

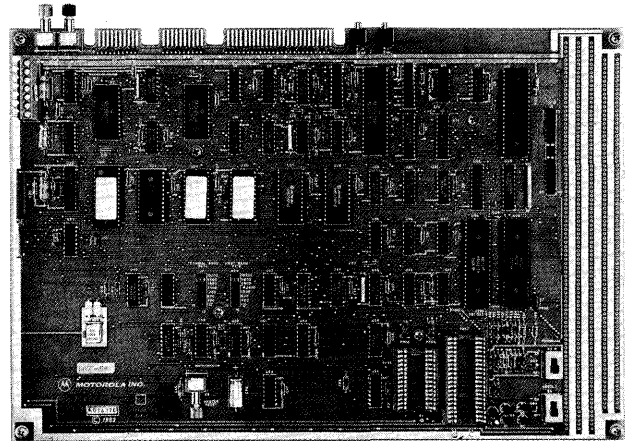


M68705EVM  
M1468705EVM

# MC68705 and MC1468705 Evaluation Modules

- Economical Means of Evaluating and Programming the Following EPROM MCU's
  - MC68705P3, R3, U3 (Part #M68705EVM)
  - MC1468705G2 (RS7 Mask) (Part #M1468705EVM)
- Requires Only Power Supply and Terminal for Operation
- Monitor/Debugger Uses SYMbug-Type Syntax
- One Line Assembler/Disassembler
- Cassette Download/Upload
- Centronics Compatible Printer Port
- Dual Memory Maps: 4K ROM — Monitor Map  
4K RAM — User Map
- Programmer for On-Chip EPROM
- Target MCU I/O Available
- On-Chip A/D (MC68705R3) and Timer
- Power-On Reset
- User Reset/Abort Switches
- External Clock Input
- Wirewrap Area

The M68705/1468705 Evaluation Modules (EVM) are economical vehicles for evaluating the MC68705 and MC1468705 Microcomputer Units (MCU) by providing all of the essential timing and I/O interface circuitry. The EVM vastly simplifies user operation of the MCU implementation. A block diagram of the EVM is shown in Figure 1.



Operation of an MC68705 or MC1468705 is simulated by the resident MC6805 or MC146805 MCU. Data transfer within the EVM is controlled by the monitor ROM firmware. In turn, this ROM is controlled from an external RS-232C compatible user terminal. User object code may be downloaded to the user program RAM via the host port; a cassette port is also provided for this purpose. The host and terminal port ACIA's are baud rate strap-selectable from 110 to 19.2 Kbps in eight steps.

