



RM 65 DATA SHEET

DESIGN PROTOTYPING MODULE

RM 65

The RM 65 product line is designed for OEM and end user microcomputer applications requiring state-of-the-art performance, compact size, modular design and low cost. Software for RM 65 systems can be developed in R6500 Assembly Language, PL/65, BASIC and FORTH. Both BASIC and FORTH are available in ROM and can be incorporated into the user's system.

The RM 65 product line uses a motherboard interconnect concept and accepts any card in any slot. The 64-line RM 65 Bus offers memory addressing up to 128K bytes, high immunity to electrical noise and includes growth provisions for user functions. A selection of card cages provides packaging flexibility. RM 65 products may also be used with Rockwell's AIM 65 Microcomputer for product development and for a broad variety of portable or desktop microcomputer applications.

ORDERING INFORMATION

The Design Prototyping Module is available in an Edge Connector version (RM65-7201) and a Eurocard version (RM65-7201E).

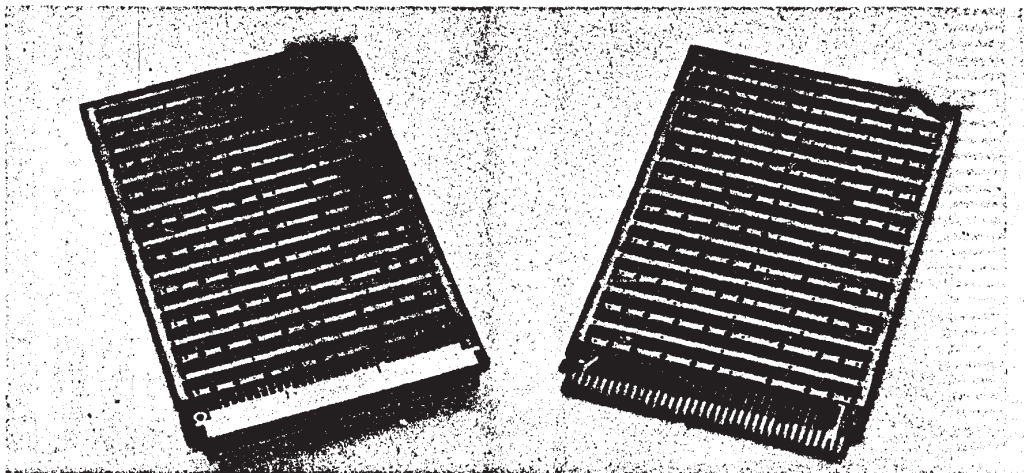
FEATURES

- Compact size — approximately 4" x 6 1/4" (100 mm x 160 mm)
- Provision for mounting mass-terminated cable connectors
- All wire-wrap holes pre-drilled on 0.100 in. centers
- Provision for installing decoupling capacitors
- Spacing for 0.300, 0.400 and 0.600 in. wide components
- +5V and ground extended throughout the module
- Isolated power strips allow connection to other supply voltages
- Edge Connector and Eurocard versions

PRODUCT OVERVIEW

The Design Prototyping Module allows you to develop custom application circuits for installation in any RM 65 motherboard.

Power and return lines are prerouted throughout the module. Plated-through holes, spaced beside the power lines, permit wire-wrap sockets to be installed. The hole pattern allows manual or automatic wire-wrapping. The holes at the I/O end of the module accept a variety of wire-wrap flat ribbon cable connectors. Additional pre-drilled holes permit mounting of decoupling capacitors.

