MP-51 Programmer

EPROM, Flash, PLD and Microcontroller Programmer

FEATURES

- **EPROM, Flash, PLD and Microcontroller Programmer**
- **Serially Linked to PC or Compatible Host**
- **Programs all the 8051 Microcontrollers**
- **Programs 16-bit Microcontrollers**
- **Supports 24 to 32-pin EPROMs and 32-pin Flash Memories**
- **Programs PLD Devices**
- **Macros and Easy to Follow Menus**
- **Handles Hex, Binary, Object and JEDEC Files**
- **Programs DIP, QFP, LCC and PLCC Devices**
- **Supports Lock Bits, Encryption Tables and Security Bits**
- **Includes Format Converters**

DESCRIPTION

MP-51 is an EPROM, Flash Memory, PLD and Microcontroller Programmer dedicated to standard 24 to 32-pin EPROMs, all of the microcontrollers belonging to the 8051 family, 16-bit microcontrollers, high density PLDs and flash memories. Its modern design provides a high performance instrument, which is easy to use and conveniently sized. MP-51 operates with an IBM PC or compatible personal computer and carries out a set of powerful functions on the selected device. An RS-232 interface is used to link MP-51 to a PC. The unit consists of the instrument

Adapters are available for all the possible packages such as DIP, LCC, PLCC and QFP. MP-51 software handles a PC Memory Buffer where code is loaded from a disk or filled with the contents of a device. Furthermore, this buffer may be saved on a disk file, parts of the buffer can be moved from one location to another filled with a constant or modified by the user. The Memory Buffer can be displayed, and finding values or strings in it is possible. Before programming, MP-51 checks if the installed adapter is compatible with the device type selected by the user. This test is done before programming any device. MP-51 has the capability to check if the device is totally erased, and can also compare if the contents of the plugged device are equal to the contents of the Memory Buffer. Address range can be specified for both operations. MP-51 allows the PLD or microcontroller security capabilities to be enabled or disabled and handles the Lock Bit 1, Lock Bit 2, Lock Bit 3 and the Encryption Table available in several Microcontrollers.

SPECIFICATIONS

SUPPORTED DEVICES

Following is a list of supported devices:

EPROMs: 2716, 2732, 2764, 27128, 27256, 27512, 27010, 27020, 27040, both NMOS and CMOS versions for all the available programming voltages

FLASH MEMORIES: 28F256, 28F512, 28F010, 28F020

8/16 BIT MICROCONTROLLERS: 8751H, 8751/2BH, 87C51/2/4/8, 87C51FA/B/C, 87C51GB, 87C51RA/B/C, 87C51RA/B/C/D+, 87CL134, 87C251SA/B/P/Q, TSC87251G1/2, TSC87251G1D, 87C451/3, 87C504/8, 87C520/530, 87C524/8, 87C550, 87C552/4, 87CE560, 87C575/6, 87C592, 87CE598, 87C652/4, 87C748/9, 87C750/1/2/4, 87C766, 87C770, 87CL880/1/3/4/6/7/8, 87C054/5, AT89C51/2/5, P89C52/4/8, P89C51RC/D+,

SUPPORTED DEVICES: AT89S8252, AT89S53, P89C536/8, 89CE558, AT89C1051/2051/4051, P51XAG17/27/37, P51XAS37, PCD3745/55/56A, PCA5007/10, PCA5097, PCD50917/27/37/57, PCD6002, SAB-C501G-1E, SAB-C504-2E, SAB-C505CA-4E, SAB-C513A-2E

PLDs: AT22V10, ATV750, ATV2500, ATV5000, ATV5100

FILE FORMATS

MP-51 loads different file formats: Intel Hex and Motorola S-records, Binary files, Object files and JEDEC files. It saves portions of memory in Intel, Motorola, Binary and JEDEC formats.

USER SOFTWARE

The system comes with MS-Windows software. This software is powerful yet extremely user friendly.

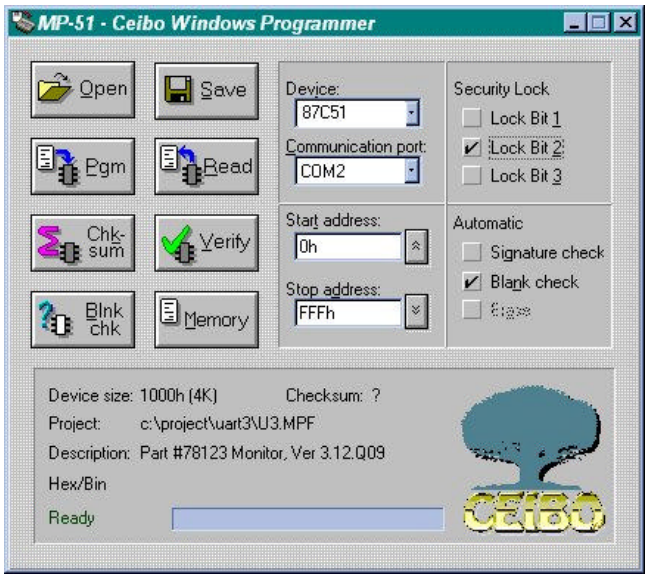

Figure 1: MP-51 Windows Software

COMMAND SET

The available functions include: TYPE, BLANK CHECK, SECURITY, PROGRAM, COMPARE, CHECKSUM, MOVE, MODIFY, DUMP, LOAD, SAVE.

