

AMTI introduces the next generation in strain gage amplifiers...

Gen 5: Advanced six-channel signal conditioner

The Gen 5 provides industry-leading performance and innovative features in an easy-to-use and cost effective package.

State-of-the-art signal conditioning

Provides six unique, independently configurable data channels

Fully calibrated and NIST-traceable

Signal conditioning includes: 1 kHz anti-aliasing filter, oversampling and digital signal processing

Built in cable length compensation

Virtually eliminates crosstalk by applying a factory calibrated platform correction matrix

Tested to medical-grade standards for safety, essential performance and electro-magnetic compatibility

Heart of new Smart Platform System

Applies complete transducer profile stored onboard all new AMTI force plates and force sensors, including bridge resistance, transducer capacity and calibration matrix

Allows users to order their platforms by simply walking across them in subjects' direction of travel

Intuitive and easy to use

Fully software configurable

All calibration and configuration settings stored internally

Multiple Gen 5's automatically synchronize data sampling – no additional wiring required.

Automatic balancing of strain gage bridges initiated by front-panel button or by software

Supports both genlock data acquisition and external triggering

Digital and analog outputs

Gen 5 can be connected to a PC or other data acquisition system via the digital (USB) or analog output

Factory calibrated gain and offset correction constants applied to each output channel

Each of the six analog output channels has an independent 16-bit DAC conditioned by a low-pass reconstruction filter and amplifier.

Digital output stream consists of fully processed IEEE floating point numbers presented in their respective engineering units.

Highly configurable

User-selectable excitation (2.5, 5.0, and 10.0 volts)

User-selectable gains (500, 1000, 2000, and 4000)

User-selectable zero set point

Flexible integration

NetForce: complete data acquisition solution – features multi-channel real time acquisition and display, including center of pressure

Gen 5 Setup Program: easy integration with analog systems and third-party software applications

Gen 5 Software Development Kit: available for incorporating Gen 5 amplifiers into proprietary systems



Gen 5 specifications

Analog inputs	Six 4-arm strain gage bridges (350 Ohm minimum)
Bridge excitation	Channel independent, software configurable – 2.5, 5 or 10 VDC
Amplifier gains	Channel independent, software configurable – 500, 1000, 2000, 4000
Auto zero	Push button or software initiated
Anti-aliasing filter	1000 Hz low pass, 2-pole Butterworth
Analog output range	+/- 5 volts
Analog output reconstruction filter	1000 Hz low pass, 3-pole Butterworth
Analog output DAC	16 bit
Sample rate	Max: 2000 Hz/channel Min: 10 Hz/ channel
Synchronization	Genlock, external trigger, internal clock
Digital Signal Processor	16 bit
Digital data	IEEE 754 floating point
Digital resolution	14 bit
Power supply	External medical grade (included) Input: 120-240 VAC, 50/60 Hz Output: 15VDC @ 0.3 amps
Connectors	Digital output: USB 2.0 Sync/genlock: RCA phono Power: 5.5 mm x 2.1 mm plug Analog output: DB25S Transducer Input: 26-pin circular type connector
System environmental operating conditions	0 to 125°F (-18 to 52°C) 0 to 70% RH, indoor/laboratory environment
Physical dimensions (WxLxH)	26 x 21 x 4 cm (10.25 x 8.25 x 1.72)
Weight	2 kg (4.5 lbs)



The Gen 5 is a medical-grade strain gage signal conditioner manufactured under the ISO 13485:2003 quality system.



The amplifier meets applicable CE standards and has successfully demonstrated compliance to standards for medical electrical equipment regarding basic safety, essential performance and electro-magnetic compatibility:

AAMI – ES 60601-1

CSA – EN 60601-1

UL – IEC –EN 60601-1