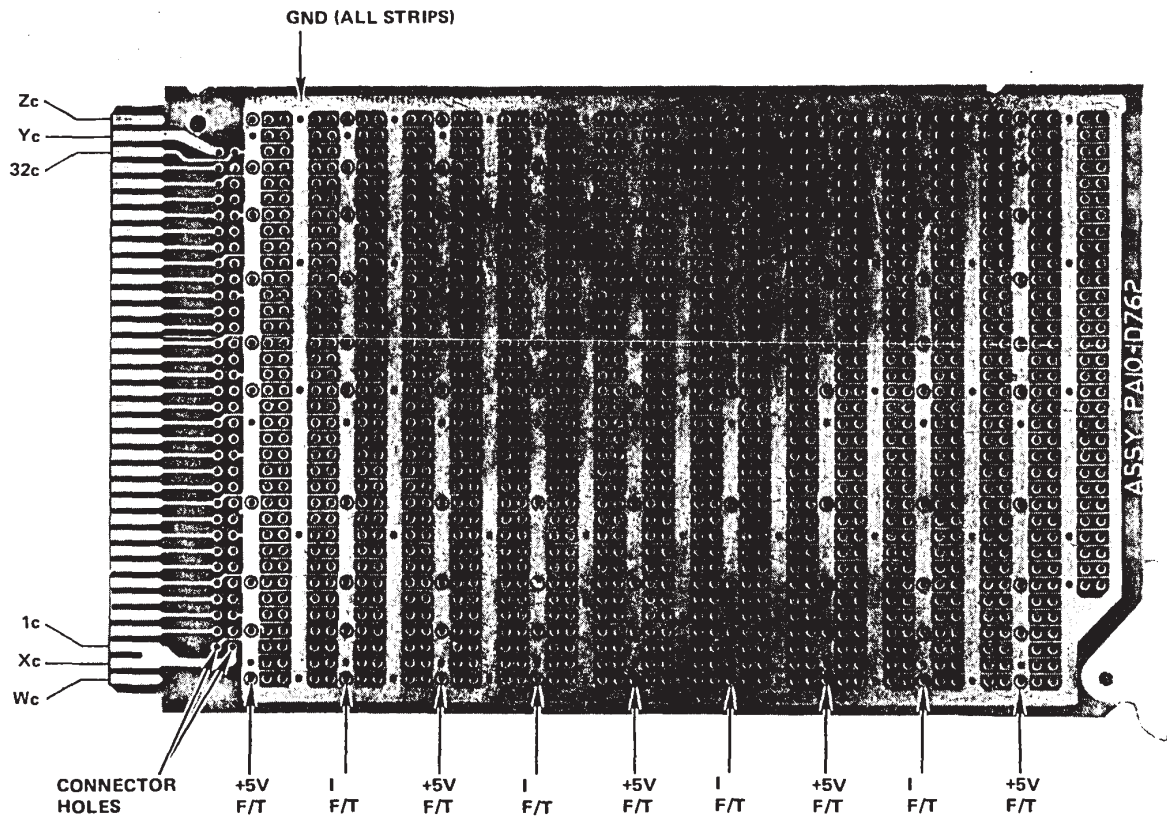


Eurocard Version
RM65-7201E

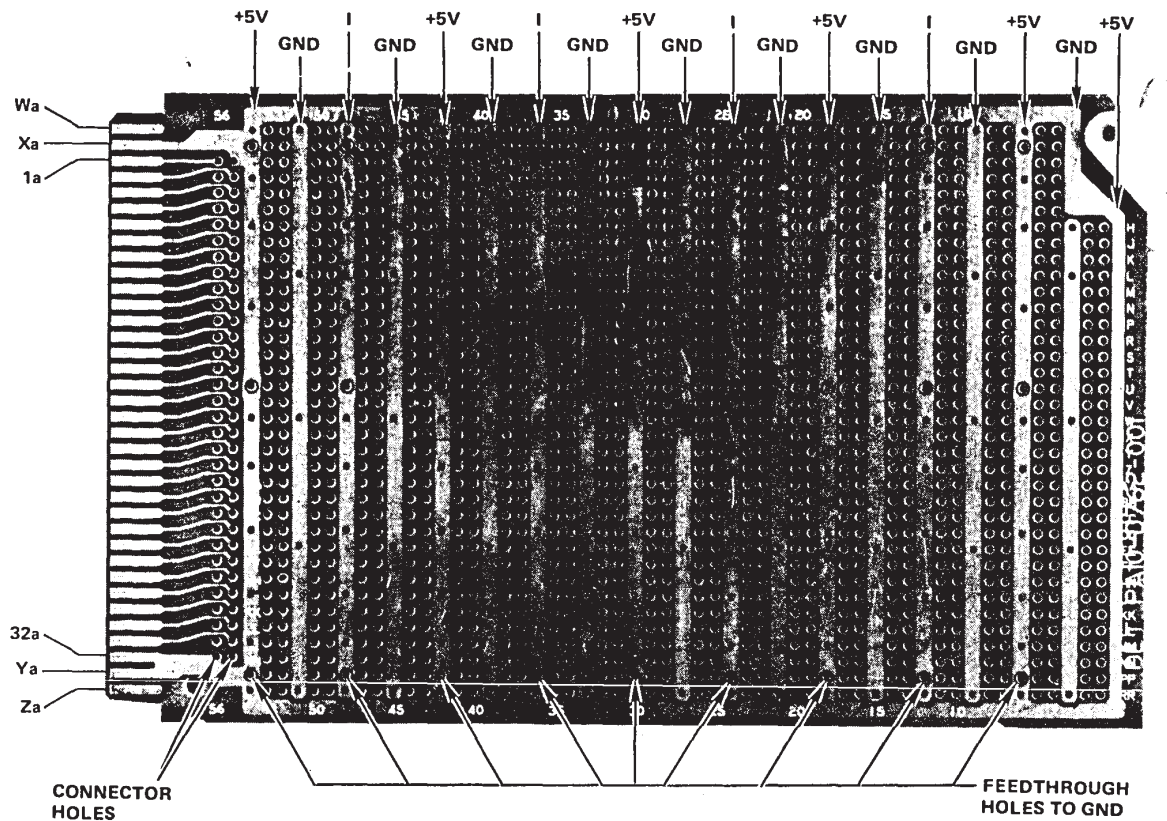
Edge Connector Version
RM65-7201

DESIGN PROTOTYPING MODULE

RM65
BOARD
PRODUCTS



Design Prototyping Module – Edge Connector (Component Side)



