

AccessionIndex: TCD-SCSS-T.20141115.001

Accession Date: 15-Nov-2014

Accession By: Dr.Brian Coghlan

Object name: SORD M685 Micro-mainframe with DF44H Floppy Disk Unit

Vintage: c.1984

Synopsis: Japanese MC68000-based microcomputer, running SORD UNOS operating system. S/N: 00143.

Description:

The M685 is a 32-bit micro-mainframe computer system made via a joint venture between SORD Computer Corporation, Japan, and Charles River Data Systems, Natick, Massachusetts 01760, USA.

This system is based upon the Motorola MC68000 microprocessor. It runs under the UNOS operating system, supports a multi-user timesharing system and supports FORTRAN, PASCAL, C, COBOL and assembler programming languages (eventually Lisp too). The M685 was intended as a host computer for 8-bit or 16-bit client systems and their local area network, and for design, manufacture and other technical applications.

See also:

<http://www.readabstracts.com/Computers-and-office-automation-industries/Sord-Computer-Unveils-32-Bit-Micro-Mainframe-M685-Hannover-Fair-84-Guide.html>

The following unverified information is from:

https://archive.org/stream/nzbitsandbytes-2-04/NZ-bits-and-bytes-issue-2-04_djvu.txt

The SORD M685 is a 32-bit 68010/68020 based minicomputer (they call it a "micro mainframe". It will support four to twelve terminals for less than \$US40,000. A processing speed of 1.25 32-bit MIPs (million instructions per second) makes a humble Z80A-based machine 10.3 8-bit MIPsI look rather sad. Published user benchmarks for this system have put it faster than the VAX 11/730 and in the same league as the VAX 11 /750 (both DEC minicomputers). Best of all, a joint venture between SORD and Charles River Data Systems of Massachusetts, has given the M685 full software support in the form of UNOS, a UNIX compatible operating system.

In particular the machine in the SCSS collection has (two) MC68000 CPUs instead of 68010/68020 CPUs, so may use an earlier CPU board than that referred to above, and hence may have lower performance.

The SORD M685 incorporates a Versabus chassis, with a dual-MC68000 CPU board, a DRAM board, a floating-point accelerator board and a disk controller board. The M685 in this collection includes a DF44H M685 external dual 8-inch floppy disk unit.

Accession Index	Object with Identification
TCD-SCSS-T.20141115.001.01	SORD M685 Micro-mainframe Chassis
TCD-SCSS-T.20141115.001.02	CPU board. Includes: 1 x MC68000L2 GN78316 1 x MC68000G8 GN78305 1 x EPROM 'UNBUG 20-S1 ODD' 1 x EPROM 'UNBUG 20-S1 EVEN' 8 x Am2149-45DC 4 x HM6116P-3 2 x Z8530 1 x MC68B40P 1 x MC146818P P/N: 05-30406 Rev J, S/N: 8308040
TCD-SCSS-T.20141115.001.03	'DATARAM' DRAM board. Includes: 2 x Am2960 ((8x20)-4)=156) x HM4864P-2 Marked '???omptronix'
TCD-SCSS-T.20141115.001.04	SKYFFP-VBS-01 1983 Floating-Point Accelerator board. Includes: Weitek WTL1016JC '8245' 16 x 16 multiplier 4 x NS IDM2901A-2NC Marked MC2V0 2083
TCD-SCSS-T.20141115.001.05	Disk Controller board. Includes: 1 x Intel i8031 microcontroller P/N: 05-00279 Rev J, S/N: 8308063
TCD-SCSS-T.20141115.001.06	SORD DF44H M685 External Dual 8-inch Floppy Disk Unit. P/N: DF44H, S/N: 3K010



