is read back and returned to the caller.

A *data write* request will switch the channels configured as output according to the commanded value.

### Technical Data

#### Features

- Up to 8 channels on a single board
- Software configurable settings per channel:
  - Direction: input or output
  - Input: GND/Open or 28V/Open
  - Output: GND/Open, 28V/Open, 28V/GND
  - Configurable switching thresholds
    - for HS and LS operation
    - Pull-up/-down resistor
- Fault report
- Up to 500 mA output current per channel (total module maximum current: 2 A)
- Monitoring signal provides logical state of the input (ON/OFF) as well as the voltage level
- Accessible via FAST-2G or PCI-e2G protocol from ADS2 or standalone user API

#### Electrical Characteristics

- Reference voltage range: 12 V up to 42 V
- Input voltage range: 0 V up to the reference voltage
- Output voltage range: 0 V up to the reference voltage
- Power supply: provided by carrier

#### Physical Dimensions

- 95 mm x 52 mm

#### Environmental Conditions

- Operating temperature: 0 °C to +70 °C
- Storage temperature: -40 °C to +85 °C
- Humidity: 0 - 90% non-condensing

#### Part Number

- 702512