

CURSO DE ENGENHARIA ELÉTRICA

LABORATÓRIO DE SISTEMAS DIGITAIS

ASSOCIAÇÃO DE PINOS DO FPGA DA PLACA DE10-LITE

ASSOCIAÇÃO DE PINOS DO FPGA DA PLACA DE10-Lite

(Referência: DE10-Lite – User Manual – pg. 24 a 34)

VISTA GERAL DA PLACA DE10 - Lite - TERASIC

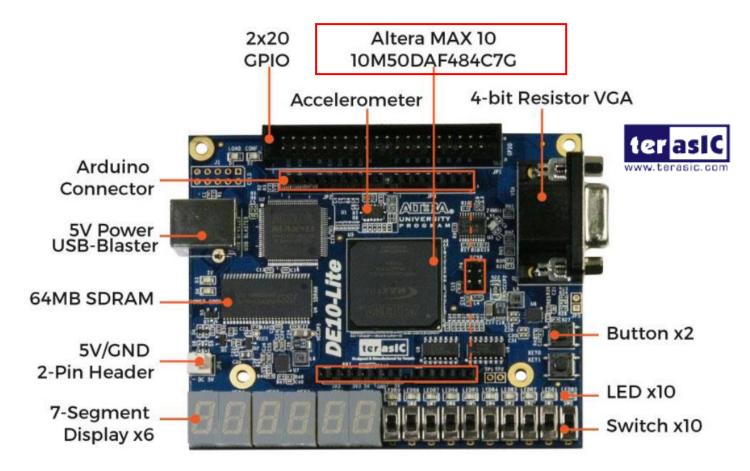
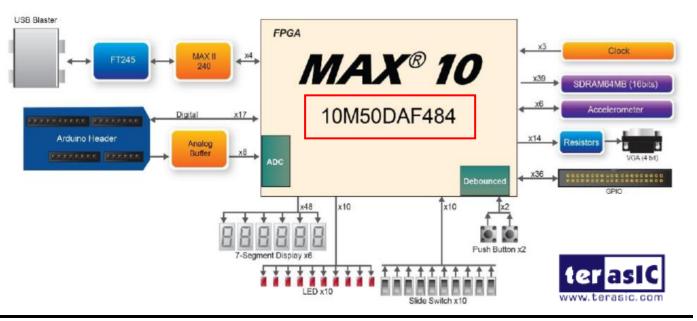


DIAGRAMA DE BLOCOS DAS INTERFACES - DE10-Lite





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SINAIS DE CLOCK

ATENÇÃO: Utilizar preferencialmente nos projetos do Laboratório de Sistemas Digitais o sinal: MAX10_CLK1_50

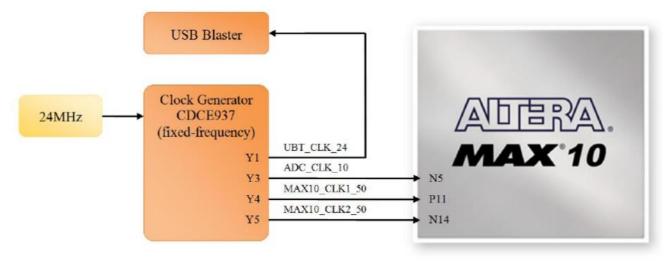


Figure 3-12 Clock circuit of the FPGA Board

Table 3-2 Pin Assignment of Clock Inputs

| Signal Name | FPGA Pin No. | Description |
|---------------|--------------|--------------------------------------|
| ADC_CLK_10 | PIN_N5 | 10 MHz clock input for ADC (Bank 3B) |
| MAX10_CLK1_50 | PIN_P11 | 50 MHz clock input(Bank 3B) |
| MAX10_CLK2_50 | PIN_N14 | 50 MHz clock input(Bank 3B) |



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BOTÕES DE PRESSÃO (CONTATO MOMENTÂNEO):

ATENÇÃO: Esses botões são <u>ativos em nível lógico zero</u> (quando <u>NÃO</u> <u>ESTÃO PRESSIONADOS</u> geram sinais em <u>nível lógico um</u>)