Figure 2: SORD M685 three-quarter view



Figure 3: SORD M685 front top view



Figure 4: SORD M685 front view



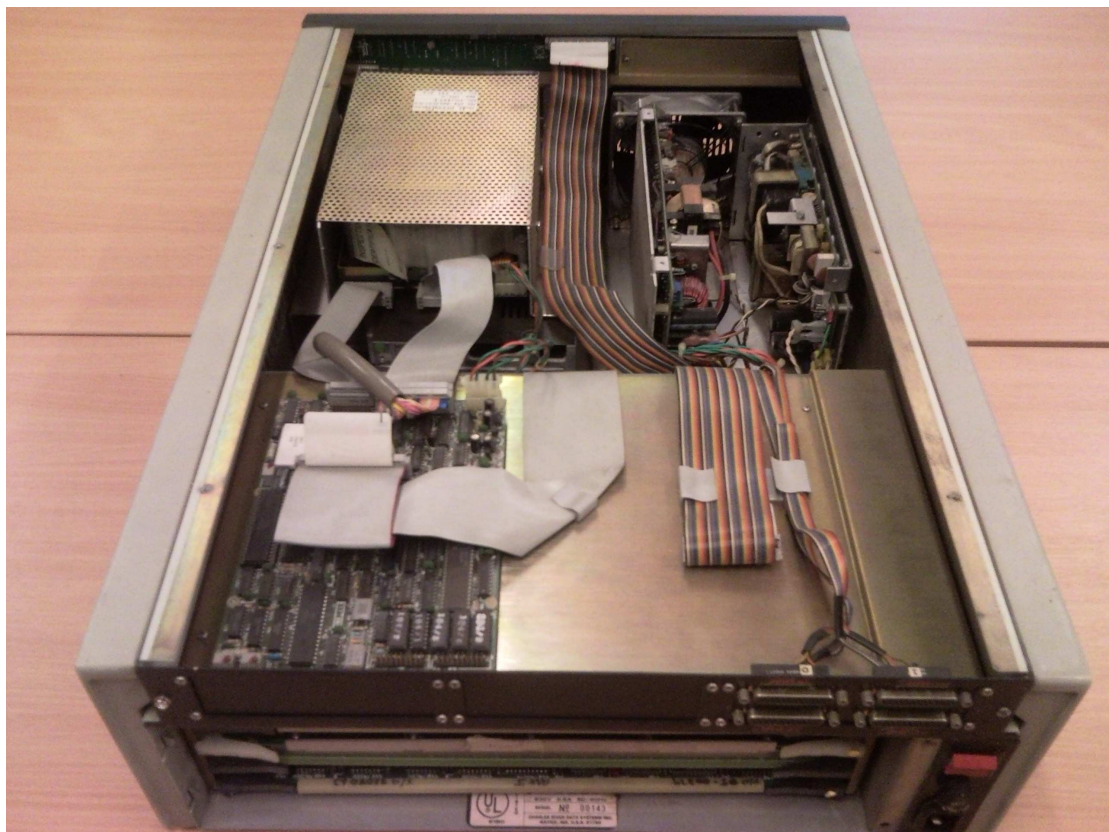
Figure 5: SORD M685 control panel



Figure 6: SORD M685 rear view



*Figure 7: SORD M685 serial number 00143
Visible at base when rear panel is removed*



*Figure 8: SORD M685 rear top inside view
MFM disk controller bottom left, hard disk top left, power supply top right*

