

A modular approach to product development -

MEVB1632 Modular Evaluation Board

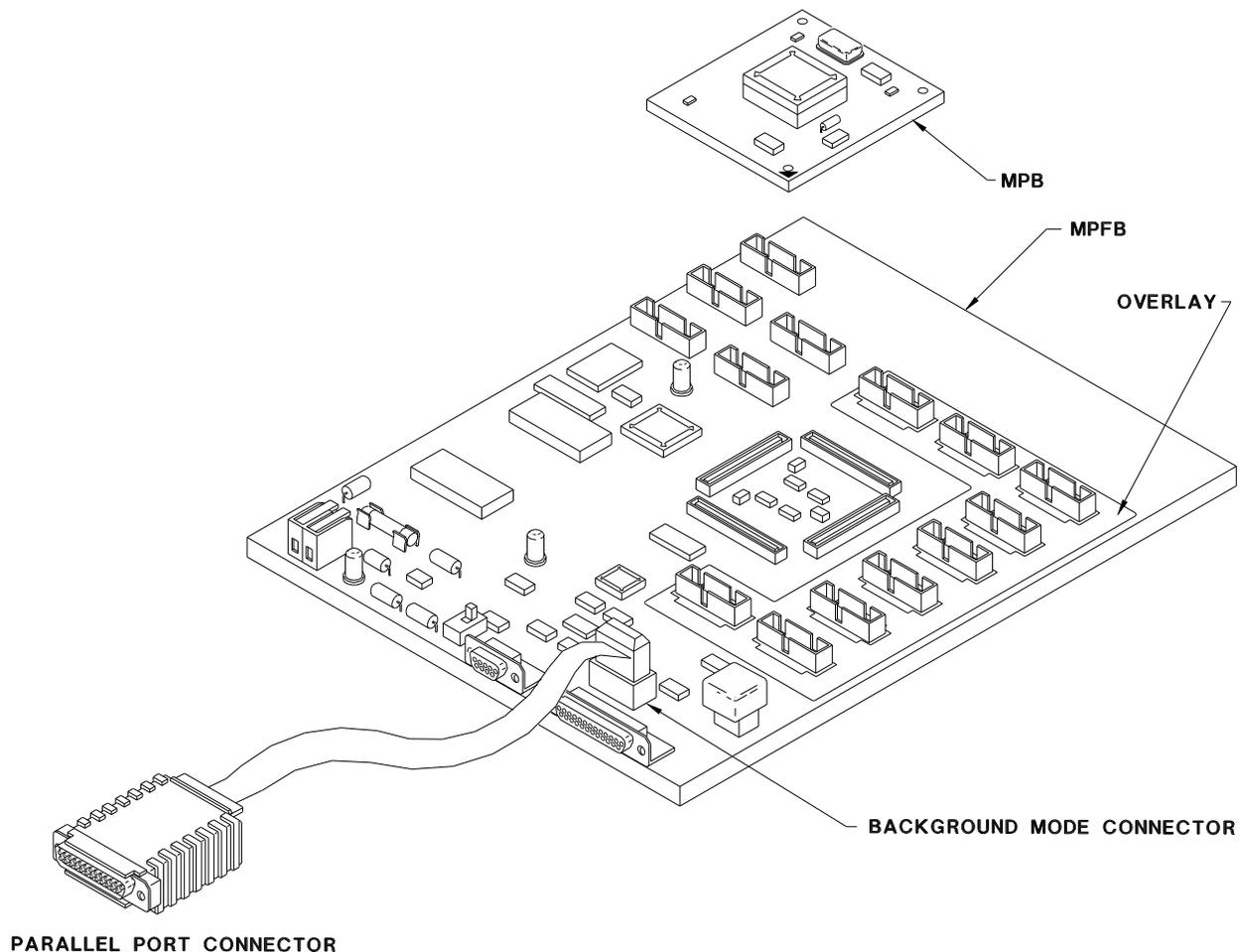
The M68MEVB1632 Modular Evaluation Board (MEVB) provides an economical, integrated solution for designing, debugging, and evaluating MCU operations of the M68HC16 and M68300 MCU families.

Designed with a modular approach, the MEVB reduces development system cost by enabling you to purchase only the modular components necessary to support a particular MCU derivative. After purchasing the MEVB you may evaluate multiple MCU devices by simply switching the device-specific MCU Personality Board (MPB). This modular approach provides easy configuration of the MEVB to fit a wide range of requirements and makes the MEVB a valuable tool for the long term.

The device-specific MPB provided with this tool is also compatible with the high performance MMDS1632 Motorola Modular Development System.

