

StrongARM Upgrade for Risc PC

The Risc PC provides a standard of flexibility and upgradeability unrivalled on any other platform. A totally modular system, coupled with innovative mechanical and electrical design that enables the basic configuration to be extended at a later date.

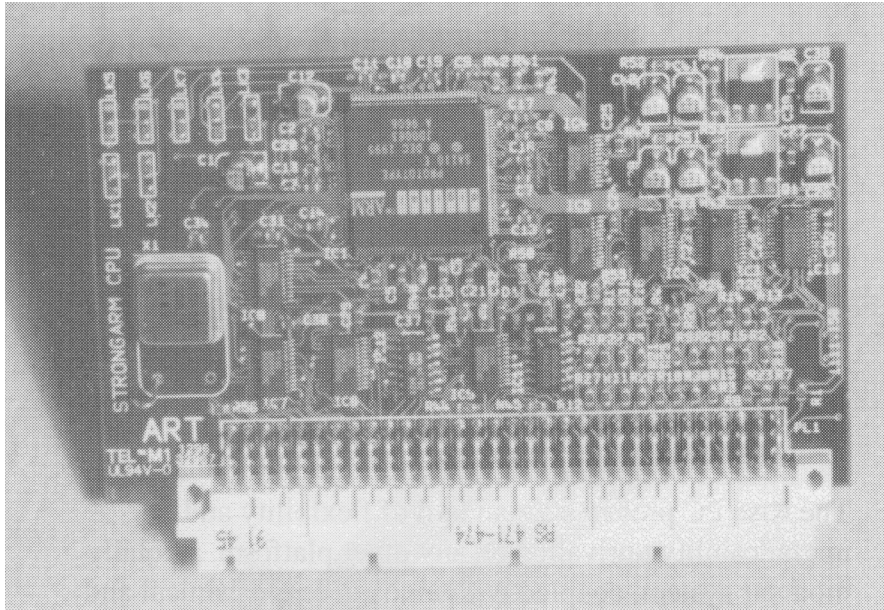
This ART StrongARM upgrade enables owners of existing 30MHz ARM610, 33MHz ARM610 or 40MHz ARM710 based machines to update the main processor to a 200MHz StrongARM SA-110 processor.

The performance improvement offered by StrongARM is staggering; opening and manipulation of windows is near-instantaneous, and with the 350k Dhrystones (equivalent to roughly 200 D-MIPS) of throughput which StrongARM delivers, the speed of all applications is dramatically improved.

By way of example, the following timings should give an indication of the typical improvement possible; as the system is still being optimised, it is likely that these results will be improved further in the production unit.

Interpolating 200 figures in ! Draw between two differently-coloured, closed, filled Bezier curves bounded by a black perimeter line took 38.0s on ARM710 and 5.2s on the StrongARM A global redraw on a desktop running !AWRender (Artworks renderer) of the "Apple" file in 32,000 colours took the ARM710 13.7 sec and 3.0 sec on the StrongARM

The ART StrongARM upgrade card will be fitted with a 200MHz SA-110, and can be installed in any Risc PC as a direct replacement for the existing ARM610 or ARM710 card. The new card will ship with a ROM set containing a new StrongARM-aware version of RISC OS; this version will contain all the features of RISC OS 3.6, along with other performance improvements such as improved task swapping. PC Card compatibility should not be affected.



Initial prototype StrongARM upgrade card (production cards may differ slightly)

Technical Overview

Processor Card

- SA-110 processor
- 3.6864MHz crystal
- Internal PLL synthesising 200MHz clock
- On card supplies for 3.3V I/O interface and 2.0V core logic
- Interfaces to the Risc PC OPEN bus standard

RISC OS Upgrade

- New version compatible with the StrongARM SA-110, ARM610 and ARM710
- Upgrade will include RISC OS 3.6 features - new Filecore, fast JPEG and Atapi CD ROM drivers
- Includes 4MByte page mode ROM
- Update to the hard disc image
- ROMs include !Edit, !Draw, !Paint, !Alarm, !Chars, !Help, Access and updated !Printers,

Physical Characteristics

- Card Dimension 108.0 x 62.9 x 1.6mm
- Power consumption approx.1W

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