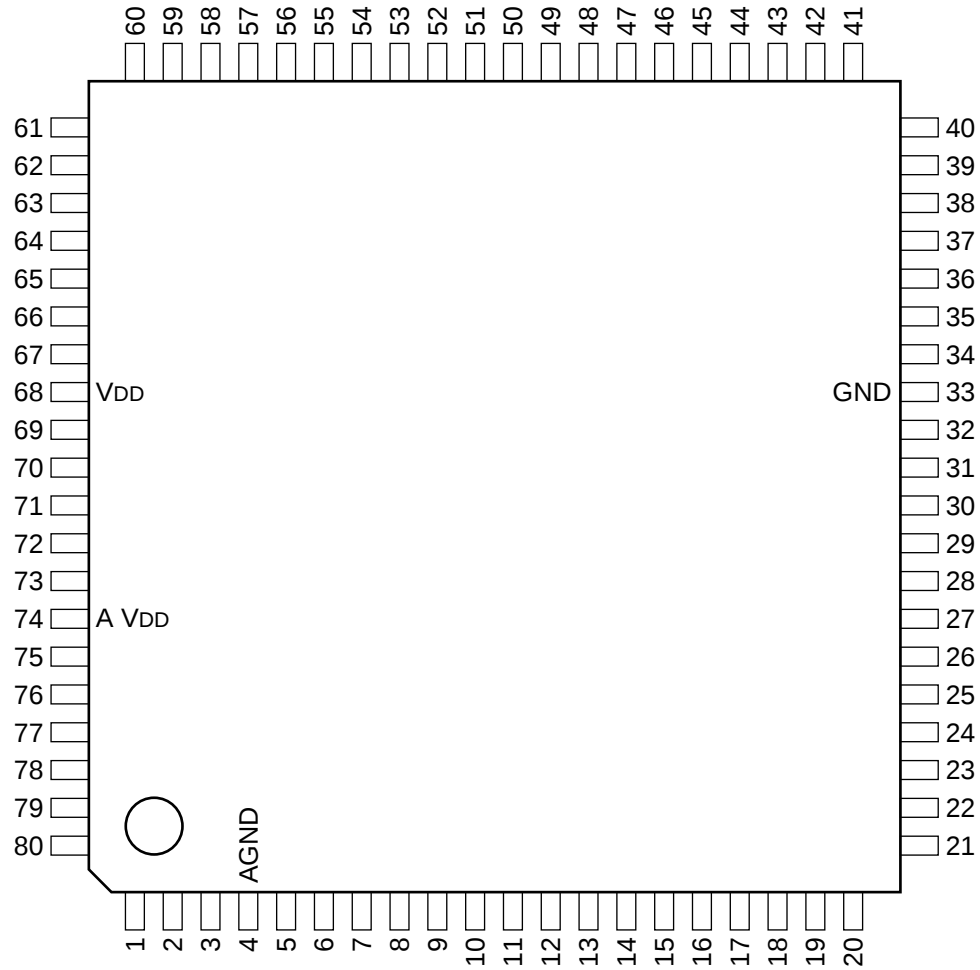


## C-MOS 8-BIT MICROCOMPUTER

—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 | P15/ANI5                            | 21      | I/O | P42/AD2                     | 41      | I/O | P65/ $\overline{\text{WR}}$   | 61      | I   | P00/INTP0/TI00 |
| 2       | I/O | P16/ANI6                            | 22      | I/O | P43/AD3                     | 42      | I/O | P66/ $\overline{\text{WAIT}}$ | 62      | I/O | P01/INTP1/TI01 |
| 3       | I/O | P17/ANI7                            | 23      | I/O | P44/AD4                     | 43      | I/O | P67/ASTB                      | 63      | I/O | P02/INTP2      |
| 4       | —   | AGND                                | 24      | I/O | P45/AD5                     | 44      | I/O | P30/TO0                       | 64      | I/O | P03/INTP3      |
| 5       | I/O | P130/ANO0                           | 25      | I/O | P46/AD6                     | 45      | I/O | P31/TO1                       | 65      | I/O | P04/INTP4      |
| 6       | I/O | P131/ANO1                           | 26      | I/O | P47/AD7                     | 46      | I/O | P32/TO2                       | 66      | I/O | P05/INTP5      |
| 7       | I   | AVREF1                              | 27      | I/O | P50/A8                      | 47      | I/O | P33/TI1                       | 67      | I/O | P06/INTP6      |
| 8       | I/O | P70/SI2/RXD                         | 28      | I/O | P51/A9                      | 48      | I/O | P34/TI2                       | 68      | —   | VDD            |
| 9       | I/O | P71/SO2/TXD                         | 29      | I/O | P52/A10                     | 49      | I/O | P35/PCL                       | 69      | —   | X2             |
| 10      | I/O | P72/ $\overline{\text{SCK2}}$ /ASCK | 30      | I/O | P53/A11                     | 50      | I/O | P36/BUZ                       | 70      | I   | X1             |
| 11      | I/O | P20/SI1                             | 31      | I/O | P54/A12                     | 51      | I/O | P37                           | 71      | —   | IC             |
| 12      | I/O | P21/SO1                             | 32      | I/O | P55/A13                     | 52      | I/O | P120/RTP0                     | 72      | —   | XT2            |
| 13      | I/O | P22/ $\overline{\text{SCK1}}$       | 33      | —   | GND                         | 53      | I/O | P121/RTP1                     | 73      | I   | P07/XT1        |
| 14      | I/O | P23/STB                             | 34      | I/O | P56/A14                     | 54      | I/O | P122/RTP2                     | 74      | —   | AVDD           |
| 15      | I/O | P24/BUSY                            | 35      | I/O | P57/A15                     | 55      | I/O | P123/RTP3                     | 75      | I   | AVREF0         |
| 16      | I/O | P25/SI0/SB0                         | 36      | I/O | P60                         | 56      | I/O | P124/RTP4                     | 76      | I/O | P10/ANI0       |
| 17      | I/O | P26/SO0/SB1                         | 37      | I/O | P61                         | 57      | I/O | P125/RTP5                     | 77      | I/O | P11/ANI1       |
| 18      | I/O | P27/ $\overline{\text{SCK0}}$       | 38      | I/O | P62                         | 58      | I/O | P126/RTP6                     | 78      | I/O | P12/ANI2       |
| 19      | I/O | P40/AD0                             | 39      | I/O | P63                         | 59      | I/O | P127/RTP7                     | 79      | I/O | P13/ANI3       |
