# DE2-115 FPGA Board Configuration

## Pin Assignments:

* [CLOCK](#_gjdgxs)
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* [KEY](#_1fob9te)
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* [GPIO](#_tyjcwt)

## Pin Assignment Table:

## 

CLOCK

| Name | Location | Direction | Standard |
| --- | --- | --- | --- |
| CLOCK\_50 | Y2 | input | 3.3-V LVTTL |
| CLOCK2\_50 | AG14 | input | 3.3-V LVTTL |
| CLOCK3\_50 | AG15 | input | 3.3-V LVTTL |

## 

LED

| Name | Location | Direction | Standard |
| --- | --- | --- | --- |
| LEDR[0] | G19 | output | 2.5 V |
| LEDR[1] | F19 | output | 2.5 V |
| LEDR[2] | E19 | output | 2.5 V |
| LEDR[3] | F21 | output | 2.5 V |
| LEDR[4] | F18 | output | 2.5 V |
| LEDR[5] | E18 | output | 2.5 V |
| LEDR[6] | J19 | output | 2.5 V |
| LEDR[7] | H19 | output | 2.5 V |
| LEDR[8] | J17 | output | 2.5 V |
| LEDR[9] | G17 | output | 2.5 V |
| LEDR[10] | J15 | output | 2.5 V |
| LEDR[11] | H16 | output | 2.5 V |
| LEDR[12] | J16 | output | 2.5 V |
| LEDR[13] | H17 | output | 2.5 V |
| LEDR[14] | F15 | output | 2.5 V |
| LEDR[15] | G15 | output | 2.5 V |
| LEDR[16] | G16 | output | 2.5 V |
| LEDR[17] | H15 | output | 2.5 V |
| LEDG[0] | E21 | output | 2.5 V |
| LEDG[1] | E22 | output | 2.5 V |
| LEDG[2] | E25 | output | 2.5 V |
| LEDG[3] | E24 | output | 2.5 V |
| LEDG[4] | H21 | output | 2.5 V |
| LEDG[5] | G20 | output | 2.5 V |
| LEDG[6] | G22 | output | 2.5 V |
| LEDG[7] | G21 | output | 2.5 V |
| LEDG[8] | F17 | output | 2.5 V |

## 

KEY

| Name | Location | Direction | Standard |
| --- | --- | --- | --- |
| KEY[0] | M23 | input | 3.3-V LVTTL |
| KEY[1] | M21 | input | 3.3-V LVTTL |
| KEY[2] | N21 | input | 3.3-V LVTTL |
| KEY[3] | R24 | input | 3.3-V LVTTL |

## 

SW

| Name | Location | Direction | Standard |
| --- | --- | --- | --- |
| SW[0] | AB28 | input | 3.3-V LVTTL |
| SW[1] | AC28 | input | 3.3-V LVTTL |
| SW[2] | AC27 | input | 3.3-V LVTTL |
| SW[3] | AD27 | input | 3.3-V LVTTL |
| SW[4] | AB27 | input | 3.3-V LVTTL |
| SW[5] | AC26 | input | 3.3-V LVTTL |
| SW[6] | AD26 | input | 3.3-V LVTTL |
| SW[7] | AB26 | input | 3.3-V LVTTL |
| SW[8] | AC25 | input | 3.3-V LVTTL |
| SW[9] | AB25 | input | 3.3-V LVTTL |
| SW[10] | AC24 | input | 3.3-V LVTTL |
| SW[11] | AB24 | input | 3.3-V LVTTL |
| SW[12] | AB23 | input | 3.3-V LVTTL |
| SW[13] | AA24 | input | 3.3-V LVTTL |
| SW[14] | AA23 | input | 3.3-V LVTTL |
| SW[15] | AA22 | input | 3.3-V LVTTL |
| SW[16] | Y24 | input | 3.3-V LVTTL |
| SW[17] | Y23 | input | 3.3-V LVTTL |