HOST CHARACTERISTICS

IBM PC or compatible systems with 8 MBytes of RAM, one RS-232 interface card for the PC, DOS or MS-Windows (3.1x, 95, NT or later) operating system.

INPUT POWER

85VAC to 265VAC, 50Hz to 60Hz. That makes the unit suitable for any country outlet.

MECHANICAL DIMENSIONS
MP-51 is 155mm long, 60mm high and 250mm wide.

ADAPTERS AND SUPPORTED DEVICES
The following list shows which adapter should be used for the different supported devices.

Adapter	***Supported Devices***
EPROMs and Flash Memories:	
27040D - 32 PIN DIP	27C010 to 27C040, 28F256, 28F512, 28F010, 28F020.
27040P - 32 PIN PLCC	27C010 to 27C040, 28F256, 28F512, 28F010, 28F020.
27512D - 28 PIN DIP	2716 to 27512 NMOS and CMOS.
27512P - 32 PIN PLCC	2716 to 27512 NMOS and CMOS.
8/16 BIT Microcontrollers:	
87C51D - 40 PIN DIP	8751H, 8751/2BH, 87C51/2/4/8, TSC87C51/2, 87C51FA/B/C, 87C51RA/B/C, 7C51RA/B/C/D+, 87L51FA/B/C, 87L52/4/8 87C504/8, DS87C520/30, 87C524/8, 87C550, 87C652/4, AT89C51/2/5, T89C51RA/B/C/D2, P89C52/4/8, P89C51RA/B/C/D+, AT89S8252, AT89S53, P89C536/8, SAB-C501G-1E, SAB-C513A-2E
87C51P - 44 PIN PLCC	8751H, 8751/2BH, 87C51/2/4/8, TSC87C51/2, 87C51FA/B/C, 87C51RA/B/C, 87C51RA/B/C/D+, 87L51FA/B/C, 87L52/4/8, 87C504/8, DS87C520/30, 87C524/8, 87C550, 87C652/4, AT89C51/2/5, P89C52/4/8, T89C51RA/B/C/D2, P89C51RA/B/C/D+, AT89S8252, AT89S53, P89C536/8, SAB-C501G-1E, AB-C513A-2E
87C51Q - 44 PIN QFP	87C51/2/4/8, TSC87C51/2, 87C51FA/B/C, 87C51RA/B/C, 87C51RA/B/C/D+, 87L51FA/B/C, 87L52/4/8, 87C504/8, DS87C520/30, 87C524/8, 87C550, 87C652/4, AT89C51/2/5, P89C52/4/8, T89C51RA/B/C/D2, P89C51RA/B/C/D+, AT89S8252, AT89S53, P89C536/8, SAB-

Adapter	*Supported Devices*
87C51GBP - 68 PIN PLCC	87C51GB
P51XAG3P - 44 PIN PLCC	P51XAG17, P51XAG27, P51XAG37
P51XAG3Q - 44 PIN QFP	P51XAG17, P51XAG27, P51XAG37
P51XAS3P - 68 PIN PLCC	P51XAS37
87CL134D - 42 PIN SDIP	87CL134
87CL134Q - 44 PIN QFP	87CL134
87C251P - 44 PIN PLCC	87C251SA/B/P/Q,TSC87251G1/2, TSC87251G1D
87C451D - 64 PIN DIP	87C451
87C451P - 68 PIN PLCC	87C451, 87C453
87C530P 52 PIN PLCC	DS87C530
87C550P - 44 PIN PLCC	87C550
87C552P - 68 PIN PLCC	87C552, 87C554
87C552Q - 80 PIN QFP	87C552, 87C554
87C575D - 40 PIN DIP	87C575
87C576D - 40 PIN DIP	87C576
87C592P - 68 PIN PLCC	87C592
87C598Q - 80 PIN QFP	87CE598, 89CE558, 87CE560
87C751D - 24 PIN DIP	87C748, 87C750, 87C751
87C751P - 28 PIN PLCC	87C748, 87C750, 87C751
87C752D - 28 PIN DIP	87C749, 87C752
87C752P - 28 PIN PLCC	87C749, 87C752
87C754D - 28 PIN DIP	87C754
87C754SS - 28 PIN SSOP	87C754
87C766D - 42 PIN SDIP	87C766
87C770D - 52 PIN SDIP	87C770
87CL880Q - 64 PIN QFP	87CL880
87CL881Q - 44 PIN QFP	87CL881
87CL883S - 28 PIN SO	87CL883, 87CL884, 87CL886, 87CL887
87CL888T 48 PIN TSSOP	87CL888

