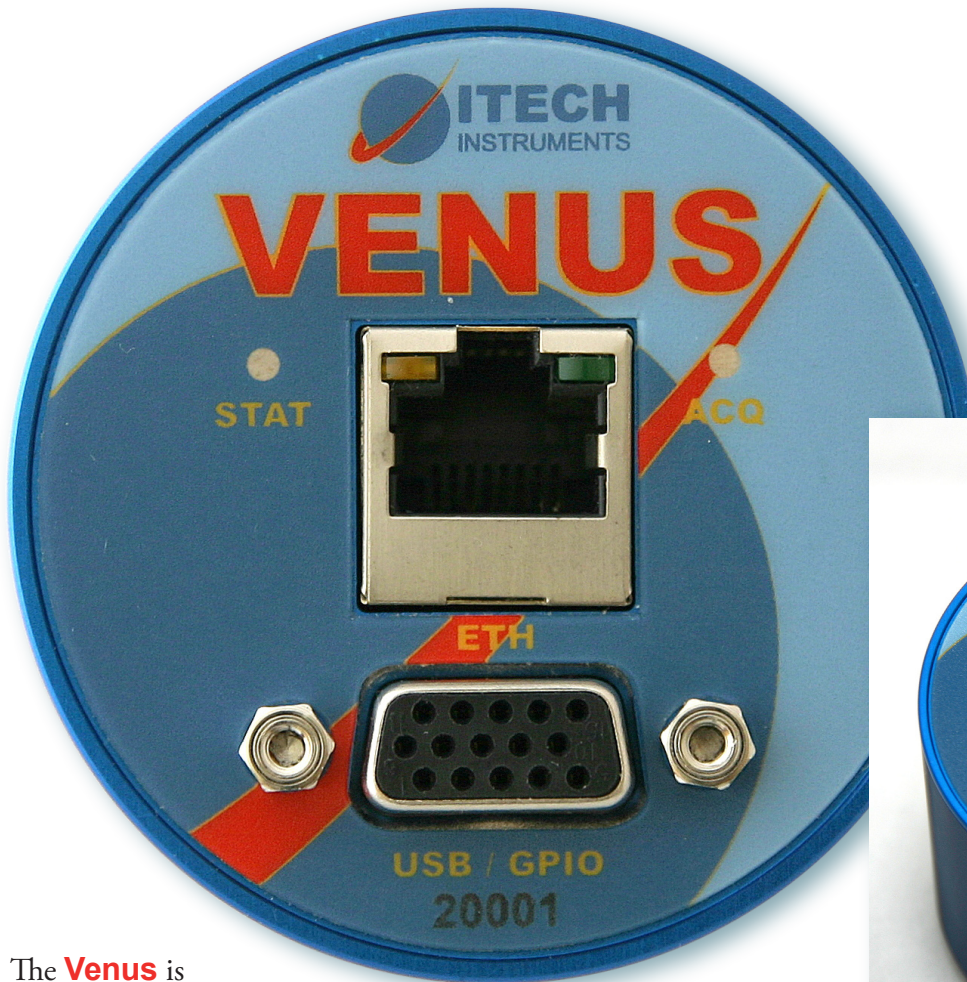# Venus/E

The **Venus** is a universal digital multichannel analyzer integrated into a photomultiplier base. The **Venus** can be used in the most exacting spectroscopic applications as well as high rate, industrial counting applications. Because of our range of user selectable gain and time constant options, the **Venus** is easily adapted to all of today's choices of scintillator, including NaI, CsI and LaBr.

The **Venus** connects to your PC via Ethernet. The Ethernet bus supplies all communication and power requirements for the Venus.

Along with pulse height analysis, the **Venus** includes a time stamped list mode. In this mode, each event is stored with the time of it's detection in clock units (15,625 ns). Up to 64 **Venus** devices can be synchronized for coincidence counting.

The **Venus** works with the **InterWinner** nuclear spectroscopy software.

With modern low cost digital electronics, **InterWinner** software and single cable Ethernet communication and power, the **Venus** is the ideal device for research and industrial laboratories, university teaching and radiation safety applications, hospital and other nuclear medicine applications and, of course single or multi-system homeland security functions.

Physical:

► Robust aluminum housing
► Size: 58 mm x 69 mm (diameter x length, without connector)
► Net weight: 210 g

Sampling ADC:

► 12 bits
► 20-65 MHz sampling frequency, user selectable

Spectrum size:

► 256-4096 channels, user selectable
► 32 bits per channel

Acquisition modes:

► PHA mode
► Time stamped list mode
► Pulseshape list mode
► Multispectrum scaling mode

Gain:

► Analog coarse gain
► Digital fine gain
► Digital stabilizer
► Detector connection:
► Standard JEDEC B14A connector

Digital I/O connector:

► RJ45 Ethernet connector (100 MBit/s)
► DB15 HD type connector
► USB 2.0 (20 MBits/s)

► 6 programmable digital inputs/outputs (0V/3.3V) for sample changer control, synchronization, gate input, trigger input, single channel analyzer output and other applications

Maximum count rate:

► PHA mode: > 1 million counts/s, depending on detector speed
► List mode: > 200000 counts/s

High voltage:

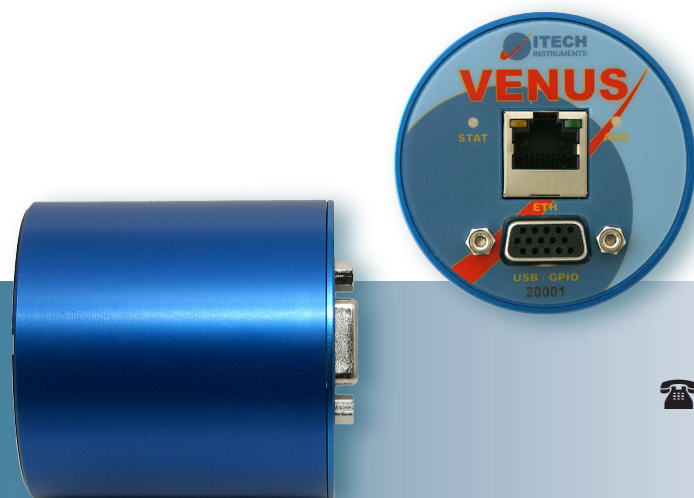► 0 - 2000 VDC (positive)

Environment:

► Temperature: 0-50 °C
► Humidity: <80%, non condensing

Power supply:

► Using Power over Ethernet (PoE), less than 3 Watt
► Alternatively over USB, less than 500 mA

Options:

► High speed USB interface instead of the Ethernet interface
► Negative HV instead of positive HV
► Connector compatible with R6231 preamplifier
► InterWinner quantitative analysis software