Accurate Technologies’ long history in powertrain development provided insight into the day-to-day issues that were occurring during engine testing at a time when electronic devices were being introduced to monitor performance instead of traditional mechanical means. Outside of the harsh physical environments, devices used in these applications need to perform difficult high-voltage signal conditioning and high-speed synchronous pulse processing.

ATI developed unique products that satisfy specific test cell or dynamometer challenges. These highly accurate products measure engine timing (IGTM) or speed (SmartTach) in convenient ways to provide information that otherwise may not be available.
IGTM-2000
The IGTM-2000 is a precision ignition timing measurement instrument designed specifically for the engine development and testing environment. Among its many innovations is the capability to continuously measure actual ignition timing in real-time with +/-0.05 degree accuracy under all engine operating conditions.

A unique feature of the IGTM-2000 is the universal compatibility with “patterned” crankshaft position signals (i.e. missing/extra tooth). Reference (tooth) patterns can be chosen from pre-defined common automotive types or custom pattern definitions, which can easily be programmed into the IGTM-2000 by the operator. A universal decoding algorithm provides maximum achievable transient timing measurement accuracy for any reference pattern under all engine operating conditions.

SmartTach
The SmartTach is a precision speed measurement instrument designed specifically for the development and testing environment. Among its many innovations is the capability to continuously measure speed from virtually any type of signal.

Along with measured speed being continuously displayed, a precision analog voltage output representing measured speed is available on the Analog output connector. Three user configurable Range Outputs are available on the SmartTach. These can be used as warnings to the dynamometer technician or test cell computer that an engine or test malfunction may have occurred.