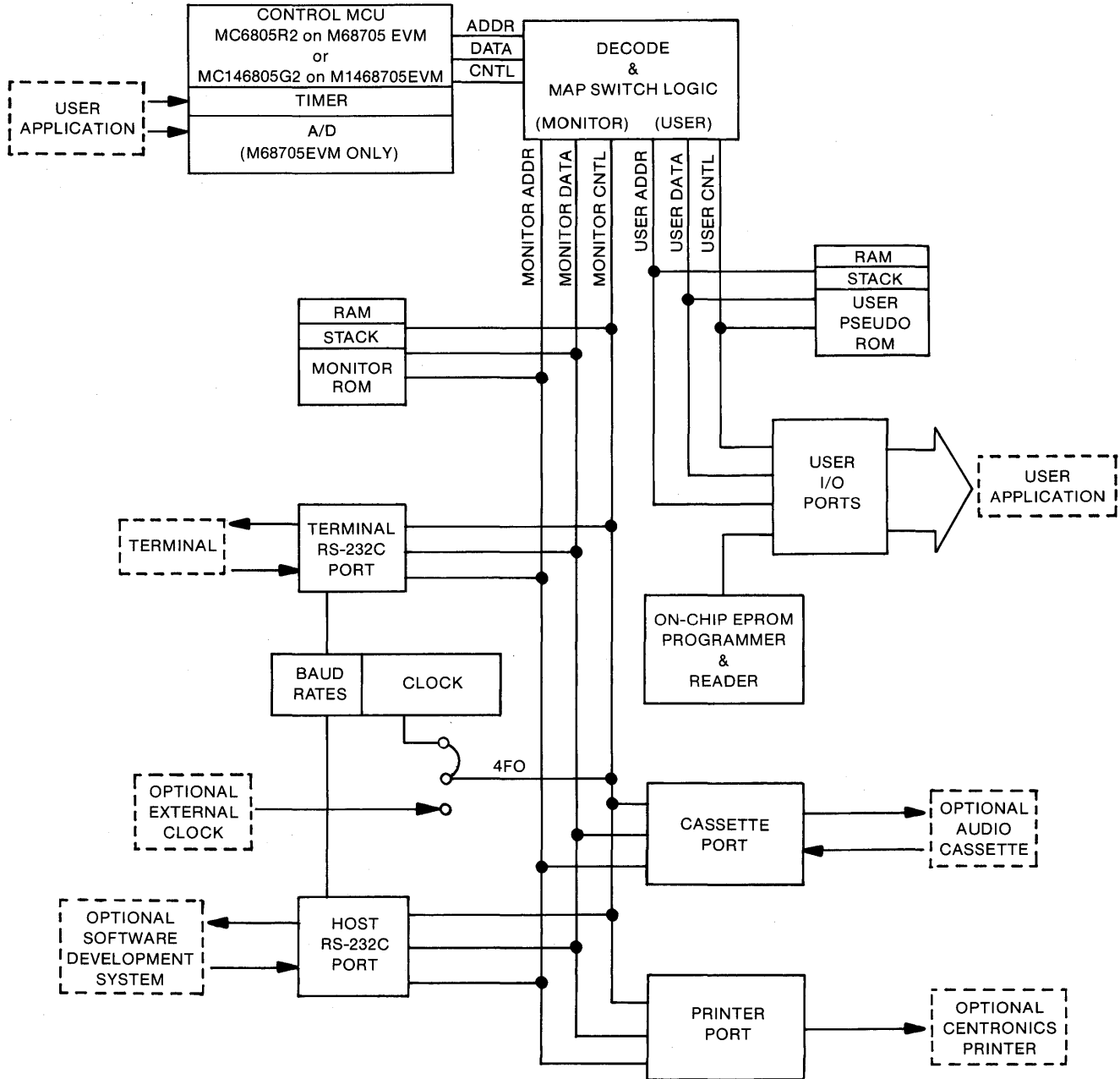
The MCU parallel I/O ports allow the user to connect externally to the simulated MCU I/O lines. These lines are also used to control the MC68705 or MC1468705 MCU's on-chip EPROM programmer. This is accomplished by inserting the MCU into the programmer socket and executing the appropriate monitor commands.

A user jumper-select option allows either the on-board clock or an external clock to be used. A printer port is also provided with a Centronics compatible pin-out. Special user circuits may be added on a wirewrap area on the board.

Figure 2 illustrates the memory maps for the Evaluation Modules. Table 1 describes the Monitor Command Set used with the modules.

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FIGURE 1 — EVM Block Diagram





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**TABLE 1 — Monitor Command Set**

Command	Description
ASM <addr>	Assembler/Disassembler (Interactive)
BF <addr1> <addr2> <data>	Block Fill Address Range With Data
BR [<addr1>[<addr2>[<addr3>]]]	Define Breakpoint(s)
G [<addr>]	Go (Execute)
LOAD [<offset>]<cmd>	Download Memory From Host File
MD <addr1>[<addr2>]	Memory Display Address Range
MM <addr>	Memory Modify (Interactive)
NOPA	Detach Printer
P [<count>]	Proceed (From Breakpoint)
PA	Printer Attach
PROG	Program EPROM
RD	Register Display
READ	Read EPROM
RM	Register Modify (Interactive)
TPLD [<offset>]	Load Memory From Cassette Tape
TPDU <add1> <add2>	Dump Memory To Cassette Tape
T [<count>]	Trace Instruction(s)
TM [<char>]	Enter Transparent Mode

**Mechanical and Environmental Specifications**

Input Voltages:	+5 Volts at 1.0 A ±12 Volts at 0.4 A +27 Volts at 50 mA (M68705EVM Programmer only)
Operating Frequency:	4.0 MHz on-board clock (1.0 MHz bus frequency) EXT CLK range of the MCU being evaluated
Operating Environment:	0°C to 55°C
Dimensions (L × W × H)	9.75 in. × 14.5 in. × 1.2 in. (24.8 cm × 37.8 cm × 3.0 cm)


**Ordering Information**

Part Number	Description
M68705EVM*	MC68705P3, R3, or U3 Evaluation Module including User's Manual
M1468705EVM*	MC1468705G2 Evaluation Module including User's Manual
M68705EVM/D1	M68705 Evaluation Module User's Manual
M1468705EVM/D2	M1468705 Evaluation Module User's Manual

**Options**

M68RS232M	RS-232C Adapter Cable, 3 ft. flat cable; edge conn./male DB25 conn.
M68RS232F	RS-232C Adapter Cable, 3 ft. flat cable; edge conn./female DB25 conn.

\*The M68705EVM and M1468705EVM are not processor interchangeable products.

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