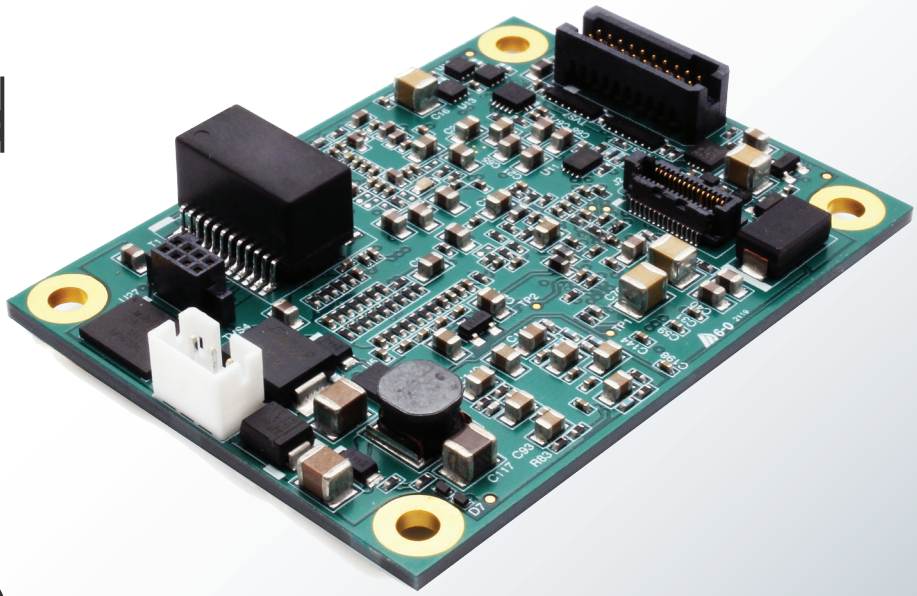
ACCURATE TECHNOLOGIES

A9
High-Speed Serial ECU Interface



ACQUIRE CALIBRATE & FLASH IN-ONE

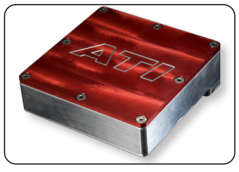
HIGH SPEED ECU DAQ

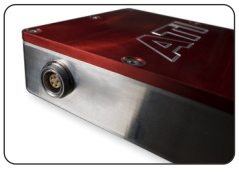
DYNAMIC DATA RATES

1 Gbps ETHERNET CONNECTIVITY

The A9 ECU Interface product is a high-speed ECU interface that efficiently communicates to an ECU over the processor's DAP interface. To use the A9, a simple plug-and-play gigabit Ethernet interface can be connected directly to a PC or standard LAN, eliminating any need for expensive interface boxes. Hardware IEEE-1588 PTP time synchronization ensures accurate correlation to other acquired data.

- Calibrate, DAQ, and Flash ECUs with a single product
- Capable of supporting ECUs from most OEMs
- Read data from and write data directly to the ECU processor's memory
- DAP interface up to 160MHz with auto-sense speed and multiphase receive
- Any DAQ item addressable within the ECU
- Support for 125,000 unique data items
- Dynamic data rates allow real-time reconfiguration of acquired data items
- ECU cold start capability for instantaneous data acquisition at ECU power-up
- 1Gbps Ethernet w/IEEE-1588 PTP time sync
- Plug and play direct Ethernet connection to PC
- Automotive surge tolerant wide operating voltage of 5 to 36VDC
- Wide -40 to +105°C operating temperature range





Custom tool enclosures and ECU housing modifications available to suit ECU packaging needs.

