M6
Memory Emulator

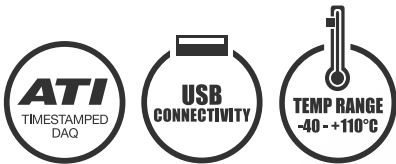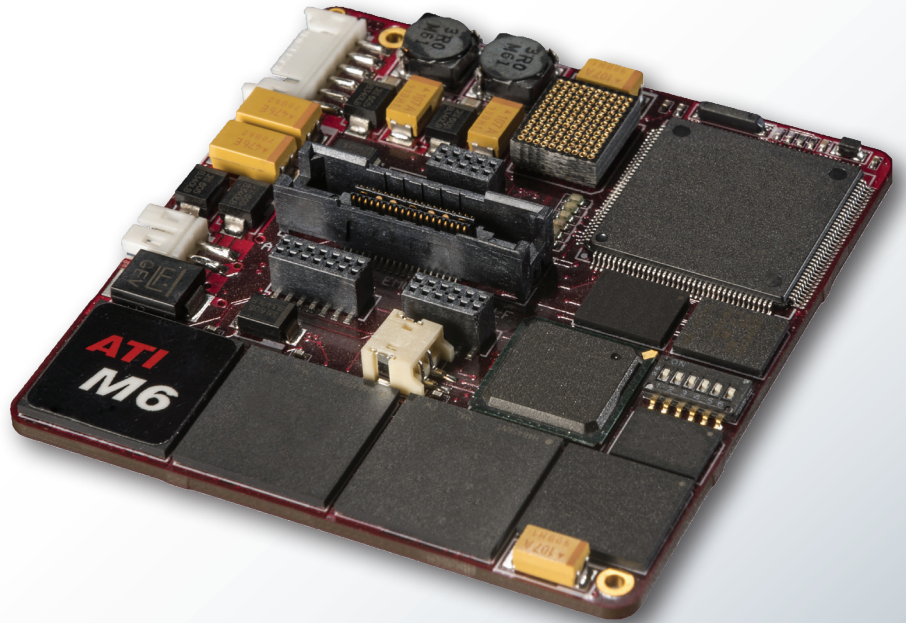**ATI** TIMESTAMPED DAQ

USB CONNECTIVITY

TEMP RANGE -40 - +110°C

Achieve typical measurement rates of 300 to 400 data items every 10 msec with exact time stamp accuracy using M6 Memory Emulators for calibration of ECUs.

This competitively priced, stand-alone solution with built-in USB interface provides full, plug and play compatibility without the need for any additional hardware or external modules. After connection of the M6 to the USB port, VISION™ software is used to easily configure the system for calibration.

Features

- M6 supporting the Freescale PowerPC MPC5XX Product Family
- M6V supporting the Freescale MPC5500 and MPC5600, VertCal compliant Product Family

ECU CALIBRATION

ECU RAPID PROTOTYPING

ECU INTERFACES

ACCURATE TECHNOLOGIES

Microcontroller Family	Interface
Freescale	
MPC5xx	Data and Address Bus
MPC5xxx	Data and Address Bus; Standard Vertical Interface
Infineon	
TriCore TC179x	Data and Address Bus

Please contact your sales representative for specific part numbers.

M6 Memory Emulator Assembly

Side View

7mm, M6
PCM Socket

M6 Memory Emulator Accessories

Part Numbers	Length	Description
Power Cable		
162-0020		M6 Isolated Power Supply
150-0073	1.83m/6ft	Cable; DC Power LEMO 0B 3-pin plug to Banana Jacks
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
150-0171-8FT	2.44m/8ft	Cable; USB/Power USB-A/Ring Terminal to LEMO 1F 8-pin plug
150-0181-8FT	2.44m/8ft	Cable; USB-A to LEMO 0B 5-pin plug shield connected
150-0182-8FT	2.44m/8ft	Cable; USB-A to LEMO 0F 5-pin plug shield connected
150-0162-8FT	2.44m/8ft	Cable; USB / Power USB-A / Banana to LEMO 1F 8-pin plug
Internal		
150-0119 150-0125	17.7cm/7in 0.3m/12in	Cable; Power JST 2-pin plug unterminated
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 plug to LEMO 0F 5-pin socket

ATI ACCURATE TECHNOLOGIES

M6 Memory Emulator Specifications

Configuration	
Microcontroller Types	M6-555: MPC555, MPC556 M6-563: MPC561, MPC562, MPC563, MPC 564 M6-565: MPC 565, MPC566 M6V: Freescale MPD5554/5553/5534/5533 M6T: Infineon M6T-TC179X: TC1796 Available with processor installed or processor socket
ECU Connection	Plugs into mating ECU processor socket
ECU Adaptation	The chip selects and microcontroller bus are configurable to allow the M6 to be adapted to various ECUs.
ECU Programming	Capable of programming internal and external ECU flash memory stand-alone (no need for separate flashing tools)
Memory	
Memory Access	8-bit, 16-bit or 32-bit burst data or asynchronous access Bus voltage 2.6 V or 3.3 V based on CPU (M6 is 5 V tolerant)
Emulation Memory	(2) separate banks of 1MB (for calibration bank swapping)
Data Acquisition Memory Size	512 Kb of dual-port RAM
On-board Flash Memory	8 MB flash for non-volatile emulation memory storage
Min Memory Access Time	16 ns
Calibration A/B Comparison	External switch input for selecting between two calibration data sets for comparison purposes without the need of a PC
Special Capabilities	
Power on/off	External wake-up and self-shutdown (e.g. vehicle cold-start)
Operation Conditions	
Communication	PC interface: USB full speed at 12 Mpbs To other ATI hardware: CAN standard ISO11898
Power Supply	6-18 VDC (2 power inputs provided, one for internal ECU connection, and one for optional external power supply)
Max Supply Current	400 mA at 12 VDC
Temperature Range	-40 °C to max +110 °C (85 °C normal) -40 °F to max +230 °F (185 °F normal)
Mechanical	
Dimensions	64 x 61 x 7 mm / 2.52 x 2.4 x 0.28 in (without CPU socket)
Construction	Special high temperature PCB material, humidity and vibration resistant

ATI ACCURATE TECHNOLOGIES

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ECU CALIBRATION   ECU RAPID PROTOTYPING   ECU INTERFACES

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