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Philips P851M
MicroMini



PHILIPS

Data
Systems

PHILIPS

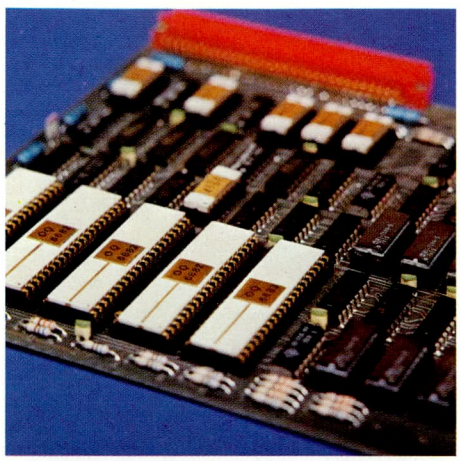
Microtechniques in mini form

You've no doubt heard of microprocessors. You know that they have revolutionised many products and processes for one very simple reason: a microprocessor offers intelligence at low cost. The only problem is that the low cost only comes with large quantities, due to the ever-increasing costs of developing and implementing the dedicated software for each specific application. Philips have developed the P851M MicroMini with this in mind as an extension to the P800M family, consisting of the P852M, the P856M and the powerful 128K words P857M, including a wide range of proven software. This enables easy programming at a low cost.
So we combined the best of both worlds:
the advantages of microprocessors and the flexibility of mini computers.

Tailored to your application requirements
For many applications mini computers are too powerful. Their high speed, easy programming, and system and application software are not really needed. But there was no real alternative.

Then microprocessors came along with incredibly low hardware costs - an LSI chip containing the computing power of the large computer of 20 years ago. But programming implementation of a microprocessor is more complicated than with minis, and therefore more expensive.

Now Philips offers the solution. If you've been looking at minis and thinking about micros, this is the one for you. A micromini, that's big on benefits. The P851M MicroMini.



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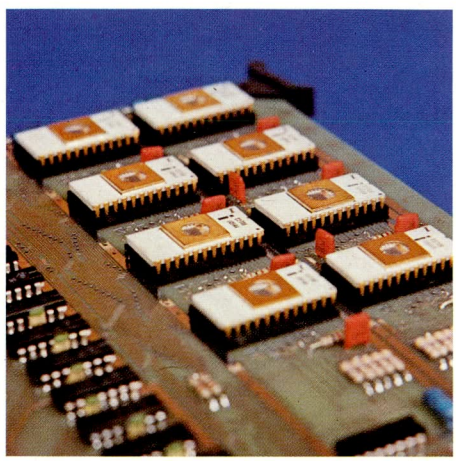

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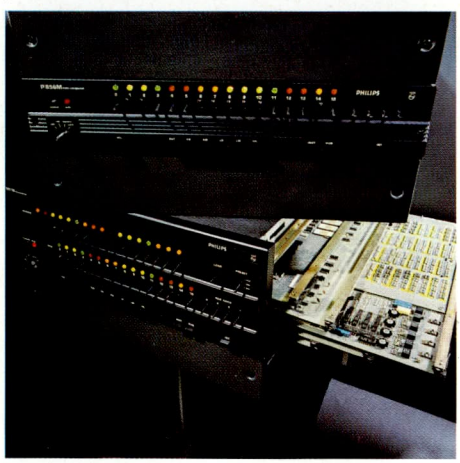

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1 LOCMOS LSI chips and Bootstrap ROM
2 REPROMs easy to plug in
3 P856M and P857M mini computers

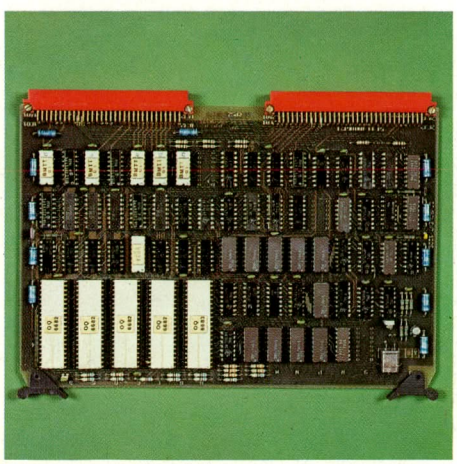
Benefits of the P851M MicroMini

Easy systems design: the P851M MicroMini has a simplified general-purpose bus with ample expansion capability for peripheral controllers, standard I/O and custom designed boards as and when required.

