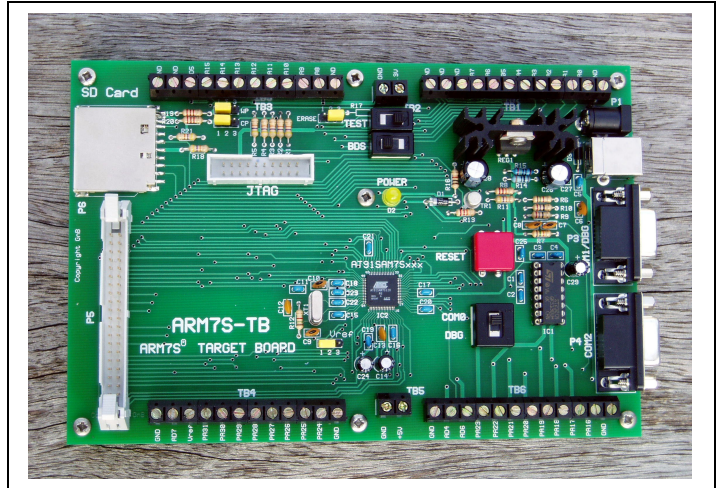# ARM7S-TB

ARM7S TARGET BOARD

ARM® micro-controllers are high performance 16/32-Bit RISC Core devices incorporating the ARM7TDMI® and are the fastest growing section of the micro-controller market.

ARM7S-TB is based on the Atmel® AT91SAM7S range of micro-controllers with high performance 32-bit RISC architecture and a high density 16-bit instruction set with real-time emulation and embedded trace support, which combine micro-controller with embedded high-speed flash memory.

The **ARM7S-TB target board fitted with the powerful Atmel AT91SAM7S128 "In System Programmable"** device.
Shown with optional STB fitted

The **AT91SAM7S128** is a high performance micro-controller with **128K bytes** of downloadable non-volatile FLASH EEPROM and **32K bytes** of SRAM.

Designed for **EDUCATIONAL** and **TRAINING** purposes but also ideal for **INDUSTRIAL DEVELOPMENT** applications, the **ARM7S-TB** target board is directly link-able to **Abitec's APPS-BD Applications board** with its wide range of features for student learning.

Software downloading to the target can be achieved via the on board JTAG connector or the USB port. Program download can also be achieved via the, 9 way D type, serial port connection.

A 40 way standard IDC connector on the ARM7S-TB facilitates full access to the controller's ports when used in industrial design and development applications but is also used for direct connection of additional teaching applications such as the Abitec Application board, 2mm I/O unit or Switch and Lamp unit. Access to the ports is also duplicated via optional screw terminal blocks allowing easy connection for demonstration or development purposes.

ARM7S-TB target board is manufactured as a 180 mm x 120 mm printed circuit board with through plated holes, solder mask and screen printed component identification.

The ARM7S-TB target board is supplied mounted on an acrylic base with rubber feet for stability whilst in use on the bench.

ARM7S-DATS HARDWARE

ARM7 Target Board Specification
- AT91SAM7S128 Atmel micro-controller.
- 128K Bytes of In-System Re-programmable downloadable FLASH memory.
- 32 K Bytes SRAM
- 8 channels of 10-bit ADC
- USB2.0 Full Speed Device Port
- 2 Enhanced USARTs
- SPI, SSC & TWI
- USART/DBGU interface
- SD Memory Card interface

- In System Programmable (ISP) downloaded via RS232, USB or JTag connections.
- All controller connections accessed via an IDC connector for external processor bus examination.
- PCB Dimensions: 180 x 120 mm
- Programmable UART serial port (via external 9 way D type connector) buffered by line receiver/driver
- On-board low-dropout voltage and reset generation. Generates +3.3V from a +5V supply.
- Powered from a simple unregulated 8 to 13V dc applied to 2.1mm connector (centre positive).
- Power On LED
- Can be powered via the USB connector.
- Up to 32 Programmable Input/Output lines accessible via IDC headers (3 lines allocated for in service programming).
- Screw terminal block option* to access the 32 I/O lines.
- Input/Output connections compatible with a range of Applications products (via 40 way header).
- Advanced Interrupt Controller (8 level priority)
- 2 wire UART & Support for Debug Communication Channel interrupt
- 20- bit Programmable Counter + 12-bit interval counter (PIT)
- 12-bit Programmable Windowed Watchdog Timer (WDT) providing reset and interrupt signals.
- 3 x 16 bit timer
- Hardware reset signal push button.
- Power supply, cable and technical manual (on CD-ROM) included.

ARM Board Connectors:

Standard fit
- RS232, female DSUB-9
- USB, type B connector
- MMC/SD memory card connector
- J-TAG socket
- 2.1 mm power supply connector
- 40 pin IDC expansion connector (APPS-BD compatible)

Optional fit
- Screw Terminal Blocks (4x12 way) access to signal lines
- Screw Terminal Block (2 way) access to on board 3.3V power
- Screw Terminal Block (2 way) access to USB 5V

ARM7S-TB target board is supplied in a rugged moulded storage case and is complete with the Technical/User Manual on CD-ROM, Serial cable, USB cable, Power supply and Student Tutorial/experiments book on CD-ROM.

Operating system requirements are Windows 2000, XP or above

Ordering Information

ARM7S target board (AT91SAM7S128 fitted)……....ARM7S-TB (specify UK, US or EU PSU))
Screw terminal option fitted to ARM7S-TB…....….....ST-OPT-ARM7S
Experiments Manual (paper copy)……………..….... EM-ARM7S
AT91SAM7S256 option (factory fitted only)…………S256-OPT