ECU CALIBRATION

ECU RAPID PROTOTYPING

ECU INTERFACES

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Dynamic Overlay Support

- Allows the calibration memory range to be larger than available emulation memory
- Permits tool-controlled dynamic initialization of calibration data
- Requires no ECU code changes for calibration

Power Management

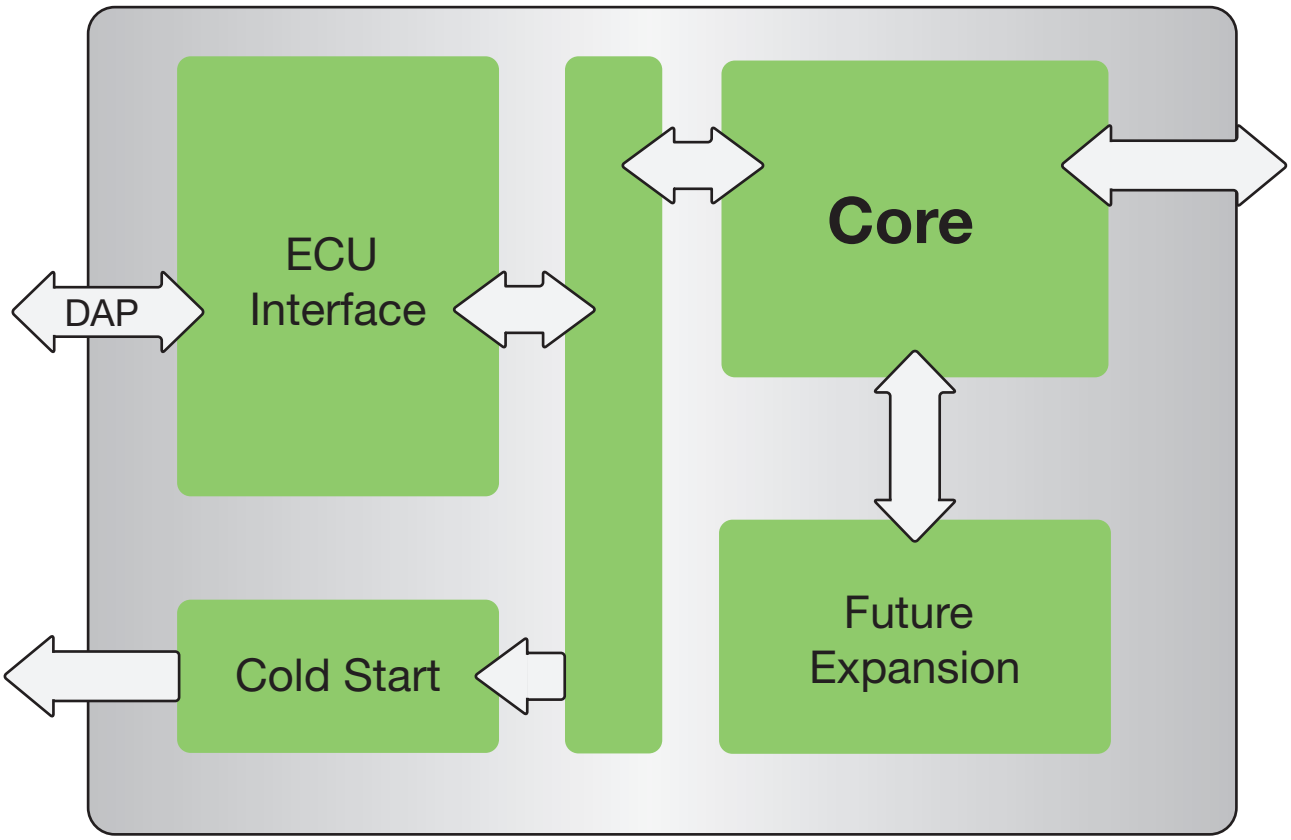
- Minimal current draw from target ECU
- Low current sleep mode
- Externally powered to enable asynchronous data acquisition before the ECU code initializes (near instantaneous data acquisition)

Intelligent Flashing

- Optimized intelligent flashing algorithms that shorten flash time and minimize memory degradation caused by repeated flashing operations
- Inherent protection of reserved memory regions during flash operations
- Enhanced handling of memory region checksums to provide quick synchronization between the A9 and the ECU
- Built-in brain-dead flashing capability

