IO & Memory address Mapping

Memory

Address Range 0x000 – 0x0FF

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 30 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | 1 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Seven Segment

Address 0x100

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 15:12 | | 11:8 | 7:4 | 3:0 | |
| Seven Segment 3  Decimal Value | | Seven Segment 2  Decimal Value | Seven Segment 1  Decimal Value | Seven Segment 0  Decimal Value | |
| 31 | ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ | | | | 16 | |
| NC | | | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| NC | Hex0[6]  E2 | Hex0[5]  F1 | Hex0[4]  F2 | Hex0[3]  H1 | Hex0[2]  H2 | Hex0[1]  J1 | Hex0[0]  J2 |
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
| NC | Hex1[6]  D1 | Hex1[5]  D2 | Hex1[4]  G3 | Hex1[3]  H4 | Hex1[2]  H5 | Hex1[1]  H6 | Hex1[0]  E1 |
| 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 |
| NC | Hex2[6]  D3 | Hex2[5]  E4 | Hex2[4]  E3 | Hex2[3]  C1 | Hex2[2]  C2 | Hex2[1]  G6 | Hex2[0]  G5 |
| 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 |
| NC | Hex3[6]  D4 | Hex3[5]  F3 | Hex3[4]  L8 | Hex3[3]  J4 | Hex3[2]  D6 | Hex3[1]  D5 | Hex3[0]  F4 |

LEDs

Address 0x101

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | 6 | | 5 | | | 4 | 3 | 2 | 1 | 0 |
| LEDG[7]  Y21 | | LEDG[6]  Y22 | | LEDG[5]  W21 | LEDG[4]  W22 | | LEDG[3]  V21 | LEDG[2]  V22 | LEDG [1]  U21 | LEDG[0]  U22 |
| 15 | 14 | | 13 | | | 12 | 11 | 10 | 9 | 8 |
| LEDR[7]  U18 | LEDR[6]  Y18 | | LEDR[5]  V19 | | | LEDR[4]  T18 | LEDR[3]  Y19 | LEDR[2]  U19 | LEDR[1]  R19 | LEDR[0]  R20 |
| 31 | ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ | | | | | | | 18 | 17 | 16 |
| NC | | | | | | | | | LEDR[9]  R17 | LEDR[8]  R18 |

Pushbuttons and Switches

Address 0x102

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7 | ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ | | 4 | 3 | 2 | 1 | 0 |
| NC | | | | KEY[3]  T21 | KEY[2]  T22 | KEY[1]  R21 | KEY[0]  R22 |
| 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
| SW[7]  M2 | SW[6]  U11 | SW[5]  U12 | SW[4]  W12 | SW[3]  V12 | SW[2]  M22 | SW[1]  L21 | SW[0]  L22 |
| 31 | ⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯ | | | | 18 | 17 | 16 |
| NC | | | | | | SW[9]  L2 | SW[8]  M1 |