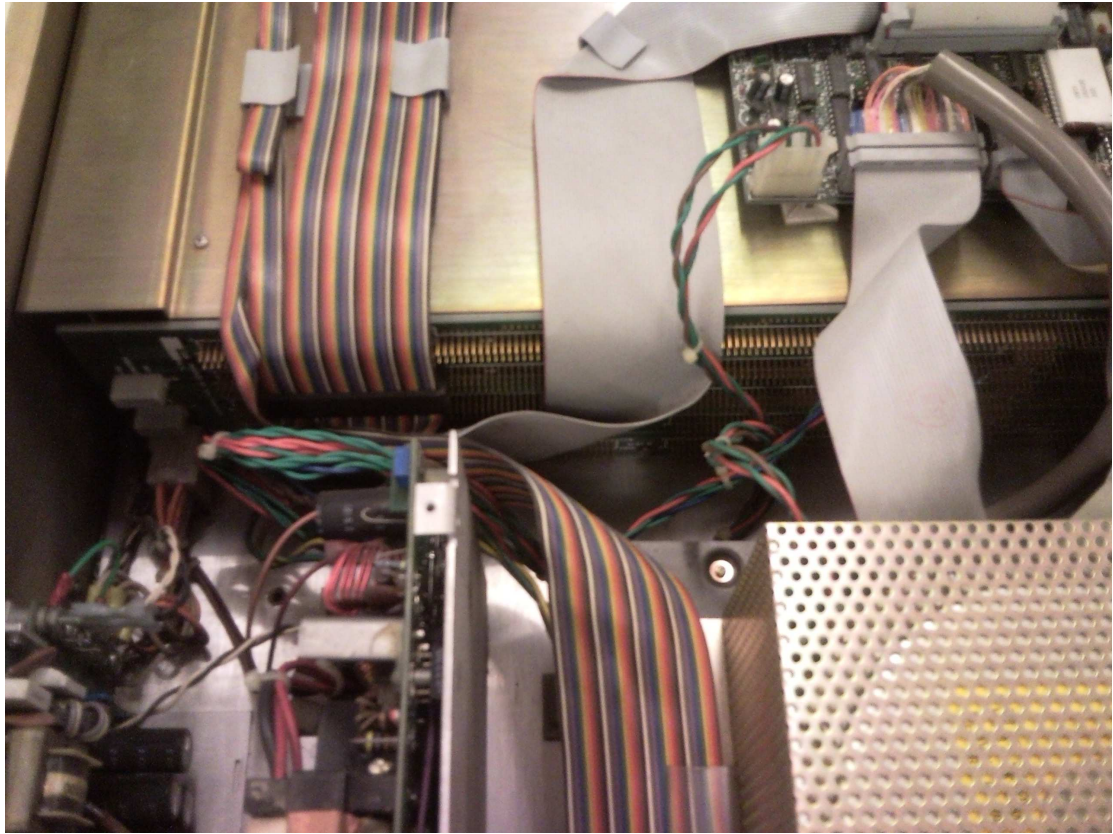
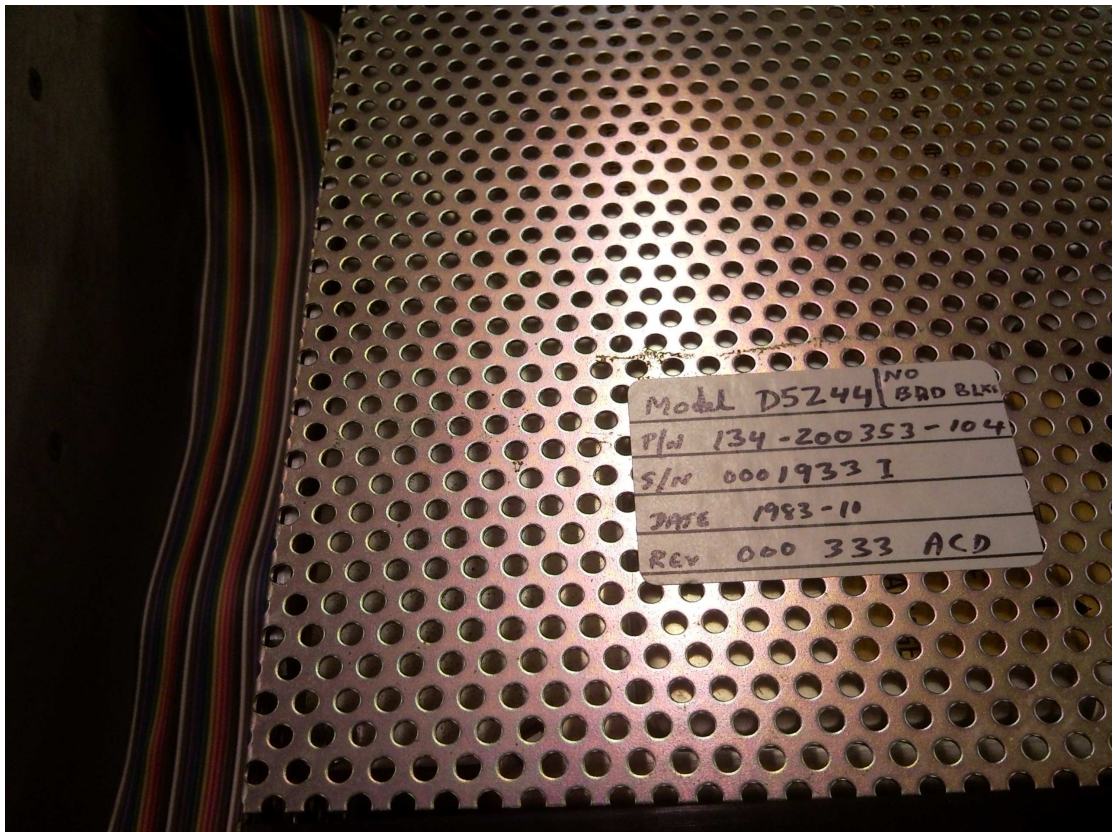
