

ART 7500 Development System

- Choice of 16 or 32 bit wide memory systems
- 2, 4 or 8 megabytes of DRAM as standard
- Choice of I/O expansion routes
- Powerful software development system
- 16 bit stereo sound and high quality video

The ART 7500 development system allows ARM 7500 users to design software and hardware far quicker than using existing methods. The board contains extensive hardware support, with two expansion connectors and all the necessary components for sound and video including a 16 bit serial DAC. LCD support is an optional extra.

Multiple memory configurations are supported allowing the system to mimic the final design as closely as possible. Software development is aided by the on board operating system, which can be either DEMON or ART's powerful ARTOS which features support for many of the 7500's capabilities. By connecting the system to a PC, Sun workstation or HP/UX workstation, software can be downloaded and debugged, including the setting of breakpoints and single stepping of code.

The software includes C and C++ compilers, an ARM Assembler, Linker and debuggers. The debuggers are also capable of emulating many ARM processors allowing standalone development for much of the code.

ART also provides access to its highly experienced consultancy team, enabling the system to be customised to the user's requirements.

Possible applications

The system is delivered complete with an IDE socket, video Genlock connector and CD quality stereo sound system, making the development environment ideal for CD-based applications such as games or CD video systems using an optional MPEG card or ART's proprietary video system Replay.

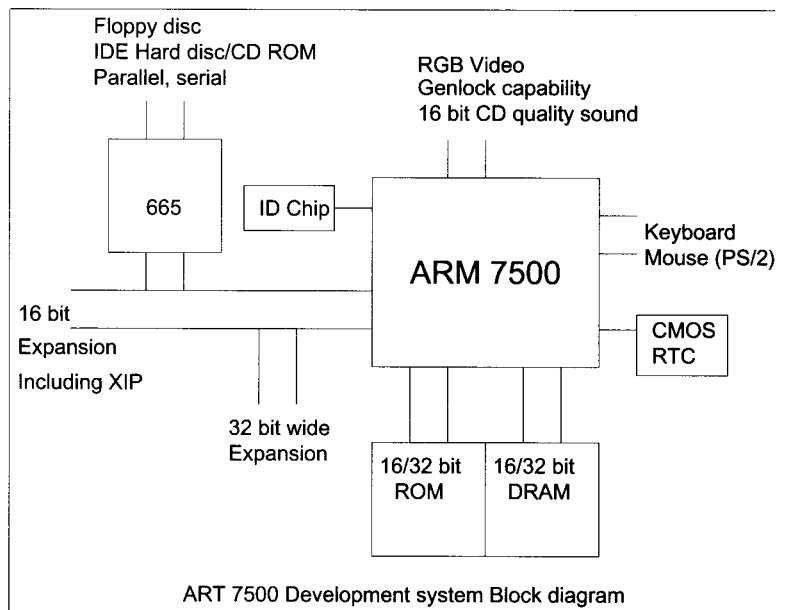
The ART 7500 Development System is also suitable as a base design for more embedded solutions, such as high performance hand-held / LCD-based equipment.

The 16bit expansion bus also supports Execute in place, so that software can be placed on a PCMCIA card and run directly from the card without using any DRAM. This could benefit solutions where code or data changes fairly regularly. PCMCIA is easily supported with ART's PCMCIA interface chip.

Using an optional network or modem card, the system could be used as a low cost networked entertainment device providing internet access or services on demand.

Performance

- Up to 48K dhrystones (32MHz FClock)
- Video displays in excess of 100MHz pixel clock
- DRAM access peak 64MBytes/s (32 on 16 bit wide systems) with 32MHz clock
- ROM access times down to 62.5ns (burst mode supported)



Hardware Specification

- 32MHz ARM 7500, site for alternative FClock.
- 2, 4, or 8 megabytes 32 bit wide DRAM or, 2 or 4 megabytes 16 bit wide DRAM, empty 32 bit SIMM socket.
- Two 16 bit wide ROM sockets, allowing 4 megabytes of ROM image.
- DEMON or ARTOS supplied in ROM.
- SMC665 'Combo' chip supplying floppy & hard disc interfaces along with parallel and serial. One floppy disc supplied as standard. Serial port used to connect with host PC for remote debugging.
- 16 bit stereo DAC.
- RTC, CMOS and unique ID chip.
- 16 and 32 bit expansion sockets.
- 35W universal PSU (auto-ranging)

Software Specification

- DEMON or ARTOS remote debugging environment, including floating point emulator
- Optimising C/C++ compiler
- Linker, Assembler and maintenance tools
- Choice of debuggers, ARM chip emulation

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