Easy systems building: the P851M MicroMini uses European standard vertically mounted printed circuit cards and mechanical components based on a 19″ wide rack. Full front access facilities and peripheral cabling simplify wall mounting when required.

Advanced techniques: the P851M MicroMini uses Philips developed and manufactured LOCMOS LSI, that features high speed, low power consumption and excellent noise immunity - ideally suited to industrial applications. REPROM cards are available for permanent storage of your application programs. Software monitors are supplied on ROM.

Easy servicing: diagnostic capability supplied as standard in the mini panel enables the user to perform first line maintenance.



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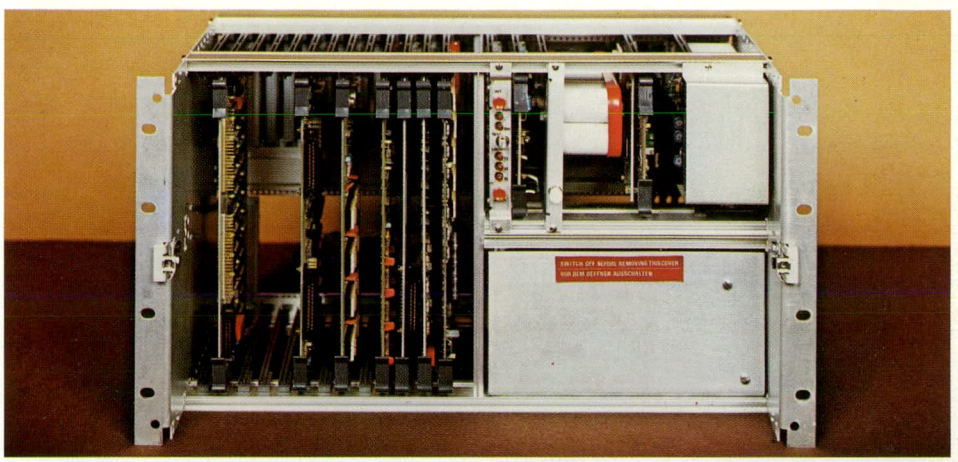


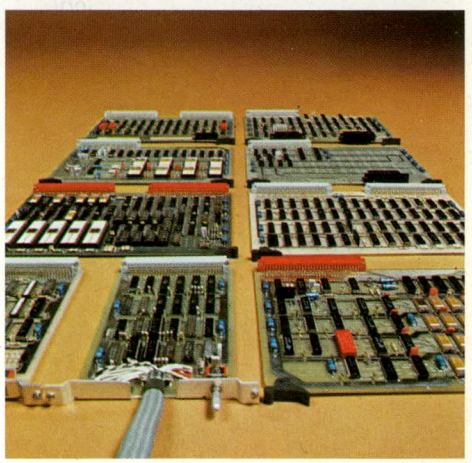
2

Options: a wide range of options include full programmers control panel - battery back-up - peripheral control units - blank circuit boards for user designed interfaces - extension chassis to full General Purpose Bus.

Industrial interfaces: a new cost effective range of interface cards for digital and analog I/O can be mounted directly into the CPU chassis.

Proven applications: the P851M MicroMini is the latest addition to the Philips P800M family - a family that is already proven in all major application areas.

Compatibility: by standardizing on the P856M instruction set, full software compatibility of the P851M MicroMini is ensured, as well as enabling future extensions with the other members of the P800M family.



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P851M:
the Euro-MicroMini in the Euro-format.

1 P851M CPU on double Euro-card
2 P851M features full front access facilities
3 P851M standard printed circuit cards

PHILIPS DATA SYSTEMS B.V.

MARKETING GROUP SMALL COMPUTERS
P.O. Box 245, Apeldoorn, The Netherlands
Phone: 055-230123; telex: 49142

For further details contact the above address or:

Sweden
Svenska AB Philips
Data Systems
Minidatorer
Rissneleden 16
Fack
172 07 Sundbyberg
Tel. 08 830300

Denmark
Philips Data Systems A/S
Prags Boulevard 80
2300 København S
Tel. 0127 2222

Norway
Norsk A/S Philips
Data Systems Division
Nils Hansens vei 2
Oslo 6
Tel. 02 679380

Finland
OY Philips AB
Department Data Systems
Kaivokatu 8
P.O. Box 10255
Helsinki 10
Tel. 90 17271