I = ISOLATED POWER STRIPS
F/T = FEEDTHROUGH HOLES

Design Prototyping Module – Edge Connector (Wirewrap Side)

RM 65 Bus Connector Pin Assignments					
Bottom (Solder Side)			Top (Component Side)		
Signal Mnemonic	Signal Name	Pin	Pin	Signal Mnemonic	Signal Name
	Not Connected (See Note)	Wa	Wc		Not Connected (See Note)
+5V	+5 Vdc Line (See Note)	Xa	Xc	+5V	+5 Vdc (See Note)
GND	Ground	1a	1c	+5V	+5 Vdc
BADR/	Buffered Bank Address	2a	2c	BA15/	Buffered Address Bit 15
GND	Ground	3a	3c	BA14/	Buffered Address Bit 14
BA13/	Buffered Address Bit 13	4a	4c	BA12/	Buffered Address Bit 12
BA11/	Buffered Address Bit 11	5a	5c	GND	Ground
BA10/	Buffered Address Bit 10	6a	6c	BA9/	Buffered Address Bit 9
BA8/	Buffered Address Bit 8	7a	7c	BA7/	Buffered Address Bit 7
GND	Ground	8a	8c	BA6/	Buffered Address Bit 6
BA5/	Buffered Address Bit 5	9a	9c	BA4/	Buffered Address Bit 4
BA3/	Buffered Address Bit 3	10a	10c	GND	Ground
BA2/	Buffered Address Bit 2	11a	11c	BA1/	Buffered Address Bit 1
BA0/	Buffered Address Bit 0	12a	12c	Bφ1	Buffered Phase 1 Clock
GND	Ground	13a	13c	BSYNC	Buffered Sync
BSO	Buffered Set Overflow	14a	14c	BDRQ1/	Buffered DMA Request 1
BRDY	Buffered Ready	15a	15c	GND	Ground
	User Spare 1	16a	16c	-12V/-V	-12 Vdc/-V
+12V/+V	+12 Vdc/+V	17a	17c		User Spare 2
GND	Ground Line	18a	18c	BFLT/	Buffered Bus Float
BDMT/	Buffered DMA Terminate	19a	19c	Bφ0	Buffered External Phase 0 Clock
	User Spare 3	20a	20c	GND	Ground
BR/W/	Buffered Read/Write "Not"	21a	21c	BDRQ2/	Buffered DMA Request 2
	System Spare	22a	22c	BR/W/	Buffered Read/Write
GND	Ground	23a	23c	BACT/	Buffered Bus Active
BIRQ/	Buffered Interrupt Request	24a	24c	BNMI/	Buffered Non-Maskable Interrupt
Bφ2/	Buffered Phase 2 "Not" Clock	25a	25c	GND	Ground
Bφ2	Buffered Phase 2 Clock	26a	26c	BRES/	Buffered Reset
BD7/	Buffered Data Bit 7	27a	27c	BD6/	Buffered Data Bit 6
GND	Ground	28a	28c	BD5/	Buffered Data Bit 5
BD4/	Buffered Data Bit 4	29a	29c	BD3/	Buffered Data Bit 3
BD2/	Buffered Data Bit 2	30a	30c	GND	Ground
BD1/	Buffered Data Bit 1	31a	31c	BD0/	Buffered Data Bit 0
+5V	+5 Vdc	32a	32c	GND	Ground
+5V	+5 Vdc (See Note)	Ya	Yc	+5V	+5 Vdc (See Note)
	Not Connected (See Note)	Za	Zc		Not Connected (See Note)

NOTE

Pins Wa, Wc, Xa, Xc, Ya, Yc, Za and Zc are not used on Eurocard version.



INSTALLATION

- Solder jumpers between the isolated power strips and the power (+5V, +12V/+V, or -12V/-V) traces as required.

CAUTION

Before proceeding, ensure that the power strips are not shorted to GND.

- Solder power filter capacitors as required between the power strips and GND.