Adapter	*Supported Devices*
87LCP67xD - 20 DIP	87LCP762/4/7/8/9
89C1051D - 20 PIN DIP	89C1051, 89C2051, 89C4051
89C1051S - 20 PIN SO	89C1051, 89C2051, 89C4051
3755AD - 28 PIN DIP	PCD3745A, PCD3755A, PCD3756A
3755AS - 28 PIN SO	PCD3745A, PCD3755A, PCD3756A
3755AQ - 32 PIN QFP	PCD3745A, PCD3755A, PCD3756A
5007LQ - 48 PIN LQFP	PCA5007, PCA5010
5097Q - 100 PIN QFP	PCA5097
509x7LQ - 80 PIN LQFP	PCD50917, PCD50927, PCD50937, PCD50957
6002Q - 80 PIN QFP	PCD6002

PLDs:

ATV-24D - 24 PIN DIP	AT22V10, ATV750
ATV-40D - 40 PIN DIP	ATV2500
ATV-68P - 68 PIN PLCC	ATV5000, ATV5100

As the list of supported devices and available adapters is continuously evolving, call Ceibo to receive the latest update.

ITEMS SUPPLIED AS STANDARD

MP-51 Programmer, user software, user manual, RS-232 cable.Power cord not included.

WARRANTY

Two years limited warranty, parts and labor.

MP-51- ORDERING INFORMATION

Item	*Description*
MP-51	Programmer, Software, Cables
AD27040D	32 PIN DIP EPROM Adapter
AD27040P	32 PIN PLCC EPROM Adapter
AD27512D	28 PIN DIP EPROM Adapter
AD27512P	32 PIN PLCC EPROM Adapter

Item	*Description*
AD-ATV40D	40 PIN DIP PLD Adapter
AD-ATV68P	68 PIN PLCC PLD Adapter
AD87C51D	40 PIN DIP Microcontroller Adapter
AD87C51P	44 PIN PLCC Microcontroller Adapter
AD87C51Q	44 PIN QFP Microcontroller Adapter
AD87C51GBP	68 PIN PLCC Microcontroller Adapter
ADP51XAG3P	44 PIN PLCC Microcontroller Adapter
ADP51XAG3Q	44 PIN QFP Microcontroller Adapter
ADP51XAS3P	68 PIN PLCC Microcontroller Adapter
AD87CL134D	42 PIN SDIP Microcontroller Adapter
AD87CL134Q	44 PIN QFP Microcontroller Adapter
AD87C251D	40 PIN DIP Microcontroller adapter
AD87C251P	44 PIN PLCC Microcontroller Adapter
AD87C451D	64 PIN DIP Microcontroller Adapter
AD87C451P	68 PIN PLCC Microcontroller Adapter
AD87C530P	52 PIN PLCC Microcontroller Adapter
AD87C550P	44 PIN PLCC Microcontroller Adapter
AD87C552P	68 PIN PLCC Microcontroller Adapter
AD87C552Q	80 PIN QFP Microcontroller Adapter
AD87C575D	40 PIN DIP Microcontroller Adapter
AD87C576D	40 PIN DIP Microcontroller Adapter
AD87C592P	68 PIN PLCC Microcontroller Adapter
AD87C598Q	80 PIN QFP Microcontroller Adapter
AD87C751D	24 PIN DIP Microcontroller Adapter
AD87C751P	28 PIN PLCC Microcontroller Adapter
AD87C752D	28 PIN DIP Microcontroller Adapter
AD87C752P	28 PIN PLCC Microcontroller Adapter
AD87C754D	28 PIN DIP Microcontroller Adapter
AD87C754SS	28 PIN SSOP Microcontroller Adapter

Item	*Description*
AD87C770D	52 PIN SDIP Microcontroller Adapter
AD87CL880Q	64 PIN QFP Microcontroller Adapter
AD87CL881Q	44 PIN QFP Microcontroller Adapter
AD87CL883S	28 PIN SO Microcontroller Adapter
AD87CL888T	48 PIN TSSOP Microcontroller Adapter
AD87C054D	42 PIN SDIP Microcontroller Adapter
AD87LCP76xD	20 PIN DIP Microcontroller Adapter
AD89C1051D	20 PIN DIP Microcontroller Adapter
AD89C1051S	20 PIN SO Microcontroller Adapter
AD3755AD	28 PIN DIP Microcontroller Adapter
AD3755AS	28 PIN SO Microcontroller Adapter
AD3755AQ	32 PIN QFP Microcontroller Adapter
AD5007LQ	48 PIN LQFP Microcontroller Adapter
AD5097Q	100 PIN QFP Microcontroller Adapter
AD509x7LQ	80 PIN LQFP Microcontroller Adapter
AD6002Q	80 PIN QFP Microcontroller Adapter