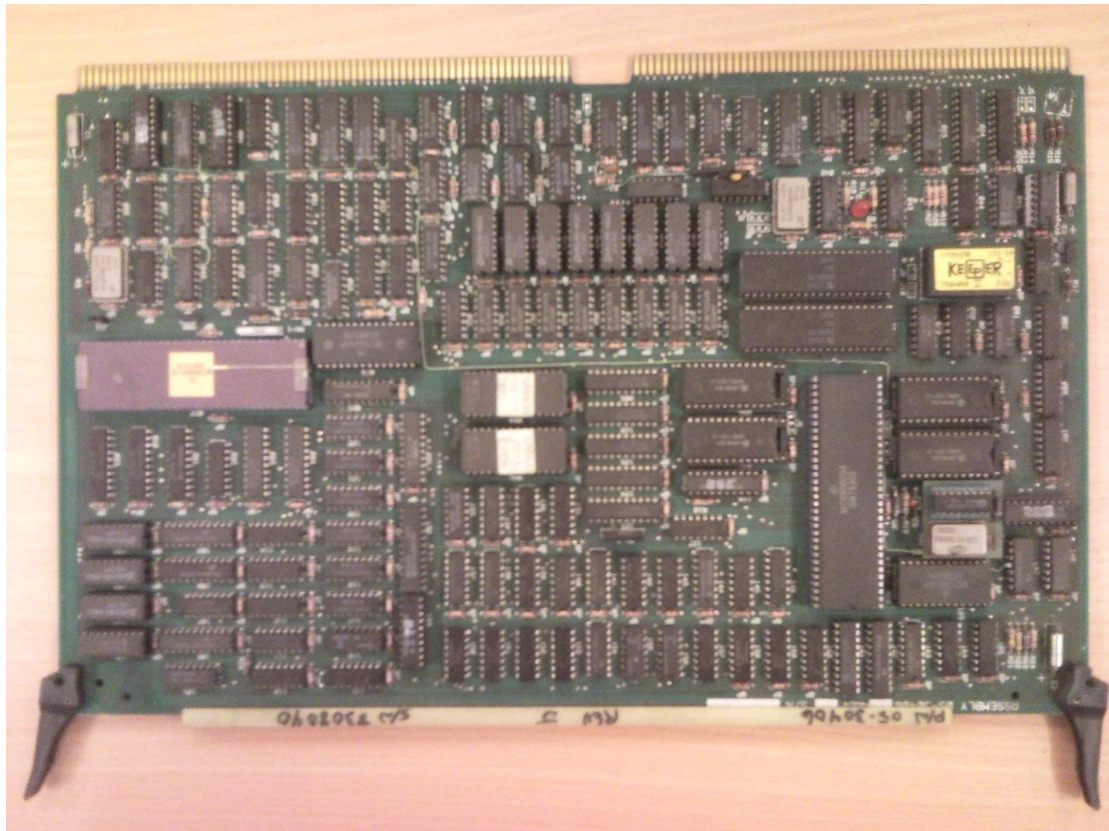