- Install and wire components on the Design Prototype Module:
 - Insert wire-wrap sockets into the desired holes. Solder two pins (on opposite ends of the socket) to the associated feedthrough to hold the socket in place.
 - Insert the solder stakes for mounting of discrete components, power connection and test points into the desired holes and solder to the associated feedthroughs.
 - Insert and solder individual or strip stakes into connector holes for all RM 65 bus signals used on the module.
 - Wire wrap wires between the protruding pins and other pins or power/GND traces as required.

- Double check the hookup to ensure proper connection.

CAUTION

Ensure that no power lines are shorted to GND before installation into the RM 65 bus. Shorting power to ground may damage your circuitry, module, power supply and/or interfacing modules unless proper current limiting protection is provided.

- Install components into sockets as required.
- Remove power from the RM 65 bus.

CAUTION

Never install or remove modules with power on – it may cause damage to your module and/or host system.

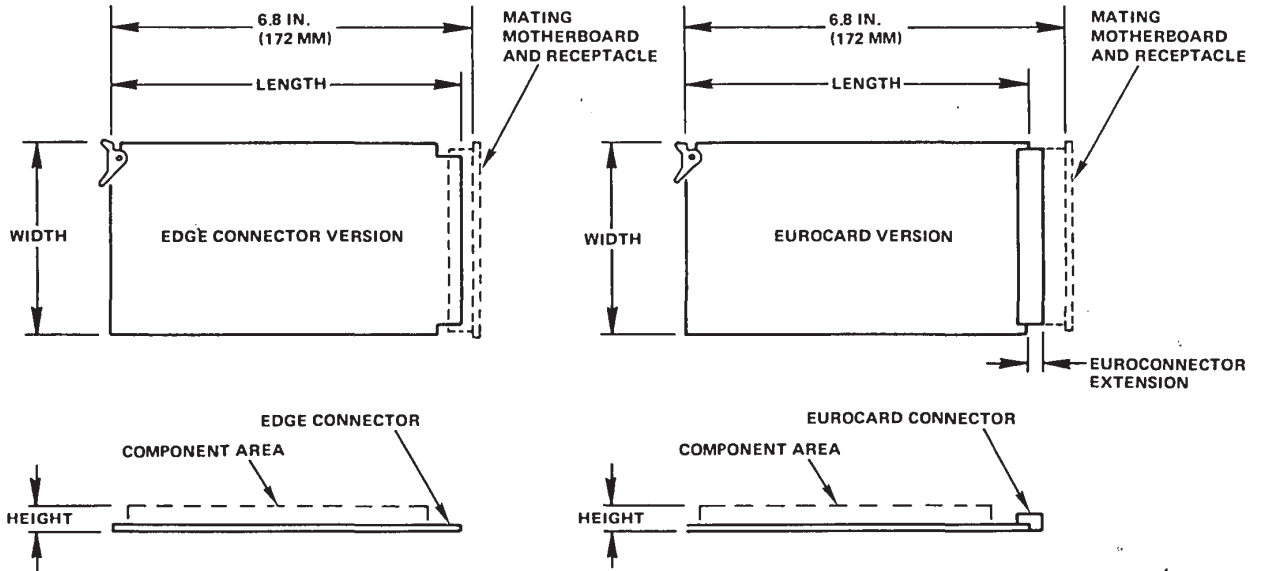
- Insert the module in the RM 65 Bus motherboard or single card adapter receptacle.
- Apply power to the RM 65 bus.

Design Prototyping Module Physical and Electrical Characteristics

Characteristic	Value	
Physical Characteristics (See Notes):	Edge Connector Version	Eurocard Version
Width	3.9 in. (100 mm)	3.9 in. (100 mm)
Length	6.5 in. (164 mm)	6.3 in. (160 mm)
Height	0.06 in. (1.6 mm)	0.56 in. (14 mm)
Weight	2.0 oz. (55 g)	2.5 oz. (65 g)
RM 65 Bus Interface		
Edge Connector	72-pin edge connector (0.100 in. centers)	
Eurocard	64-pin plug (0.100 in. centers) per DIN 41612 (Row b is not installed)	
Component Mounting Area:		
Number of Component Hole Columns:	36	
Number of Component Hole Rows:	36	
Number of +5V power strips:	6	
Number of isolated power strips:	4	
Number of ground strips:	9	
Vertical hole spacing:	0.100 in.	
Horizontal hole spacing:	0.100 in.	

NOTES:

1. The height includes the maximum values for component height above the board surface (0.4 in. for populated modules), printed circuit board thickness (0.062 in.), and pin extension through the bottom of the module (0.1 in.).
2. The length does not include the added extensions due to the module ejector.
3. The Eurocard dimensions conform to DIN 41612.



Module Dimensions