Belgium
Philips Data Systems SA
Marketing Group Small Computers
Anspachlaan 1
1000 Brussel
Tel. 02 2193900

France
Philips Data Systems
Département Mini-ordinateurs
5 Square Max-Hymans
75015 Paris 15
Tel. 01 734 7759

Western Germany
Philips GmbH-Eiserfeld
Bereich Prozessrechner
Münsterstrasse 330
4 Düsseldorf 30
Tel. 0211 632087

Höhenstrasse 17
7012 Fellbach bei Stuttgart
Tel. 0711 523086
523088

Austria
Österreichische Philips GmbH
Industrie Elektronik
Breitenfurterstrasse 219
1230 Wien
Tel. 0222 831501

Italy
Philips S.p.A.
Sezione S and I
Viale Elvezia 2
20052 Monza
Tel. 039 361441

Switzerland
Philips AG
Data Systems
Binzstrasse 18
8027 Zürich
Tel. 01 442211

Great Britain
Philips Data Systems
Elektra House
2 Bergholt Road
Colchester
C04-5AA Essex
Tel. 206 5115

The Netherlands
Philips Data Systems Nederland B.V.
Bordewijkstraat 4
Rijswijk (Z-H)
Tel. 070 906720

Spain
Philips Ibérica S.A.E.
Grupo Instrumentación
Martinez Villergas 2
Madrid 27
Tel. 091 4042200

Japan
Nihon Philips Corporation
P.O. Box 13
World Trade Centre
Hamamatsu-cho, Minato-ku
Tokyo 105
Tel. 03 435 5211

U.S.A.
North American Philips Corp.
Dept. 007
100 East 42nd Street
New York N.Y. 10017
Tel. 212 697 3600

Canada
Philips Electronics Industries Ltd.
Telecommunication Division
1001, Ellesmere Road
Scarborough 706
Ontario
Tel. 416 7521980

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Check your reasons for chosing Philips P851M MicroMini

• Philips P851M MicroMini combines the economics and efficiency of the latest microcomputer LSI technology with the application advantages of the flexible general purpose mini computer systems.

• Philips P851M MicroMini is a member of the well-known Philips P800M series of mini computers. Upwards and downwards software compatible with the P852M and P856M, for easy software development - the P851M instruction set is identical to that of the P856M.

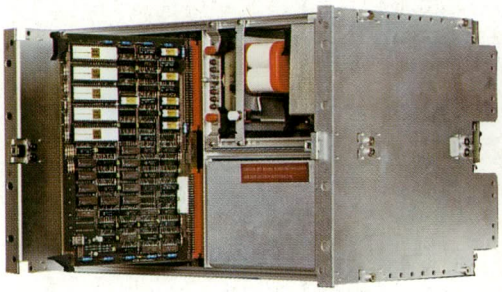
• Philips P851M MicroMini features Euro-card formats. A minipanel for diagnostics is available, permitting first line maintenance through which maintenance cost are reduced.

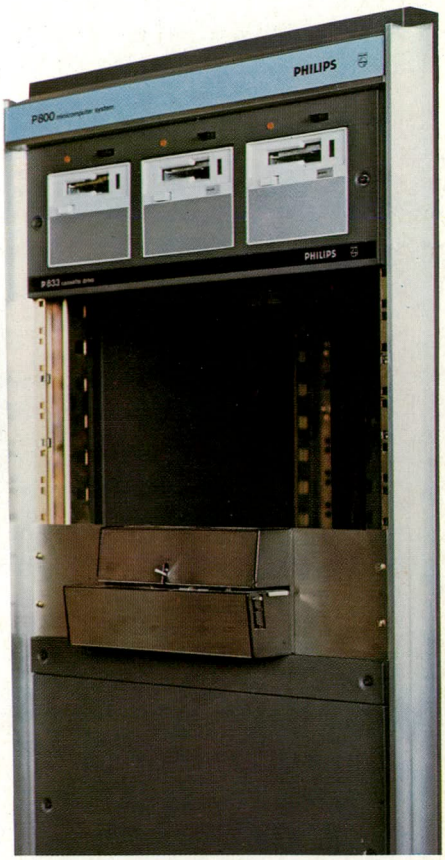
• Philips P851M MicroMini **(mind you, a micromini)** can be equipped with one of the most flexible, most powerful industrial interface systems developed: MIOS-6, a Modular Input Output System.

