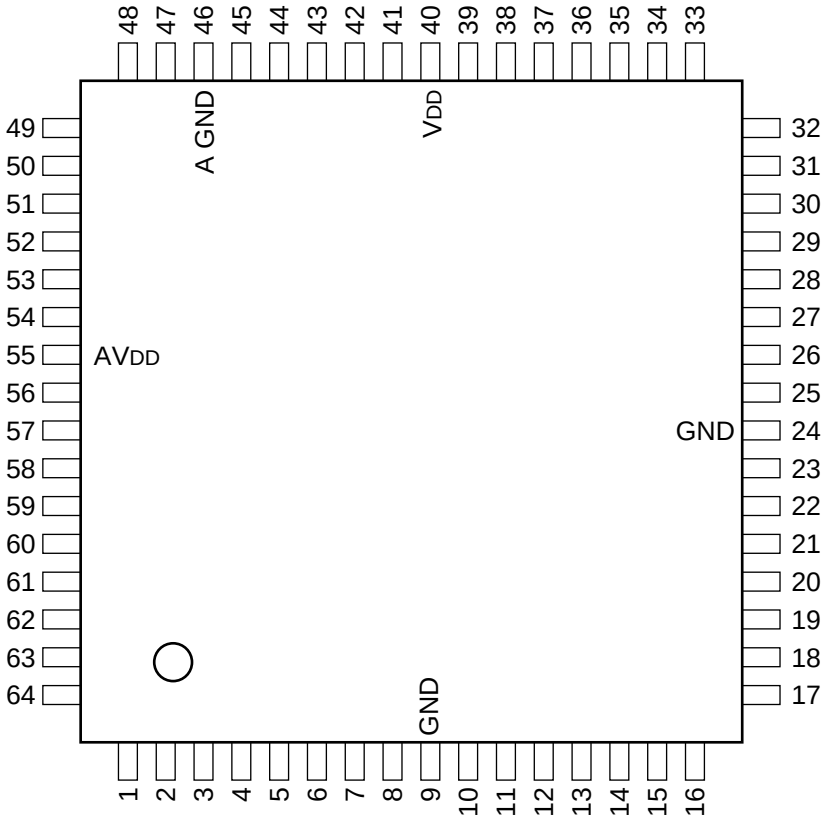
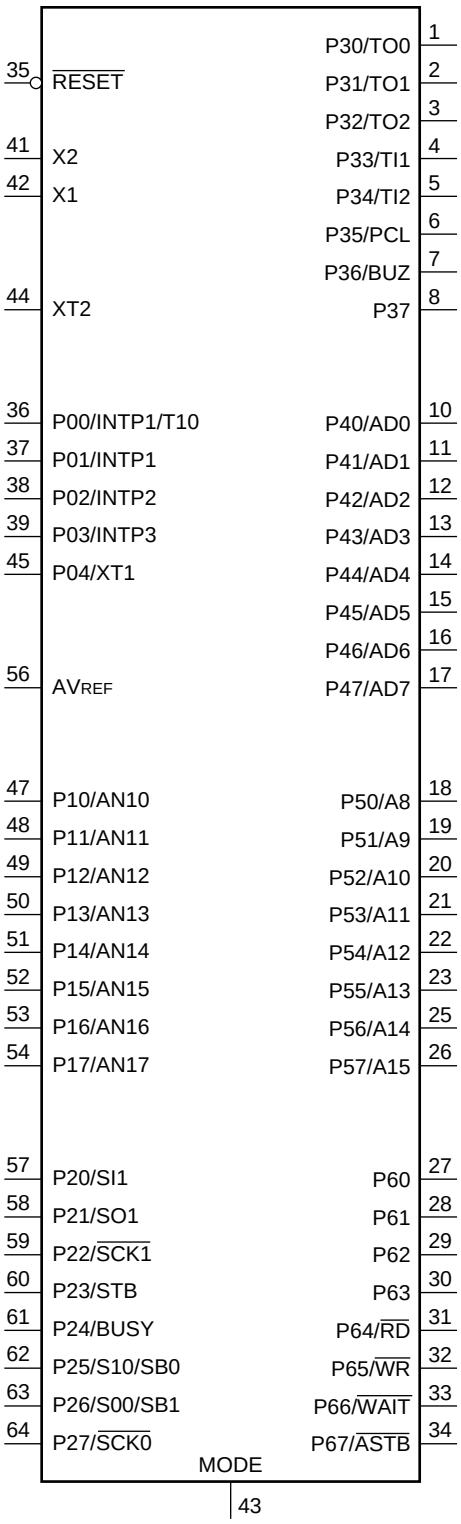
C-MOS 8-BIT SINGLE CHIP MICROCOMPUTER WITH MASK ROM

