

**proteus** is designed to provide a seamless integrated solution to interface between a downhole gamma sensor (crystal and photo multiplier tube (pmt)) and an mwd system's data bus. **proteus** combines in one single board a high voltage power supply (hvps), transimpedance amplifier (tia), gain, discriminator and a full digital mixed signal section to allow for flexible connection between the raw sensor and the mwd tool.

**proteus** provides different methods of adjusting the behavior of the system including the ability to digitally control the hvps, tia, gain and discriminator settings, and provides extensive calibration capability through the built in microcontroller. adjusting the behavior of the system for different gamma sensors and providing thermally corrected output is all done through customizable settings.

**proteus** provides a logic level output, but multiple other output formats are available upon request, including serial, i2c, spi and can. custom formats can also be supported. **proteus** also has built in environmental monitoring and memory logging capabilities including the ability to store gamma ray counts, shock and vibration data, and multiple system voltages and temperature onto the on board non-volatile memory for post-run analysis.

**proteus** is exceptionally rugged and has a small form factor, and is available in bare board and multiple chassis formats.

## specifications

dimensions	3.70" x 0.92" x 0.55" (94mm x 23.4mm x 14mm)
standard output	5V negative going pulse (+5V to 0V), 3μs
output stability (uncalibrated)	15% max deviation over temperature
output stability (calibrated)	5% max deviation over temperature with digital thermal compensation
input voltage	20V to 30V
operating temperature	32° to 347°F (0° to 175°C)
power consumption	15mA @ 28V, 30°C
memory	8MB non-volatile flash

- integrated gamma controller
- highly configurable
- 175°C temperature rated
- extensive memory logging
- limited qmix support