## 

SEG7

| Name | Location | Direction | Standard |
| --- | --- | --- | --- |
| HEX0[0] | G18 | output | 2.5 V |
| HEX0[1] | F22 | output | 2.5 V |
| HEX0[2] | E17 | output | 2.5 V |
| HEX0[3] | L26 | output | 3.3-V LVTTL |
| HEX0[4] | L25 | output | 3.3-V LVTTL |
| HEX0[5] | J22 | output | 3.3-V LVTTL |
| HEX0[6] | H22 | output | 3.3-V LVTTL |
| HEX1[0] | M24 | output | 3.3-V LVTTL |
| HEX1[1] | Y22 | output | 3.3-V LVTTL |
| HEX1[2] | W21 | output | 3.3-V LVTTL |
| HEX1[3] | W22 | output | 3.3-V LVTTL |
| HEX1[4] | W25 | output | 3.3-V LVTTL |
| HEX1[5] | U23 | output | 3.3-V LVTTL |
| HEX1[6] | U24 | output | 3.3-V LVTTL |
| HEX2[0] | AA25 | output | 3.3-V LVTTL |
| HEX2[1] | AA26 | output | 3.3-V LVTTL |
| HEX2[2] | Y25 | output | 3.3-V LVTTL |
| HEX2[3] | W26 | output | 3.3-V LVTTL |
| HEX2[4] | Y26 | output | 3.3-V LVTTL |
| HEX2[5] | W27 | output | 3.3-V LVTTL |
| HEX2[6] | W28 | output | 3.3-V LVTTL |
| HEX3[0] | V21 | output | 3.3-V LVTTL |
| HEX3[1] | U21 | output | 3.3-V LVTTL |
| HEX3[2] | AB20 | output | 3.3-V LVTTL |
| HEX3[3] | AA21 | output | 3.3-V LVTTL |
| HEX3[4] | AD24 | output | 3.3-V LVTTL |
| HEX3[5] | AF23 | output | 3.3-V LVTTL |
| HEX3[6] | Y19 | output | 3.3-V LVTTL |
| HEX4[0] | AB19 | output | 3.3-V LVTTL |
| HEX4[1] | AA19 | output | 3.3-V LVTTL |
| HEX4[2] | AG21 | output | 3.3-V LVTTL |
| HEX4[3] | AH21 | output | 3.3-V LVTTL |
| HEX4[4] | AE19 | output | 3.3-V LVTTL |
| HEX4[5] | AF19 | output | 3.3-V LVTTL |
| HEX4[6] | AE18 | output | 3.3-V LVTTL |
| HEX5[0] | AD18 | output | 3.3-V LVTTL |
| HEX5[1] | AC18 | output | 3.3-V LVTTL |
| HEX5[2] | AB18 | output | 3.3-V LVTTL |
| HEX5[3] | AH19 | output | 3.3-V LVTTL |
| HEX5[4] | AG19 | output | 3.3-V LVTTL |
| HEX5[5] | AF18 | output | 3.3-V LVTTL |
| HEX5[6] | AH18 | output | 3.3-V LVTTL |
| HEX6[0] | AA17 | output | 3.3-V LVTTL |
| HEX6[1] | AB16 | output | 3.3-V LVTTL |
| HEX6[2] | AA16 | output | 3.3-V LVTTL |
| HEX6[3] | AB17 | output | 3.3-V LVTTL |
| HEX6[4] | AB15 | output | 3.3-V LVTTL |
| HEX6[5] | AA15 | output | 3.3-V LVTTL |
| HEX6[6] | AC17 | output | 3.3-V LVTTL |
| HEX7[0] | AD17 | output | 3.3-V LVTTL |
| HEX7[1] | AE17 | output | 3.3-V LVTTL |
| HEX7[2] | AG17 | output | 3.3-V LVTTL |
| HEX7[3] | AH17 | output | 3.3-V LVTTL |
| HEX7[4] | AF17 | output | 3.3-V LVTTL |
| HEX7[5] | AG18 | output | 3.3-V LVTTL |
| HEX7[6] | AA14 | output | 3.3-V LVTTL |

## 

GPIO connect to GPIO Default

| Name | Location | Direction | Standard | GPIO Pin Index |
| --- | --- | --- | --- | --- |
| GPIO[0] | AB22 | inout | 3.3-V LVTTL | 1 |
| GPIO[1] | AC15 | inout | 3.3-V LVTTL | 2 |
| GPIO[2] | AB21 | inout | 3.3-V LVTTL | 3 |
| GPIO[3] | Y17 | inout | 3.3-V LVTTL | 4 |
| GPIO[4] | AC21 | inout | 3.3-V LVTTL | 5 |
| GPIO[5] | Y16 | inout | 3.3-V LVTTL | 6 |
| GPIO[6] | AD21 | inout | 3.3-V LVTTL | 7 |
| GPIO[7] | AE16 | inout | 3.3-V LVTTL | 8 |
| GPIO[8] | AD15 | inout | 3.3-V LVTTL | 9 |
| GPIO[9] | AE15 | inout | 3.3-V LVTTL | 10 |
| GPIO[10] | AC19 | inout | 3.3-V LVTTL | 13 |
| GPIO[11] | AF16 | inout | 3.3-V LVTTL | 14 |
| GPIO[12] | AD19 | inout | 3.3-V LVTTL | 15 |
| GPIO[13] | AF15 | inout | 3.3-V LVTTL | 16 |
| GPIO[14] | AF24 | inout | 3.3-V LVTTL | 17 |
| GPIO[15] | AE21 | inout | 3.3-V LVTTL | 18 |
| GPIO[16] | AF25 | inout | 3.3-V LVTTL | 19 |
| GPIO[17] | AC22 | inout | 3.3-V LVTTL | 20 |
| GPIO[18] | AE22 | inout | 3.3-V LVTTL | 21 |
| GPIO[19] | AF21 | inout | 3.3-V LVTTL | 22 |
| GPIO[20] | AF22 | inout | 3.3-V LVTTL | 23 |
| GPIO[21] | AD22 | inout | 3.3-V LVTTL | 24 |
| GPIO[22] | AG25 | inout | 3.3-V LVTTL | 25 |
| GPIO[23] | AD25 | inout | 3.3-V LVTTL | 26 |
| GPIO[24] | AH25 | inout | 3.3-V LVTTL | 27 |
| GPIO[25] | AE25 | inout | 3.3-V LVTTL | 28 |
| GPIO[26] | AG22 | inout | 3.3-V LVTTL | 31 |
| GPIO[27] | AE24 | inout | 3.3-V LVTTL | 32 |
| GPIO[28] | AH22 | inout | 3.3-V LVTTL | 33 |
| GPIO[29] | AF26 | inout | 3.3-V LVTTL | 34 |
| GPIO[30] | AE20 | inout | 3.3-V LVTTL | 35 |
| GPIO[31] | AG23 | inout | 3.3-V LVTTL | 36 |
| GPIO[32] | AF20 | inout | 3.3-V LVTTL | 37 |
| GPIO[33] | AH26 | inout | 3.3-V LVTTL | 38 |
| GPIO[34] | AH23 | inout | 3.3-V LVTTL | 39 |
| GPIO[35] | AG26 | inout | 3.3-V LVTTL | 40 |