—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	P30/TO0	17	I/O	P47/AD7	33	I/O	P66/$\overline{\text{WAIT}}$	49	I	P12/AN12
2	I/O	P31/TO1	18	I/O	P50/A8	34	I/O	P67/$\overline{\text{ASTB}}$	50	I	P13/AN13
3	I/O	P32/TO2	19	I/O	P51/A9	35	I	$\overline{\text{RESET}}$	51	I	P14/AN14
4	I/O	P33/T11	20	I/O	P52/A10	36	I	P00/INTP0/T10	52	I	P15/AN15
5	I/O	P34/T12	21	I/O	P53/A11	37	I/O	P01/INTP1	53	I	P16/AN16
6	I/O	P35/PCL	22	I/O	P54/A12	38	I/O	P02/INTP2	54	I	P17/AN17
7	I/O	P36/BUZ	23	I/O	P55/A13	39	I/O	P03/INTP3	55	—	AVDD
8	I/O	P37	24	—	GND	40	—	VDD	56	—	AVREF
9	—	GND	25	I/O	P56/A14	41	O	X2	57	I/O	P20/SI1
10	I/O	P40/AD0	26	I/O	P57/A15	42	I	X1	58	I/O	P21/SO1
11	I/O	P41/AD1	27	I/O	P60	43	—	MODE	59	I/O	P22/$\overline{\text{SCK1}}$
12	I/O	P42/AD2	28	I/O	P61	44	—	XT2	60	I/O	P23/STB
13	I/O	P43/AD3	29	I/O	P62	45	I	P04/XT1	61	I/O	P24/BUSY
14	I/O	P44/AD4	30	I/O	P63	46	—	A GND	62	I/O	P25/S10/SB0
15	I/O	P45/AD5	31	I/O	P64/$\overline{\text{RD}}$	47	I	P10/AN10	63	I/O	P26/S00/SB1
16	I/O	P46/AD6	32	I/O	P65/$\overline{\text{WR}}$	48	I	P11/AN11	64	I/O	P27/$\overline{\text{SCK0}}$



INPUT

ANI0 - ANI7	;	ANALOG 0 - 7
AVREF	;	ANALOG REFERENCE VOLTAGE
BUSY	;	BUSY
INTP0 - INTP3	;	INTERRUPT FROM PERIPHERALS 0 - 3
MODE	;	ROM-LESS MODE
P00, P04	;	PORT 0
P10 - P17	;	PORT 1
$\overline{\text{RESET}}$	;	RESET
SI0, SI1	;	SERIAL 0, 1
TI0 - TI2	;	TIMER 0 - 2
$\overline{\text{WAIT}}$	;	WAIT
X1, X2	;	CRYSTAL 1, 2 (MAIN SYSTEM CLOCK)
XT1, XT2	;	CRYSTAL 1, 2 (SUB SYSTEM CLOCK)

OUTPUT

A8 - A15	;	ADDRESS BUS 8 - 15
$\overline{\text{ASTB}}$	;	ADDRESS STROBE
BUZ	;	BUZZER CLOCK
PCL	;	PROGRAMMABLE CLOCK
$\overline{\text{RD}}$	;	READ STROBE
SO0, SO1	;	SERIAL 0, 1
STB	;	STROBE
TO0 - TO2	;	TIMER 0 - 2
$\overline{\text{WR}}$	;	WRITE STROBE

INPUT/OUTPUT

AD0 - AD7	;	ADDRESS / DATA BUS 0 - 7
P01 - P03	;	PORT 0
P20 - P27	;	PORT 2
P30 - P37	;	PORT 3
P40 - P47	;	PORT 4
P50 - P57	;	PORT 5
P60 - P67	;	PORT 6
SB0, SB1	;	SERIAL BUS 0, 1
$\overline{\text{SCK0}}$, $\overline{\text{SCK1}}$	;	SERIAL CLOCK 0, 1

TYPE	ROM SIZE	RAM SIZE
UPD78011	8192-BYTE	544-BYTE
UPD78012	16384-BYTE	544-BYTE
UPD78013	24576-BYTE	1056-BYTE
UPD78014	32768-BYTE	1056-BYTE