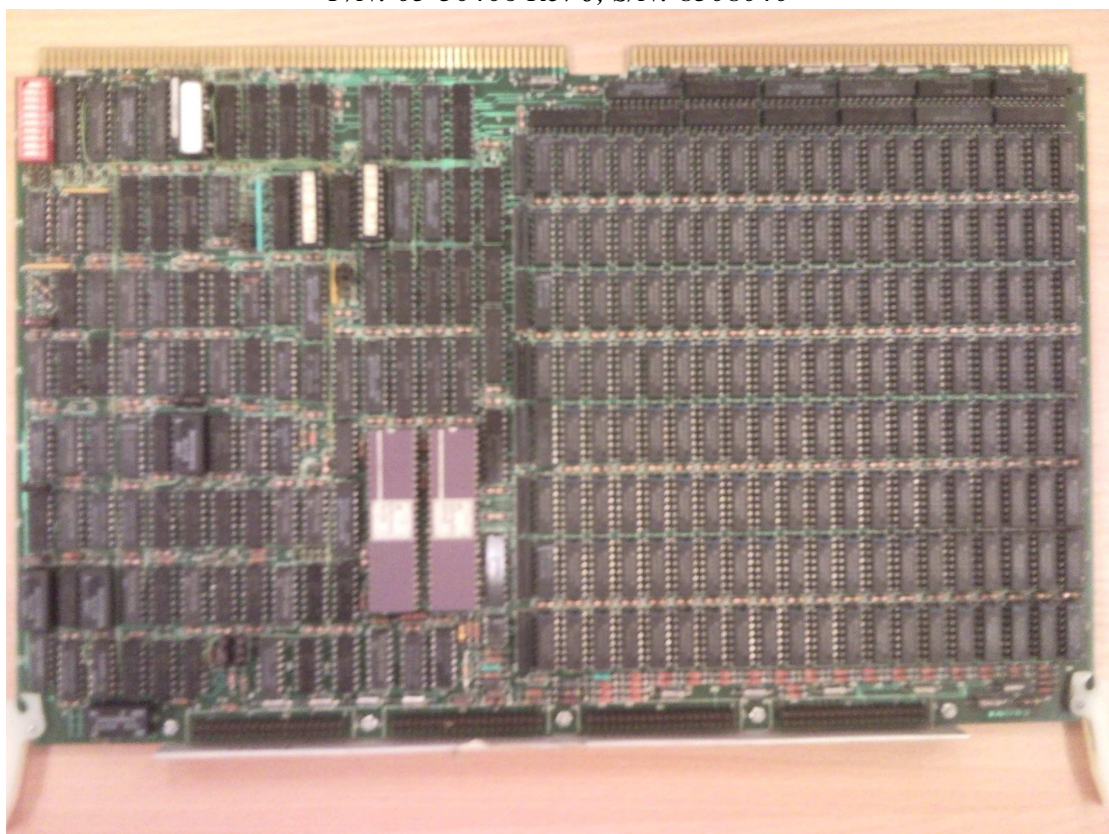
Figure 9: SORD M685 view of Versabus backplane