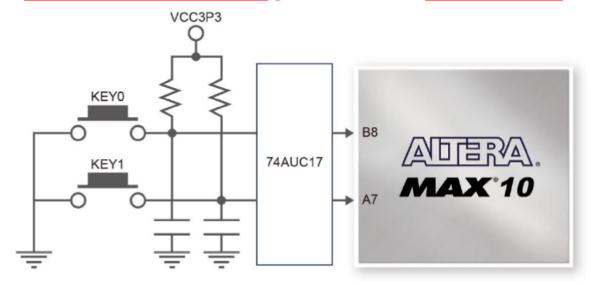


Figure 3-13 Connections between the push-button and MAX 10 FPGA

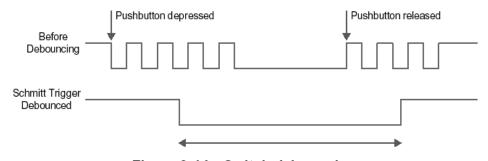


Figure 3-14 Switch debouncing

Table 3-3 Pin Assignment of Push-buttons

| Signal Name | FPGA Pin No. | Description |
|-------------|--------------|----------------|
| KEY0 | PIN_B8 | Push-button[0] |
| KEY1 | PIN_A7 | Push-button[1] |



CHAVES DESLIZANTES DE DUAS POSIÇÕES:



Figure 3-15 Connections between the slide switches and MAX 10 FPGA

Table 3-4 Pin Assignment of Slide Switches

| Signal Name | FPGA Pin No. | Description |
|-------------|--------------|-----------------|
| SW0 | PIN_C10 | Slide Switch[0] |
| SW1 | PIN_C11 | Slide Switch[1] |
| SW2 | PIN_D12 | Slide Switch[2] |
| SW3 | PIN_C12 | Slide Switch[3] |
| SW4 | PIN_A12 | Slide Switch[4] |
| SW5 | PIN_B12 | Slide Switch[5] |
| SW6 | PIN_A13 | Slide Switch[6] |
| SW7 | PIN_A14 | Slide Switch[7] |
| SW8 | PIN_B14 | Slide Switch[8] |
| SW9 | PIN_F15 | Slide Switch[9] |



LED'S VERMELHOS (LEDR):



Figure 3-16 Connections between the LEDs and MAX 10 FPGA

Table 3-5 Pin Assignment of LEDs

| Signal Name | FPGA Pin No. | Description |
|-------------|--------------|-------------|
| LEDR0 | PIN_A8 | LED [0] |
| LEDR1 | PIN_A9 | LED [1] |
| LEDR2 | PIN_A10 | LED [2] |
| LEDR3 | PIN_B10 | LED [3] |
| LEDR4 | PIN_D13 | LED [4] |
| LEDR5 | PIN_C13 | LED [5] |
| LEDR6 | PIN_E14 | LED [6] |
| LEDR7 | PIN_D14 | LED [7] |
| LEDR8 | PIN_A11 | LED [8] |
| LEDR9 | PIN_B11 | LED [9] |



DISPLAYS DE SETE SEGMENTOS:

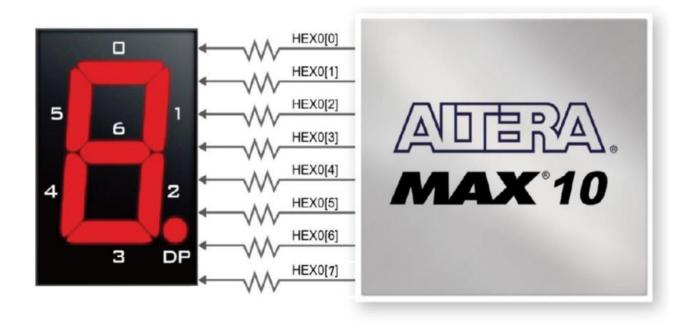


Figure 3-17 Connections between the 7-segment display HEX0 and the MAX 10 FPGA

Table 3-6 Pin Assignment of 7-segment Displays

| Signal Name | FPGA Pin No. | Description |
|-------------|--------------|------------------------------|
| HEX00 | PIN_C14 | Seven Segment Digit 0[0] |
| HEX01 | PIN_E15 | Seven Segment Digit 0[1] |
| HEX02 | PIN_C15 | Seven Segment Digit 0[2] |
| HEX03 | PIN_C16 | Seven Segment Digit 0[3] |
| HEX04 | PIN_E16 | Seven Segment Digit 0[4] |
| HEX05 | PIN_D17 | Seven Segment Digit 0[5] |
| HEX06 | PIN_C17 | Seven Segment Digit 0[6] |
| HEX07 | PIN_D15 | Seven Segment Digit 0[7], DP |
| HEX10 | PIN_C18 | Seven Segment Digit 1[0] |
| HEX11 | PIN_D18 | Seven Segment Digit 1[1] |
| HEX12 | PIN_E18 | Seven Segment Digit 1[2] |
| HEX13 | PIN_B16 | Seven Segment Digit 1[3] |