• Philips P851M MicroMini covers a wide range of applications, from the simple one, using a pre-programmed REPROM to the more complex applications where it appears as a mini computer. Application programs can either be developed on the P851M or on another Philips P800M family mini computer system.

• Philips P851M MicroMini uses Philips LOCMOS LSI circuitry.

• Philips P851M MicroMini applies the same high standards as are set for any other Philips product: quality, reliability and continuity.





P851M fits in standard 19" cabinetry

Why Philips?

Philips is one of the world's largest electrical/electronic companies, with highly diversified production facilities on all five continents, employing 400,000 people. Throughout the world the name Philips stands for a high degree of quality and reliability, be it in the field of home appliances, chemical analysis, industrial control or medical systems.

In the world-famed Philips Research and Development centres scientists are working with micro electronics to create extremely versatile, flexible and cost effective data processing and control systems. Equipment reflecting the latest state of technological achievement. Systems that can be tailored to the exact application requirements of the users. Systems that are carefully designed for maximum ease and security of operation.

Though microminis are a new product, they require a wide experience with the manufacturer in the application field. Components interface systems, software packages, cabling, cabinetry, powering, it all has to be attuned to user requirements. Mini computer manufacturers do have this experience.

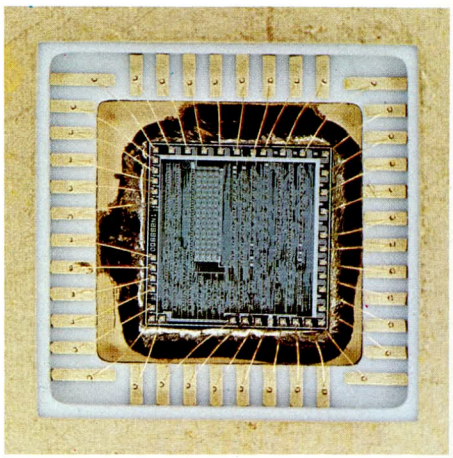
Philips have a vast experience of over 20 years in computer techniques; not only in research and development from components through small and large computers to complicated data communication networks, but also as one of the largest users of a great number of their own computers in a wide variety of applications.

Philips is European and thus well aware of and acquainted with the specific requirements of the European market. Reliability, for example, is one of the most important requirements. The best assurance of reliability we can give is "We use them ourselves".



1

As with mini computers continuity is another top requirement of micromini users. Continuity on microprocessor level is ensured through close cooperation with the Philips associated Signetics Corporation in the USA. In Europe Philips Electronic Components Division have designed and are manufacturing special LSI chips for the Philips P851M MicroMini. This means that from chip to software and from connectors to peripherals Philips combine the latest technology and in-house experience, and does take responsibility for interface and software continuity by being independent from others.



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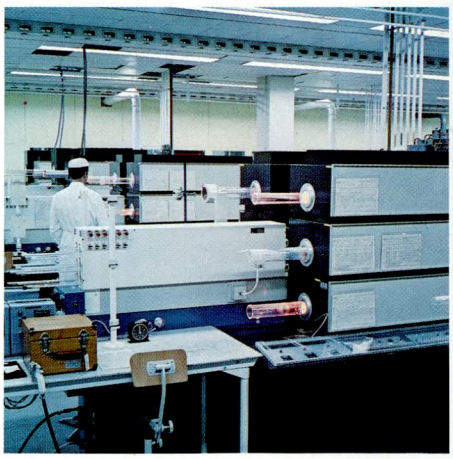

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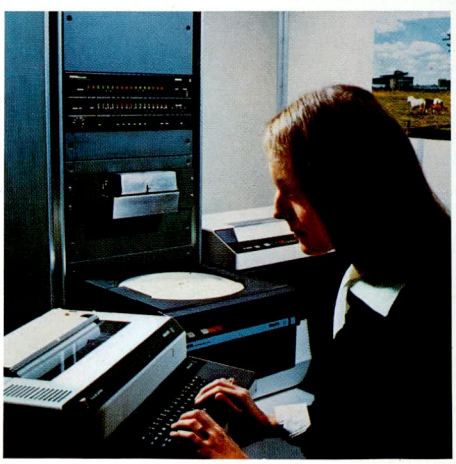

4

1 *Mounting of LSI chips at Philips factory, Nijmegen, Holland*
2 *LSI technology*
3 *Silicon diffusion furnaces at Philips factory, Nijmegen, Holland*
4 *P851M program development on P856M mini-computer configuration*