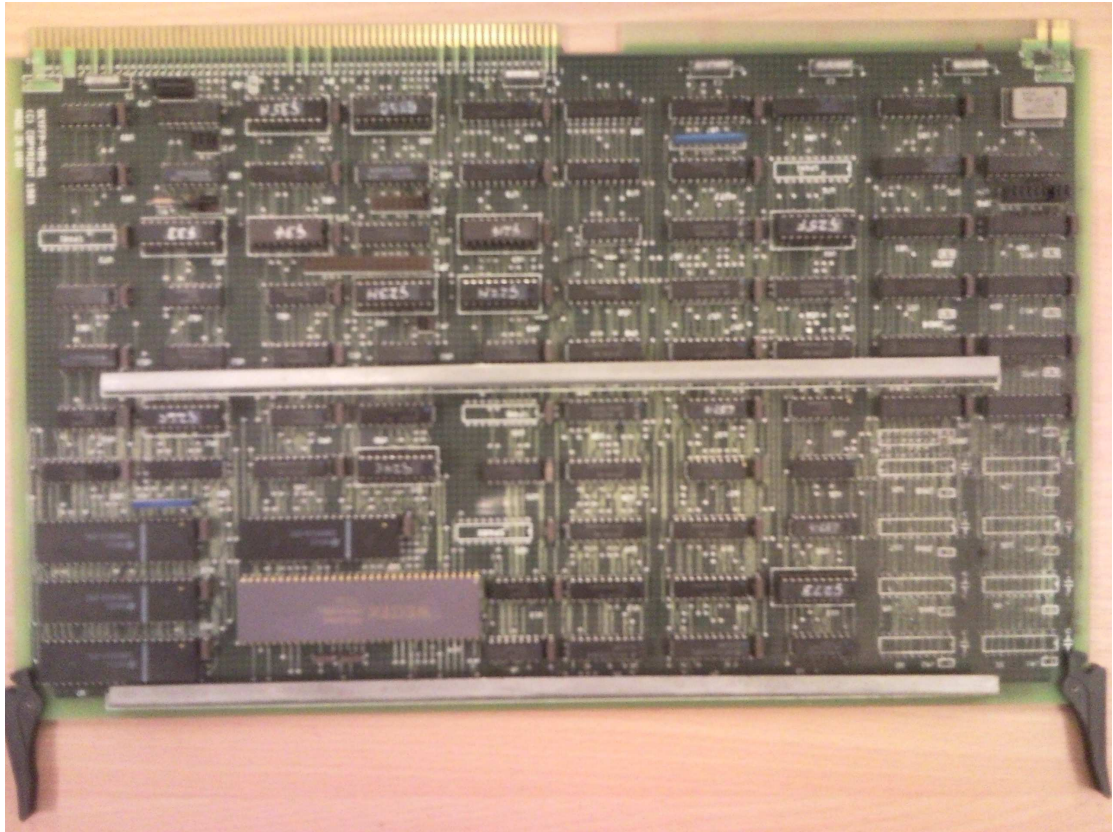
*Figure 10: SORD M685 NEC D5244 MFM hard disk
Model D5244, P/N: 134-200253-104, S/N: 0001933 7*



*Figure 11: SORD M685 CPU board
P/N: 05-30406 Rev J, S/N: 8308040*



*Figure 12: SORD M685 DRAM memory board
Labelled 'DATARAM', also marked '???omptronix'*



