Seismological Digitizer
Specifications

ADC Characteristics

- Seismic Sensor Channels (analogue, differential): 4 or 8
- Sampling Rates: 1 to 192000 sps

Bandwidth

- 0 - 48000 Hz: $0.47 \; f_s$ Hz
- 48000 - 92000 Hz: $0.45 \; f_s$ Hz
- 92000 - 192000 Hz: $0.24 \; f_s$ Hz

Dynamic Range

- at 48000 sps: 118 dB
- at 50 sps: 147 dB

Key Features

- Small, lightweight, 35mm DIN rail mountable enclosure with UL94 V0 flame retardant rating
- Low power: 0.38 Watt per channel
- 4 or 8 seismic sensor channels
- Geophone, Broadband, Force Balance or Piezoelectric digitizer
- Timing and data over single CAT5 cable (if using IMS WoE switch)
- Multi-station Networked or Standalone operating modes
- Compatible with Smart Seismic Sensors (self-configuring)
- Wide dynamic range (24-bit oversample data)
- Software selectable sampling rates
- Continuous streaming of data (triggered recording with netSP)
- Communications (Waveforms over Ethernet) via 10/100Base-TX Ethernet or fibre (using external media converter)
- Geophone state-of-health coil measurements
- Remotely upgradable firmware via netSP and/or Synapse
- On-board temperature measurement and readout

Electrical

- Supply Voltage: 9 - 18 VDC
- Power Consumption: 3 W

Physical

- Mass: 420 g
- Dimensions: Height: 180 mm, Width: 52 mm, Depth: 165 mm

Environment

- Operating Temperature: -10 - 70°C
- Humidity: 20 - 80 % relative humidity, non-condensing

External Interfaces

- Ethernet (10/100Base-TX) with Auto-MDIX (auto-crossover)
- RS-232 2-wire port for time synchronisation
- DC power and feed-through
- 4 or 8 Smart seismic sensor channels (geophone, broadband, piezoelectric and FBA)
- 6 user LEDs
- 2 User push buttons

NOTES:

1. Average power consumption measured on 8 channel version, at 48000 sps, continuously streaming data over 100Base-TX interface.
2. Bandwidth is related to the sampling frequency $f_s$.
3. Dynamic range dependent on sampling rate due to oversampling.
4. This device is designed to be operated in an enclosed environment. To avoid voiding of equipment warranty, the equipment must be housed in an external enclosure. The external enclosure should have an Ingress Protection Rating of at least IP65. Suitable, customised, pre-wired enclosures are available from IMS upon request.
5. Individually certified units with wider operating ranges available upon request - please contact IMS for confirmation before order as prices and lead times may vary.

DISCLAIMER: The information in this document has been checked and authorised prior to publication. Whilst we have taken great care in preparing the content for this document, IMS shall not be liable, either directly or in any consequential way, for acts or omissions by any party in the direct or indirect use of the information described herein. IMS reserves the right to update, without notice, any product details in this document, including specifications, appearance and performance. Refer to http://www.imseismology.org/notices for important information about equipment installation and warranty conditions, as well as the most recent product specifications.