Application Interfaces

- VISION Calibration and Data Acquisition Software
- VISION API for user developed applications
- ASAM XCP-on-Ethernet protocol for third party applications



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A9 Serial Interface Specifications

Performance	
Data Rate	3.2MB/s
Number of Data Items	125,000
Sample Time Period	50µs
Simultaneous DAQ Rates	500+ independent data rates/rasters
ECU Processor Support*	
Infineon	TriCore 2xx and 3xx
Hardware	
ECU Interfaces	DAP2 at up to 160MHz with auto-sense speed and multiphase receive
Communications	Ethernet at 1Gbps with hardware IEEE-1588 PTP time sync
Connections*	Universal and application-specific custom cabling solutions available for Ethernet and DAP2 connections
Enclosure*	Application-specific housing designs and ECU modifications available
Power	5 to 32VDC, automotive surge tolerant
Operating Current	~260mA @ 12V 20C
Quiescent Current	<500µA @ 12V (powered off)
Operating Temperature	-40°C to +105°C / -40°F to +221°F
Mechanical	
Dimensions	PCB: 61.0mm x 45.7mm x 12.8mm / 2.40in x 1.80in x 0.50in
Weight	26.0g / 0.92oz

***Please contact your ATI sales representative for more information about specific supported processors, custom cabling solutions, and custom tool enclosures/ECU housing modifications. TC4xx support in development.**

A9 Serial Interface Accessories

Part Numbers		
Power Cable		
150-0201-12IN	30.5cm/12in	Cable; Pwr 3-pin JST to unterminated
DAP		
150-0253	15.24cm/6in	Cable; A9/T1 SFM 20-pin to SFM 10-pin w/CS FlexBd
Ethernet		
150-0241-5in	12.7cm/5in	Cable; Ethernet LEMO 1F 8-Pos to Samtec 8-Pos

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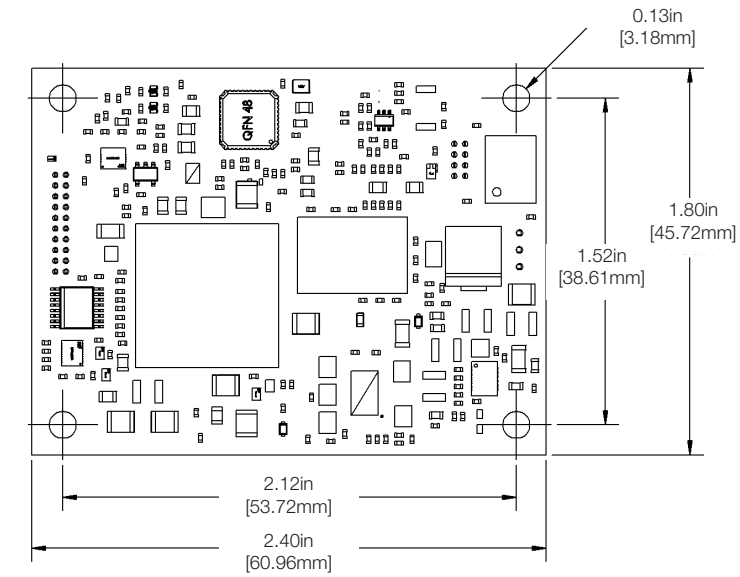
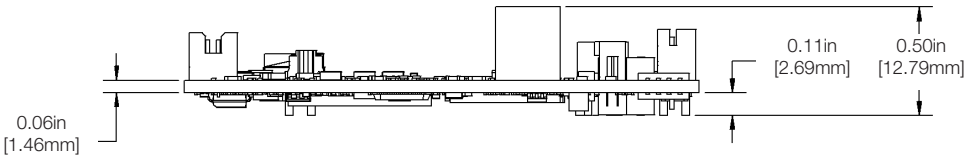
A9 Serial Interface Dimensions





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ECU CALIBRATION
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