Features

- *Microcontroller timing circuitry*
- *Jumper-selectable support for multiple memory device types and sizes*
- *Logic analyzer connection for all MCU pins*
- *On board device and flash EEPROM programming*
- *On board wire wrap area*
- *Background mode operation*
- *Seven software breakpoints*



Buy only the components you need - switch out the device specific MPB to evaluate multiple MCU devices.

A complete MEVB system consists of three components

- Modular Platform Board (MPFB) – a board that provides interface and power connections for the MPB. The MPFB works with devices from both the M68HC16 and M68300 families.
- MCU Personality Board (MPB) – a device- and package-specific board that defines the MCU to be evaluated. A plastic overlay is also included, which labels pin-outs for the MPFB logic analyzer connectors specific to your MCU.
- In-Circuit Debugger (ICD16 or ICD32) – a full background debugger for either the M68HC16 or the M68300. The ICD consists of a printed circuit board,

an associated cable, and development software. The printed circuit board is connected in-line between your computer's parallel port and a 10-pin background mode connector on the MPFB. The software features single step, instruction trace, memory modify, breakpoints with counters, time between breakpoints, step through RAM, and source code debugging. The ICD can be used with many third party C-compilers for C source-level debugging.

SPECIFICATIONS SUMMARY

The tables below summarize MEVB specifications and minimum host PC requirements.

MEVB Specifications

Characteristic	Specifications	Characteristic	Specifications
Data RAM max. memory (locations U1, U3)	<u>RAM:</u> 32K, 128K, or 512K x 16 32K, 128K, or 512K x 8	Optional development interface	RS-232C compatible (two connectors)
Pseudo ROM max. memory (locations U2, U4)	<u>RAM:</u> 32K, 128K, or 512K x 16 32K, 128K, or 512K x 8 <u>EPROM & EEPROM:</u> 32K, 64K, 128K, 256K, or 512K x 16 32K, 64K, 128K, 256K, or 512K x 8	Power requirements Operating	+5Vdc ($\pm 10\%$) @ 1.0 A (max.) – current limited @ 1.5 Amps
Fast RAM max. memory (locations U9, U10)	<u>RAM:</u> 32K or 128K x 16 (word mode only)	VPP	+12Vdc ($\pm 5\%$) @ 0.50 mA (max.) – current limiting circuit
MCU I/O ports	HCMOS compatible	Temperature Operating Storage	-10° to +50° C -40° to +85° C
Monitor interface	PC parallel (printer) port to BDM connector (J6) via ICD16/32. Refer to the ICD16/32 User's Manual.	Relative humidity	0 to 90% (non-condensing)
		MPFB Dimensions	8.5 x 11 in. (216 x 279 mm)
		MPB Dimensions	3.25 x 3.25 in. (82.6 x 82.6 mm)

Minimum Requirements

Characteristic	Specification
Host PC	386-based PC or higher
DOS Version	3.3 or later
Disk Storage	Hard disk drive - software requires 10 megabytes
Disk Drive	3.5 inch floppy disk drive 1.4MB
Memory	1MB
Input/Output	Parallel communication port
External Power Supply	+5Vdc ($\pm 10\%$) @ 1.0 A (max.) current limited @ 1.5 Amps.

ORDERING INFORMATION

To order an MEVB find the MCU you want to evaluate in column one and select the MEVB part number in column two. You will receive the items in columns three, four, and five.

MEVB Part Numbers

Evaluated MCU (Package)	Modular Platform Board	Microcontroller Personality Board	In-Circuit Debugger
68HC16S2 [100 TQFP (PU)]	M68MPFB1632	M68MPB16S2B	M68ICD16
68HC916X1 [120 PQFP (FH)]	M68MPFB1632	M68MPB916X1C	M68ICD16
68HC16Y1 [160 PQFP (FT)]	M68MPFB1632	M68MPB16Y1B	M68ICD16
68HC16Z1 [132 PQFP (FC)]	M68MPFB1632	M68MPB16Z1B	M68ICD16
68331 [132 PQFP (FC)]	M68MPFB1632	M68MPB331B	M68ICD32
68332A [132 PQFP (FC)]	M68MPFB1632	M68MPB332AB	M68ICD32
68332G [132 PQFP (FC)]	M68MPFB1632	M68MPB332GB	M68ICD32
68F333 [160 QFP (FT)]	M68MPFB1632	M68MPBF333C	M68ICD32
68334 [132 PQFP (FC)]	M68MPFB1632	M68MPB334GB	M68ICD32
68336 [160 PQFP (FT)]	M68MPFB1632	M68MPB336GB	M68ICD32
68376 [160 QFP (FT)]	M68MPFB1632	M68MPB376GB	M68ICD32

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