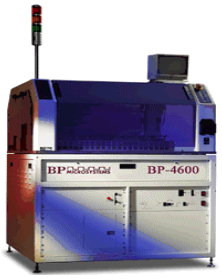
DiskOnChip® Programming Availability List

1. Overview

This document describes programming options for M-Systems' DiskOnChip products, and the product lines that are supported by each option.

2. Programming Options

Product	Description
GANG Programmer 	M-Systems' DiskOnChip GANG Programmer is a standalone GANG programmer that rapidly programs DiskOnChip devices in quantity. It has nine sockets for DiskOnChip devices: one socket for the "master" or "source" DiskOnChip device, and eight sockets for the "target" devices. All target devices are programmed in parallel to achieve high programming rates, helping lower production time and costs. Ordering information: DOC-DIP-GANG (Rev C, Ver 3)
BP Micro Machines 	BP Micro manufactures automatic programming machines that support DiskOnChip products. Many third-party programming houses worldwide provide mass-production pre-programming services based on BP machines. For a short list of some of the programming houses that support DiskOnChip programming, please see our website at: http://www.m-sys.com/Prog
Data I/O Machine 	Data I/O provides manual and automated device programming for DiskOnChip Millennium Plus devices that specifically address the requirements of engineering and manufacturing customers. Many third-party programming houses worldwide provide mass-production pre-programming services based on Data-I/O machines.
JTAG Solutions 	M-systems provides DiskOnChip JTAG programming solutions with various vendors, among them Lauterbach, Corelis and VTI Host.
On-Board Programming 	All DiskOnChip devices can be programmed on-board. The customer should be made aware of this option, since it is often the simplest and cheapest, but requires that the customer prepare the design in advance.

3. Availability

3.1 Products Supported

Product Name	Capacity	Ordering Information	Form Factor	GANG Rev C (Ver 3)	BP Micro Programming Machines	Data-IO Programming Machines
DiskOnChip Plus	16MB (128Mbit)	MD2811-D16-V3Q18-T MD3831-D16-V3Q18-T	TSOP-I BGA	✓	✓	✓
	32MB (256Mbit)	MD2811-D32-V3-T MD3831-D32-V3-T	TSOP-I BGA	✓	✓	✓
	32MB (256Mbit) (1.8V)	MD3331-D32-V3Q18-T	BGA	✓		✓
	64MB (512Mbit)	MD3331-D64-V3-T	BGA	✓		✓
DiskOnChip Millennium	8MB (64Mbit)	MD2810-D08	TSOP-II	✓	✓	
DiskOnChip Millennium DIP	8MB	MD2800-D08 MD2802-D08	DIP	✓		
DiskOnChip 2000 DIP	16MB – 1GB	MD2202-DXX-V-T MD2203-DXX-V-T	DIP	✓		
DiskOnChip DIMM 2000	16MB – 256MB	MD2240-DXX-V-T	DIMM			
DiskOnChip DIMM Plus	32MB, 64MB, 96MB, 128MB	MD2241-DXX-V-T	DIMM	✓		
DiskOnChip-Based MCP		MS04-D9P5-B1	BGA			✓

3.2 Known Programming Support Limitations

Data-IO Machines

- Single devices that are part of a cascaded array are not supported.
- Image size is limited to 54MB.
- Read protection is not supported.

BP-Micro

- Read protection is not supported.
- Previously formatted DiskOnChip Plus devices are not supported.
- Single devices that are part of a cascaded array are not supported.

4. Additional Information

Additional information about DiskOnChip programming can be found at http://www.m-sys.com.
Additional DiskOnChip tools and documents available from M-Systems are listed below:

Document Type/Tool	Description
Application Note, AP-DOC-039	Production Line Preprogramming of DiskOnChip TSOP and BGA
Application Note, AP-DOC-040	Programming DiskOnChip Millennium TSOP Using a Bed of Nails
Technical Note, TN-DOC-010	DiskOnChip Preprogramming
User Manual, 91-SR-004-03-7L, Rev 5	DiskOnChip GANG Programmer Revision C