



# RM65-0110 RM 65 INPUT/OUTPUT (I/O) ROM

## INPUT/OUTPUT FUNCTIONS

The input/output (I/O) functions in a microcomputer performs interface processing between an application program and peripheral devices, e.g. display, printer and keyboard. These functions are usually implemented as closed subroutines that may be called by the application program or as part of an operating system that operates on passed parameters. The I/O functions normally issue operating commands to the peripherals, monitor status from the peripherals and transfer data to and from the peripherals. Data formatting and message protocol stripping is also usually performed. In addition, general purpose utility functions supporting I/O operations are often provided.

## PRODUCT OVERVIEW

The RM 65 I/O ROM contains initialization, interrupt and I/O processing functions to interface AIM 65/40 peripherals to an RM 65 Single Board Computer (SBC) based microcomputer system. The processing and entry points, in most cases, are identical to the AIM 65/40 I/O ROM, to enable an application program developed on the AIM 65/40 Microcomputer to be easily transferred to the RM 65 environment for final validation and production operation. Source code entry, editing, compilation and/or assembly, and debugging can be performed on the AIM 65/40 Microcomputer with its extensive development aids using the AIM 65/40 Debug Monitor/Text Editor and the desired language. The AIM 65/40 peripherals connected to the AIM 65/40 SBC module can support development as well as application checkout in this configuration.

In a minimum RM 65 module installation consisting of only the RM 65 SBC module (RM65-1000E), the 4K-byte RM 65 I/O ROM in one SBC module socket supports an application program in the other SBC module socket for user-defined I/O over the SBC module parallel I/O port. The addition of one RM 65 Multifunction Peripheral Interface (MPI) module (RM65-5223E) allows interface to an AIM 65/40 Keyboard and either the AIM 65/40 40-Character Display or AIM 65/40 Video Display Controller in one configuration, or the AIM 65/40 Graphics Printer and a user-defined interface in the other configuration. Installation of two RM 65 MPI modules supports both configurations.

## MEMORY MAP

Address (Hex)	Contents
\$FFFA-\$FFFF	NMI, RES and IRQ Vectors
\$F000-\$FFFF	I/O ROM Program
\$1000-\$1FFF	System I/O
\$200-\$49F	I/O ROM Vectors, Constants and Variable
\$F0-\$FF	I/O ROM Variables

## FEATURES

- RM 65 SBC module compatible
- AIM 65/40 I/O ROM interface compatible
- ROM resident for immediate operation
- Supports AIM 65/40 Peripherals
  - 40-Character Display (A65/40-0400)
  - Video Display Controller Module (A65/40-0800)
  - Graphics Printers (A65/40-0600)
  - Standard Keyboard (A65/40-0200)
  - Expanded Keyboard (A65/40-0210)
- Interrupt Handlers
  - Interrupt Request (IRQ) with before and after user linkage
  - Non-Maskable Interrupt (NMI) with before and after user linkage
  - Reset (RES)
  - Break instruction linkage
- Initialization Functions
  - Cold and warm start variable initialization
  - Autostart linkage to application programs
- Provide input/output handlers for
  - Keyboard (system terminal) input
  - Display/printer (system terminal) output
  - Memory input/output
  - Floppy disk (RM65-5101E)
  - Printer output
  - Interactive user-defined input/output
  - Non-interactive user-defined input/output
  - Null output
- User-alterable variables
  - Input/output vectors
  - Interrupt vectors

## ORDERING INFORMATION

Part No.	Description
RM65-0110	RM 65 I/O ROM
Order No.	Description
821	RM 65 I/O ROM User's Manual*
Note:	
*Included with RM65-0110.	

9