



RM 65 DATA SHEET

4- SLOT PIGGYBACK MODULE STACK (PMS)

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 set of card cages allows a broad variety of packaging options. RM 65 products may also be used with Rockwell's AIM 65 Advanced Interactive Microcomputer for product development and desktop microcomputer applications.

PRODUCT OVERVIEW

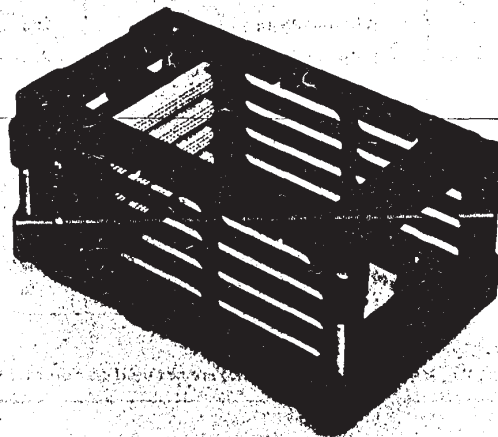
The 4-slot Piggyback Module Stack (PMS) consists of a 4-slot RM 65 Bus compatible motherboard in a card cage. Memory, I/O or special functions may be added to AIM 65 by use of the PMS. When connected to the AIM 65 through the Buffer/Adapter Module, the PMS may be mounted over, under, or behind the AIM 65 in a variety of orientations to meet unique application requirements. The form factor of the PMS allows low profile placement in a table top or terminal style enclosure.

ORDERING INFORMATION

Rockwell offers all RM 65 modules in both Edge Connector and Eurocard versions. If you plan to use Edge Connector modules, order the RM65-7004 model of the Piggyback Module Stack. Conversely, if you plan to use Eurocard modules, order the RM65-7004E model of the Piggyback Module Stack.

FEATURES

- 4-slot card cage with integral module guides
- Rugged, but lightweight construction
- Accepts axial module cooling fan
- Screw-down terminals for connecting external power (+5V, +12V/+V, -12V/-V, GND)
- Predrilled holes for various mounting configurations.
- Assembled, tested and warranted.



4- SLOT PIGGYBACK MODULE STACK (PMS)

RM65
BOARD
PRODUCTS

RM 65 Bus 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	B01	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	B00	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
B02/	Buffered Phase 2 "Not" Clock	25a	25c	GND	Ground
B02	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

1. Connect power to TB1. The power lines should be long enough to allow the PMS to be oriented and positioned as required.

WARNING

Ensure that the external power supplies are turned off before connecting to TB-1.

- a. Connect +5V from an external power supply to the terminal marked "+5". "+5" is connected to all +5V pins on all module receptacles.
 - b. Connect GND from the power supply to either terminal marked "G". Both of these terminals are connected to all GND pins on all module receptacles.
 - c. Connect +12V/+V from an external power supply to the terminal marked "+V". "+V" is connected to Pin 17a on each module receptacle.
 - d. Connect GND from the +12V/+V power supply to either "G" terminal.
 - e. Connect -12V/-V from an external power supply to the terminal marked "-V". "-V" is connected to Pin 16c on each module receptacle.
 - f. Connect GND from the -12V/-V power supply to either "G" terminal.
2. Install the PMS in the desired position. Mounting holes are provided to allow attachment at the top or bottom of the PMS.

CAUTION

Ensure that neither the left nor right side of the PMS is blocked such that the flow of forced cooling air is impeded.

NOTE

If the PMS is positioned on the AIM 65 Master Module, ensure that the PMS feet rest in areas free of components.

3. Attach an axial cooling fan to the left side of the PMS. Connect the cooling fan power leads to the required power supply.

4. To install a module in the PMS:

CAUTION

Ensure that power is turned off to the PMS motherboard before installing a module.

- a. Position the module, component side up, in front of the desired card slot.
Card slot No. 1 (top-most slot) has 0.85 inch of component clearance whereas the other three slots are on 0.6 inch centers. If a module is higher than 0.4 inches above the surface of the module, install it in card slot No. 1.
- b. Insert the module into the card guide and slide the module straight in until it touches the mating motherboard receptacle.

NOTE

The card slot guides may be snug on the inserted module.

- c. Ensure that the module connector is positioned properly against the mating receptacle.
 - d. Press in firmly on the exposed edge of the module until it is firmly seated.
5. To remove a module from the PMS:

CAUTION

Remove power from the PMS motherboard before removing a module.

- a. Lift up on the module ejector tab, if installed; otherwise grasp the exposed edge of the module and pull, to release the module from the mating receptacle.
- b. Pull the module straight back until it is free from the card slot guides.

RM65
BOARD
PRODUCTS

RECOMMENDED 3-5/8" COOLING FANS

ETRI Inc
(704) 289-5423

- Model 760-99XW-182-11115*
115 VAC, 50/60 Hz, 6 watts
2500 RPM, 30 CFM
10 oz.
- Model 760-99XW-181-11220*
220 VAC, 50/60 Hz, 6 watts
2500 RPM, 30 CFM
10 oz.

*Requires plug-in power cord, 30" long Model 760-9601-6.

ROTRON Inc
(914) 657-6661

- Model WA2F79**
115 VAC, 50/60 Hz, 13 watts
3000 RPM, 33 CFM
9 oz.
- Model WA2F77**
220 VAC, 50/60 Hz, 13 watts
3000 RPM, 33 CFM
9 oz.

**Includes two 6" power leads.

NOTE

ETRI Finger guard Model 760-9901-43 may be used with any of the above fans.

CHARACTERISTICS	VALUE
Outer Dimensions:	
Width	4.96 in. (126 mm)
Length	8.00 in. (203 mm)
Height	3.89 in. (99 mm)
Module Separation:	
Slot 1: Center line to Inside Top Cover	0.85 in. (22 mm)
Other Slots: Centerline to Centerline	0.6 in. (15 mm)
Weight	13 oz. (370 g)

RM65
BOARD
PRODUCTS

