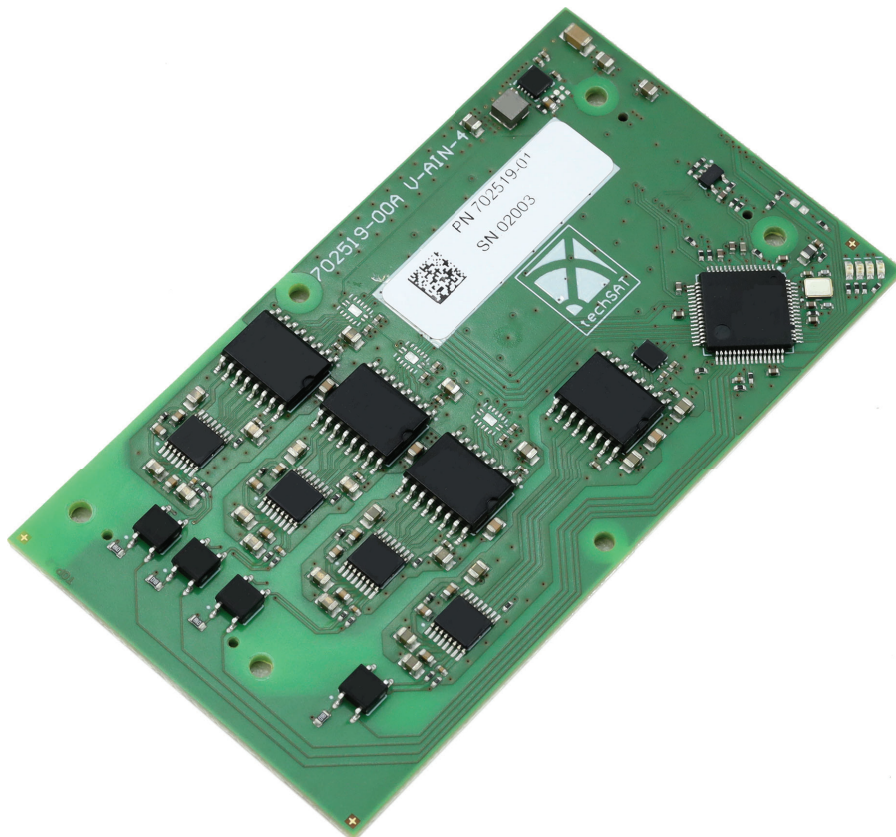




## V-AIN4

### Analog Voltage Input Module



- Four analog-to-digital conversion channels
- All channels galvanically isolated, 16-bit resolution
- Local microcontroller supporting advanced functions
- Compatible with TechSAT PCIe-2G (PCI) and FAST-2G (Ethernet) carriers
- Integrated in TechSAT's Simulation and Test Environment ADS2™



## V-AIN4

### Analog Voltage Input Module

#### Description

The V-AIN4 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 V-AIN4 module provides four individually configurable and galvanically isolated 16-bit analog input channels. The channels are individually configurable for 9 different acquisition ranges (see Technical Data) through the API.

The modules are factory calibrated. Gain, offset, and linearity correction parameters are stored on the module and applied during acquisition by the on-module software.

#### Operation

The V-AIN4 modules support sampling and streaming mode.

In sampling mode, each data read request returns the latest sampled values for each channel.

In streaming mode, the user configures an internal sampling rate. Each data read request will return all samples acquired since the previous read.

#### Advanced Function

The on-module 32-bit microcontroller can be used to implement application-specific advanced functions like digital filters, RMS or other derived value calculations, or any other evaluation based on the sampled values.

#### Technical Data

##### Features

- Up to 4 galvanically isolated channels on a module
- Software-based configuration per channel:
  - 9 individual voltage input ranges
- Accessible via FAST-2G or PCI-e2G protocol from ADS2 or standalone user API

##### Electrical Characteristics

- Reference voltage: 4.096 V
- Input range

1	± 12.28 V
2	± 10.24 V
3	± 6.144
4	± 5.12
5	± 2.56
6	0 V to 12.288 V
7	0 V to 10.24 V
8	0 V to 6.144 V
9	0 V to 5.12 V

- Accuracy: 0.05% full scale
- Maximum sampling rate: 20 kHz
- 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

- 702519