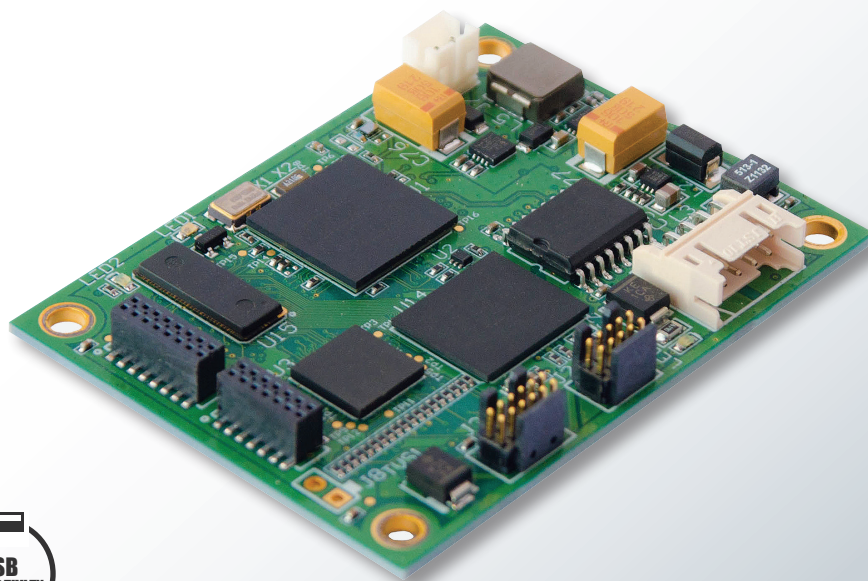


A8

High-Speed ECU Serial Interface



Where high data throughput is required, ATI offers its proven A8 Electronic Control Unit (ECU) Serial Interface modules. Designed specifically for automotive environments, the A8 Serial Interface module has been developed to read data from and write data to the ECU's microprocessor memory regions reliably and quickly.

Available in both USB and Ethernet variants, ATI's A8 Serial Interface modules support ECU high-speed data acquisition, calibration and flashing in a single OCDS, Nexus, or DAP2 debug interface. ATI's A8 Ethernet connectivity is as easy to use as USB, enabling long distance connections of up to 50 meters with enhanced data transfer. ATI recommends use of VISION™ calibration and data acquisition software to seamlessly accommodate time stamps and data synchronization. However, ASAM XCP communication protocol support, available for both USB and Ethernet variants, ensures compatibility of the A8 irrespective of software tool selection.

Features

- Support for high speed ECU data acquisition, calibration and flashing
- Fast validation and synchronization of ECU code/calibration data
- Dynamic data rates allow easier configuration of the ECU acquisition



ATI creates a bespoke billet aluminum enclosure to enable A8 integration on space restricted ECU modules.



Dynamic Overlay Support

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

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 A8 and the ECU
- Built-in brain dead flashing

Power Management

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

Microcontroller Family	Interface
Freescall	
MPC5xxx	JTAG Interface
S12x	JTAG Interface
Infineon	
TriCore TC17xx/TC2xx/TC3xx	JTAG Interface
TriCore TC2xx/TC3xx	DAP2
Renesas	
RH850	JTAG Interface
V850E2	JTAG Interface

Can support most processors with a real-time debug port. Please contact your sales representative for specific part numbers.

A8 Serial Interface Specifications

Configuration	
Application Interfaces	VISION Calibration and Data Acquisition Software (version 3.7.3 or later) VISION API for user developed applications ASAM's XCP communication protocol for USB and Ethernet
Indicator	
LEDs	(4) Power and Activity Status
Input/Output	
PC Interface	USB 2.0 full speed or Ethernet
Performance	
Data Rate	Up to 150 32bit data items/ms
Number of Data Items	Up to 1200 (A8) / 6000 (A8S)
Sample Time Period	100 μ s
Simultaneous DAQ Rates	32 dynamic
Operating Conditions	
Power Supply	External source of 5 to 30 VDC
Operational Current (average)	65 mA
Quiescent Current Draw	9 μ A
Temperature Range	-40 °C to +105 °C / -40 °F to +221 °F
Mechanical	
Dimensions	PCB: 60.1 x 45.7 x 10.6 mm / 2.37 x 1.80 x 0.42 in
Weight	105 g / 3.70 oz

A8 Serial Interface Accessories

Part Numbers		
Power Cable		
150-0073	1.83m/6ft	Cable; DC Power LEMO 0B 3-pin plug to Banana Jacks
150-0201-12IN	30.5cm/12in	Cable; A8 Pwr 3-pin JST to unterminated
Internal		
150-0187-5IN	12.7cm/5in	Cable; USB LEMO 0F 5-pin socket to JST 10-pin plug
150-0186-5IN	12.7cm/5in	Cable; USB LEMO 0B 5-pin socket to JST 10-pin plug
150-0119 150-0125	17.7cm/7in 30.5cm/12in	Cable; Power JST 2-pin plug unterminated
150-0191-10IN	25.4cm/10in	Cable; Coldstart 6-pin JST to 1 wire unterminated
150-0195-5IN	12.7cm/5in	Cable; 10-pin header to 16-pin OCDS
150-0226-5IN	12.7cm/5in	Cable; A8 (JST 14-pin) to CTE (LEMO 1F 8-pin)
USB		
150-0066-12IN 150-0066-8FT	30.5cm/12in 2.4m/8ft	Cable; USB-A to LEMO 0B 5-pin plug
150-0118-4.3FT 150-0118-6.6FT 150-0118-8FT	1.31m/4.3ft 2m/6.6ft 2.44m/8ft	Cable; USB-A plug to LEMO 0F 5-pin plug
150-0129-5IN	12.7cm/5in	Cable USB LEMO 0B 5-pin socket to JST 12-pin plug
150-0159-5IN	12.7cm/5in	Cable JST 12-pin 2MM plug to LEMO 0F 5-pin socket
150-0181-8FT	2.4m/8ft	Cable; USB-A to LEMO 0B 5-pin plug shield connected
150-0182-8FT	2.4m/8ft	Cable; USB-A to LEMO 0F 5-pin plug shield connected
150-0188	15.2cm/6in	Cable A8 SFMC 12-pin to SFM 10-pin FlexBd
Ethernet		
150-0227-10FT 150-0227-15FT 150-0227-25FT 150-0227-50FT	3.0cm/10ft 4.6m/15ft 7.6m/25ft 15.2m/50ft	Cable; CTE (LEMO 1F 8-pin) to RJ45 connector