| 20      | I/O | P41/AD1                             | 40      | I/O | P64/ $\overline{\text{RD}}$ | 60      | I   | $\overline{\text{RESET}}$     | 80      | I/O | P14/ANI4       |

|    |                               |                                     |    |
|----|-------------------------------|-------------------------------------|----|
| 61 | P00/INTP0/TI00                | P40/AD0                             | 19 |
| 62 | P01/INTP1/TI01                | P41/AD1                             | 20 |
| 63 | P02/INTP2                     | P42/AD2                             | 21 |
| 64 | P03/INTP3                     | P43/AD3                             | 22 |
| 65 | P04/INTP4                     | P44/AD4                             | 23 |
| 66 | P05/INTP5                     | P45/AD5                             | 24 |
| 67 | P06/INTP6                     | P46/AD6                             | 25 |
| 73 | P07/XT1                       | P47/AD7                             | 26 |
| 72 | XT2                           | P50/A8                              | 27 |
| 76 | P10/ANI0                      | P51/A9                              | 28 |
| 77 | P11/ANI1                      | P52/A10                             | 29 |
| 78 | P12/ANI2                      | P53/A11                             | 30 |
| 79 | P13/ANI3                      | P54/A12                             | 31 |
| 80 | P14/ANI4                      | P55/A13                             | 32 |
| 1  | P15/ANI5                      | P56/A14                             | 34 |
| 2  | P16/ANI6                      | P57/A15                             | 35 |
| 3  | P17/ANI7                      | P60                                 | 36 |
| 11 | P20/SI1                       | P61                                 | 37 |
| 12 | P21/SO1                       | P62                                 | 38 |
| 13 | P22/ $\overline{\text{SCK1}}$ | P63                                 | 39 |
| 14 | P23/STB                       | P64/ $\overline{\text{RD}}$         | 40 |
| 15 | P24/BUSY                      | P65/ $\overline{\text{WR}}$         | 41 |
| 16 | P25/SI0/SB0                   | P66/ $\overline{\text{WAIT}}$       | 42 |
| 17 | P26/SO0/SB1                   | P67/ASTB                            | 43 |
| 18 | P27/ $\overline{\text{SCK0}}$ | P70/SI2/RXD                         | 8  |
| 44 | P30/TO0                       | P71/SO2/TXD                         | 9  |
| 45 | P31/TO1                       | P72/ $\overline{\text{SCK2}}$ /ASCK | 10 |
| 46 | P32/TO2                       | P120/RTP0                           | 52 |
| 47 | P33/TI1                       | P121/RTP1                           | 53 |
| 48 | P34/TI2                       | P122/RTP2                           | 54 |
| 49 | P35/PCL                       | P123/RTP3                           | 55 |
| 50 | P36/BUZ                       | P124/RTP4                           | 56 |
| 51 | P37                           | P125/RTP5                           | 57 |
| 75 | AVREF0                        | P126/RTP6                           | 58 |
| 7  | AVREF1                        | P127/RTP7                           | 59 |
| 71 | IC                            | P130/ANO0                           | 5  |
| 60 | RESET                         | P131/ANO1                           | 6  |
| 70 | X1                            |                                     |    |
| 69 | X2                            |                                     |    |