*Figure 13: SORD M685 floating-point accelerator board
SKYFFP-VBS-01 1983 'MC2V0 2083'*

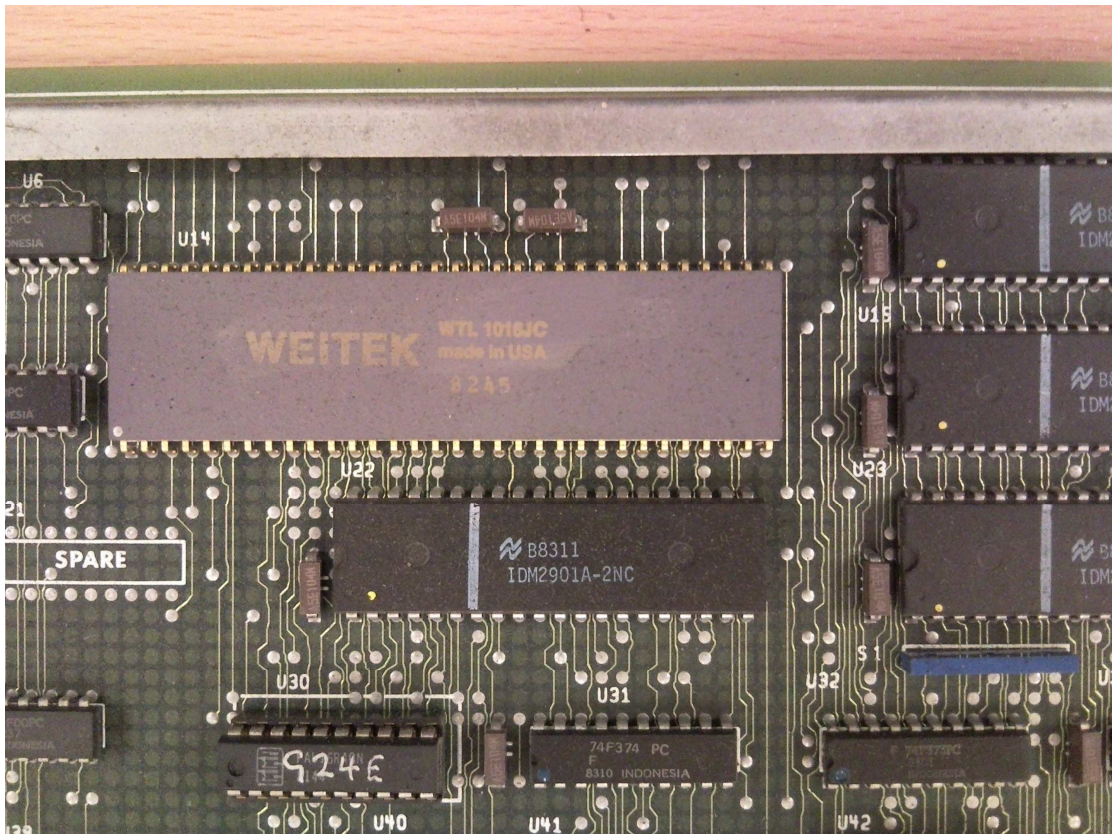
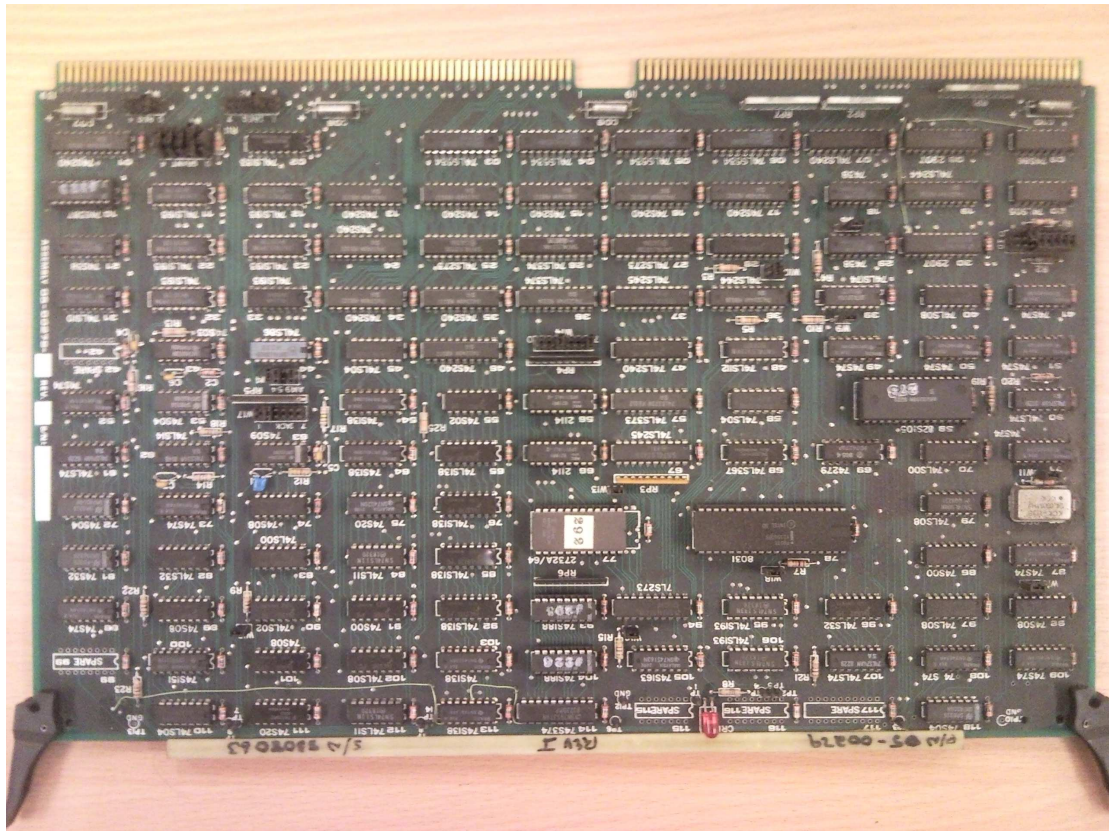


