

40K Cartridge ROM

FEATURES

- Mask Programmable Storage Providing 4096 x 10 Bit Words
- 16 Bit On-Chip Address Latch
- Control Decoder
- Programmable Memory Map Circuitry to Place 4K ROM Page Within 65K Word Memory Space Located on 4K Page Boundaries

REQUIREMENTS

The RO9508 operates as the program memory for systems using a CP1600 series microprocessor. It is configured as 4096 x 10 bit words and contains several features which reduce the device count in a practical microprocessor application.

DESCRIPTION

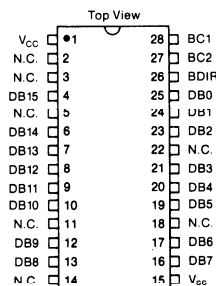
The RO9508 contains a programmable memory map location for its own 4K page and if a valid address is detected, the particular addressed location will transfer its contents to the chip output buffers. If the control code following the address cycle was a Read, the RO9508 will output the 10 bits of addressed data and also drive a logic zero on the top 6 bits of the bus.

BUS CONTROL SIGNALS

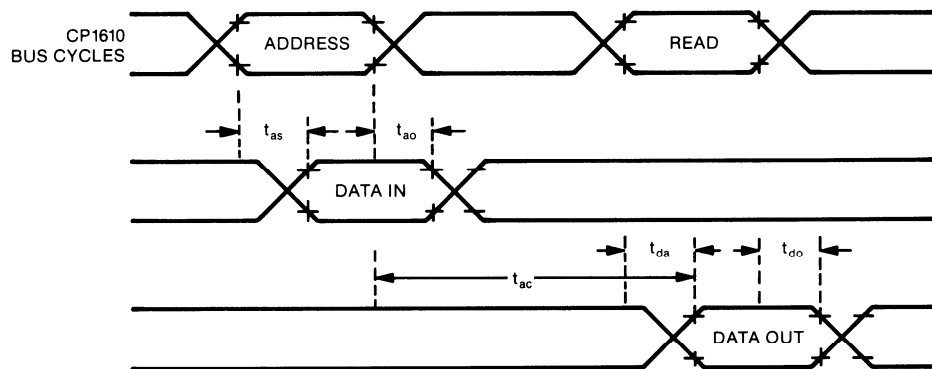
BDIR	BC2	BC1	Signal	Decoded Function
0	0	0	NACT	No ACTION, D0-D15 = High Impedance
0	0	1	ADAR	Address Data to Address Register, D0-D15 = High Impedance
0	1	0	IAB	No Action
0	1	1	DTB	Data To Bus, D0-D15 = Input
1	0	0	BAR	Bus to Address Register
1	0	1	DW	No Action
1	1	0	DWS	No Action
1	1	1	INTAK	INTerrupt AcKnowledge

READ ONLY MEMORY

PIN CONFIGURATION 28 LEAD DUAL IN LINE



TIMING DIAGRAM



ELECTRICAL CHARACTERISTICS**Maximum Ratings***

Temperature Under Bias	0°C to +100°C
Storage Temperature	-55°C to +150°C
All Input or Output Voltages with Respect to V_{SS}	-0.2V to +9.0V
V_{CC} with Respect to V_{SS}	-0.2V to +9.0V

Standard Conditions (unless otherwise noted):

Ambient Temperature	0°C to +55°C
V_{CC}	+4.85V to +5.15V
V_{SS}	0V

* Exceeding these ratings could cause permanent damage to the device. This is a stress rating only and functional operation of this device at these conditions is not implied—operating ranges are specified in Standard Conditions. Exposure to absolute maximum rating conditions for extended periods may affect device reliability. Data labeled "typical" is presented for design guidance only and is not guaranteed.

DC CHARACTERISTICS

Characteristics	Sym	Min	Typ	Max	Units	Conditions
Inputs						
Input Logic Low	V_{IL}	0	—	0.7	V	$V_{IN} = 0V \text{ to } V_{CC}$
Input Logic High	V_{IH}	2.4	—	V_{CC}	V	
Input Leakage	I_{IL}	—	—	5	μA	
CPU Bus Outputs						
Output Logic Low	V_{OL}	0	—	0.5	V	$I_{OL} = 1.5mA$ $I_{OH} = 80\mu A$
Output Logic High	V_{OH}	2.4	—	V_{CC}	V	
Supply Current						
V_{CC} Supply	I_{CC}	—	—	120	mA	$V_{CC} = 5.15V @ 25^\circ C$

AC CHARACTERISTICS

Characteristics	Sym	Min	Typ	Max	Units	Conditions
Inputs						
Address Set Up	t_{AS}	300	—	—	ns	
Address Overlap	t_{AO}	—	—	65	ns	
CPU Bus Outputs						
Turn ON Delay	t_{DA}	—	—	350	ns	
Turn OFF Delay	t_{DO}	85	—	—	ns	
Access Time	t_{AC}	—	—	1.5	μs	

READ ONLY MEMORY