**INPUT**

|                           |                                            |
|---------------------------|--------------------------------------------|
| ANI0 - ANI7               | ; ANALOG 0 - 7 (A/D CONVERTER)             |
| ASCK                      | ; ASYNCHRONOUS SERIAL CLOCK                |
| ASTB                      | ; ADDRESS STROBE                           |
| AVREF0                    | ; ANALOG REFERENCE VOLTAGE (A/D CONVERTER) |
| AVREF1                    | ; ANALOG REFERENCE VOLTAGE (D/A CONVERTER) |
| BUSY                      | ; BUSY                                     |
| INTP0 - INTP6             | ; INTERRUPT FROM PERIPHERALS 0 - 6         |
| PO0, PO7                  | ; PORT 0                                   |
| $\overline{\text{RESET}}$ | ; RESET                                    |
| RXD                       | ; RECEIVE DATA                             |
| SI0 - SI2                 | ; SERIAL DATA 0 - 2                        |
| TI00                      | ; EXTERNAL COUNT CLOCK 0                   |
| TI01                      | ; CAPTURE TRIGGER                          |
| TI1, TI2                  | ; EXTERNAL COUNT CLOCK 1, 2                |
| $\overline{\text{WAIT}}$  | ; WAIT                                     |
| X1, X2                    | ; CRYSTAL1, 2 (MAIN SYSTEM CLOCK)          |
| XT1, XT2                  | ; CRYSTAL1, 2 (SUB SYSTEM CLOCK)           |

**OUTPUT**

|                        |                               |
|------------------------|-------------------------------|
| A8 - A15               | ; ADDRESS BUS                 |
| ANO0, ANO1             | ; ANALOG 0, 1 (D/A CONVERTER) |
| BUZ                    | ; BUZZER CLOCK                |
| PCL                    | ; PROGRAMMABLE CLOCK          |
| $\overline{\text{RD}}$ | ; READ STROBE                 |
| RTP0 - RTP7            | ; REAL-TIME PORT              |
| SO0 - SO2              | ; SERIAL DATA 0 - 2           |
| STB                    | ; STROBE                      |
| TO0 - TO2              | ; TIMER 0 - 2                 |
| TXD                    | ; TRANSMIT DATA               |
| $\overline{\text{WR}}$ | ; WRITE STROBE                |

**INPUT/OUTPUT**

|                                                     |                          |
|-----------------------------------------------------|--------------------------|
| AD0 - AD7                                           | ; ADDRESS/DATA BUS 0 - 7 |
| P01 - P06                                           | ; PORT 0                 |
| P10 - P17                                           | ; PORT 1                 |
| P20 - P27                                           | ; PORT 2                 |
| P30 - P37                                           | ; PORT 3                 |
| P40 - P47                                           | ; PORT 4                 |
| P50 - P57                                           | ; PORT 5                 |
| P60 - P67                                           | ; PORT 6                 |
| P70 - P72                                           | ; PORT 7                 |
| P120 - P127                                         | ; PORT 12                |
| P130, P131                                          | ; PORT 13                |
| SB0, SB1                                            | ; SERIAL DATA BUS 0, 1   |
| $\overline{\text{SCK0}}$ - $\overline{\text{SCK2}}$ | ; SERIAL CLOCK 0 - 2     |

**OTHER**

|    |                        |
|----|------------------------|
| IC | ; INTERNALLY CONNECTED |
|----|------------------------|