Figure 14: SORD M685 floating-point accelerator, closeup of Weitek FPU chip



*Figure 15: SORD M685 disk controller board
P/N: 05-00279 Rev J, S/N: 8308063*

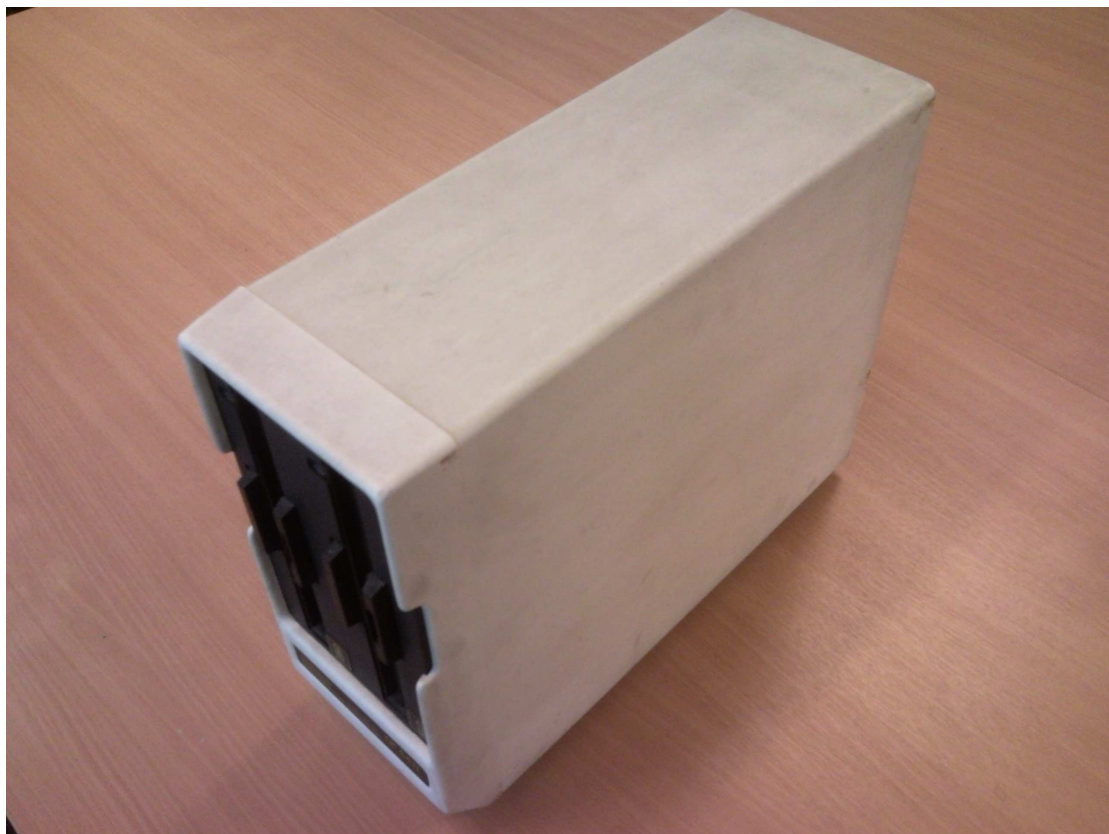


Figure 16: SORD DF44H floppy disk unit three-quarter view



Figure 17: SORD DF44H front view



Figure 18: SORD DF44H front label



Figure 19: SORD DF44H rear view



Figure 20: SORD DF44H serial number 3K010

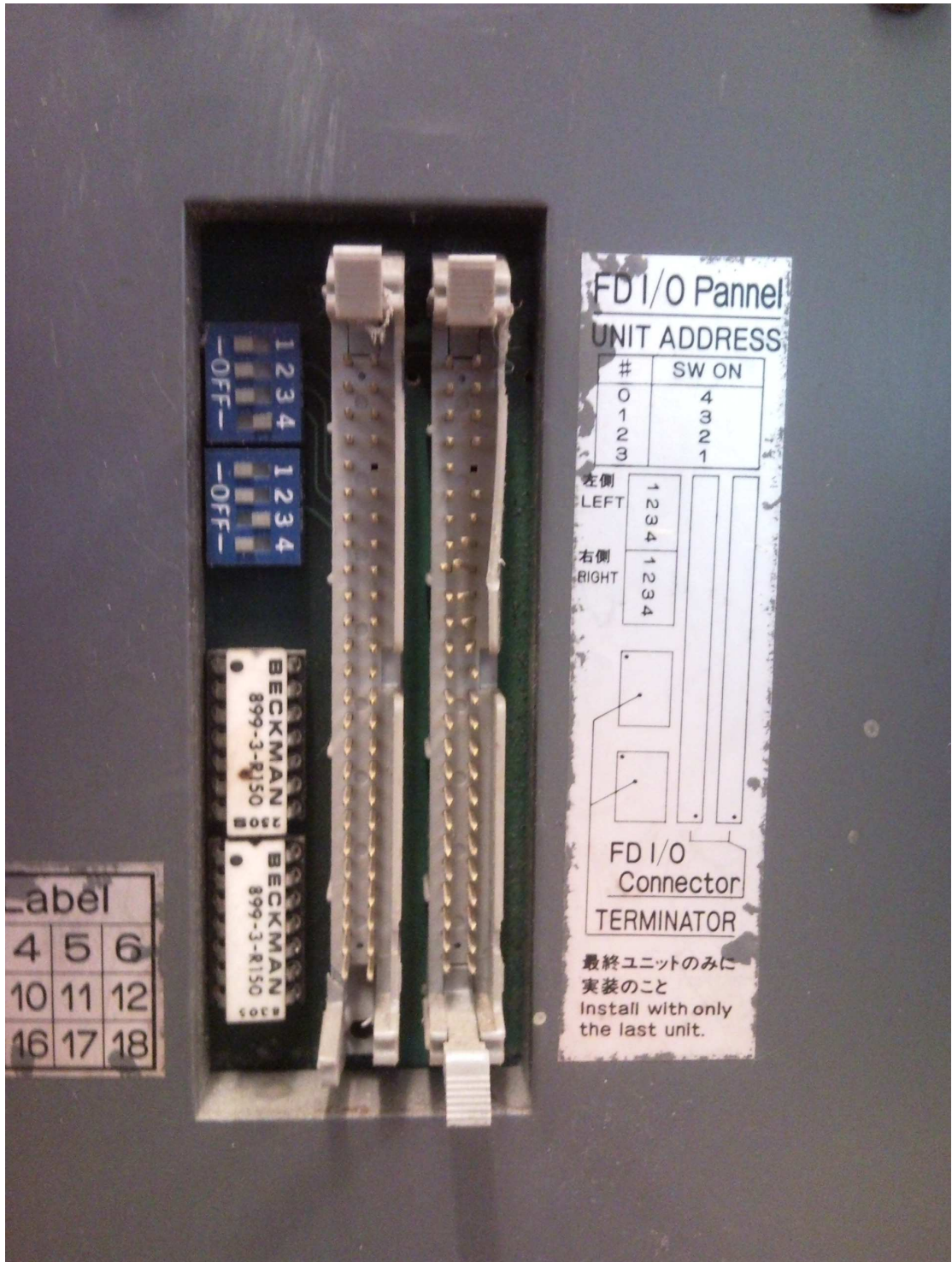


Figure 21: SORD DF44H input/output connections