| HEX14 PIN_A17 Seven Segment Digit 1[4] HEX15 PIN_A18 Seven Segment Digit 1[5] HEX16 PIN_B17 Seven Segment Digit 1[6] HEX17 PIN_A16 Seven Segment Digit 1[7], DP HEX20 PIN_B20 Seven Segment Digit 2[0] HEX21 PIN_A20 Seven Segment Digit 2[1] HEX22 PIN_B19 Seven Segment Digit 2[2] HEX23 PIN_A21 Seven Segment Digit 2[3] HEX24 PIN_B21 Seven Segment Digit 2[6] HEX25 PIN_C22 Seven Segment Digit 2[6] HEX26 PIN_B22 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 3[0] HEX31 PIN_E21 Seven Segment Digit 3[1] HEX32 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[4] HEX35 PIN_D19 Seven Segment Digit 3[6] HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven | | | |
|---|-------|---------|-------------------------------|
| HEX16 PIN_B17 Seven Segment Digit 1[6] HEX17 PIN_A16 Seven Segment Digit 1[7], DP HEX20 PIN_B20 Seven Segment Digit 2[0] HEX21 PIN_B20 Seven Segment Digit 2[1] HEX22 PIN_B19 Seven Segment Digit 2[2] HEX23 PIN_A21 Seven Segment Digit 2[3] HEX24 PIN_B21 Seven Segment Digit 2[4] HEX25 PIN_C22 Seven Segment Digit 2[6] HEX26 PIN_B22 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 3[0] HEX31 PIN_E21 Seven Segment Digit 3[1] HEX32 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[4] HEX35 PIN_D19 Seven Segment Digit 3[6] HEX36 PIN_E17 Seven Segment Digit 4[0] HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 S | HEX14 | PIN_A17 | Seven Segment Digit 1[4] |
| HEX17 PIN_A16 Seven Segment Digit 1[7], DP HEX20 PIN_B20 Seven Segment Digit 2[0] HEX21 PIN_A20 Seven Segment Digit 2[1] HEX22 PIN_B19 Seven Segment Digit 2[2] HEX23 PIN_A21 Seven Segment Digit 2[3] HEX24 PIN_B21 Seven Segment Digit 2[4] HEX25 PIN_C22 Seven Segment Digit 2[5] HEX26 PIN_B22 Seven Segment Digit 2[6] HEX27 PIN_A19 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 3[0] HEX31 PIN_F22 Seven Segment Digit 3[0] HEX33 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[4] HEX35 PIN_D19 Seven Segment Digit 3[6] HEX37 PIN_D22 Seven Segment Digit 4[0] HEX40 PIN_F18 Seven Segment Digit 4[1] HEX41 PIN_E20 Seven | HEX15 | PIN_A18 | Seven Segment Digit 1[5] |
| HEX20 PIN_B20 Seven Segment Digit 2[0] HEX21 PIN_A20 Seven Segment Digit 2[1] HEX22 PIN_B19 Seven Segment Digit 2[2] HEX23 PIN_A21 Seven Segment Digit 2[3] HEX24 PIN_B21 Seven Segment Digit 2[4] HEX25 PIN_C22 Seven Segment Digit 2[5] HEX26 PIN_B22 Seven Segment Digit 2[6] HEX27 PIN_A19 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 2[7], DP HEX31 PIN_E22 Seven Segment Digit 3[0] HEX31 PIN_E22 Seven Segment Digit 3[1] HEX32 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[6] HEX35 PIN_D19 Seven Segment Digit 3[6] HEX36 PIN_E17 Seven Segment Digit 3[7], DP HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven Segment Digit 4[2] HEX42 PIN_H19 S | HEX16 | PIN_B17 | Seven Segment Digit 1[6] |
| HEX21 PIN_A20 Seven Segment Digit 2[1] HEX22 PIN_B19 Seven Segment Digit 2[2] HEX23 PIN_A21 Seven Segment Digit 2[3] HEX24 PIN_B21 Seven Segment Digit 2[4] HEX25 PIN_C22 Seven Segment Digit 2[6] HEX26 PIN_B22 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 3[0] HEX31 PIN_E22 Seven Segment Digit 3[1] HEX32 PIN_E21 Seven Segment Digit 3[2] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[4] HEX35 PIN_D19 Seven Segment Digit 3[6] HEX36 PIN_E17 Seven Segment Digit 3[7], DP HEX430 PIN_E18 Seven Segment Digit 4[0] HEX440 PIN_F18 Seven Segment Digit 4[1] HEX41 PIN_E20 Seven Segment Digit 4[2] HEX43 PIN_H19 Seven Segment Digit 4[2] HEX44 PIN_H19 Seven Segment Digit 4[2] HEX44 PIN_F19 Sev | HEX17 | PIN_A16 | Seven Segment Digit 1[7], DP |
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| HEX24 PIN_B21 Seven Segment Digit 2[4] HEX25 PIN_C22 Seven Segment Digit 2[5] HEX26 PIN_B22 Seven Segment Digit 2[6] HEX27 PIN_A19 Seven Segment Digit 2[7], DP HEX30 PIN_F21 Seven Segment Digit 3[0] HEX31 PIN_F21 Seven Segment Digit 3[1] HEX32 PIN_E22 Seven Segment Digit 3[2] HEX33 PIN_E21 Seven Segment Digit 3[3] HEX33 PIN_C19 Seven Segment Digit 3[3] HEX34 PIN_C20 Seven Segment Digit 3[4] HEX35 PIN_D19 Seven Segment Digit 3[5] HEX36 PIN_E17 Seven Segment Digit 3[6] HEX37 PIN_D22 Seven Segment Digit 3[7], DP HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven Segment Digit 4[1] HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[4] HEX44 PIN_F19 Seven Segment Digit 4[6] HEX45 PIN_F19 Seven | HEX22 | PIN_B19 | Seven Segment Digit 2[2] |
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| HEX35 PIN_D19 Seven Segment Digit 3[5] HEX36 PIN_E17 Seven Segment Digit 3[6] HEX37 PIN_D22 Seven Segment Digit 3[7], DP HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven Segment Digit 4[1] HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 5[0] HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[5] HEX55 PIN_N19 Seven Segment Digit 5[6] | HEX33 | PIN_C19 | Seven Segment Digit 3[3] |
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| HEX37 PIN_D22 Seven Segment Digit 3[7], DP HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven Segment Digit 4[1] HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[6] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[6] | HEX35 | PIN_D19 | Seven Segment Digit 3[5] |
| HEX40 PIN_F18 Seven Segment Digit 4[0] HEX41 PIN_E20 Seven Segment Digit 4[1] HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[6] | HEX36 | PIN_E17 | Seven Segment Digit 3[6] |
| HEX41 PIN_E20 Seven Segment Digit 4[1] HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[6] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX37 | PIN_D22 | Seven Segment Digit 3[7], DP |
| HEX42 PIN_E19 Seven Segment Digit 4[2] HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX40 | PIN_F18 | Seven Segment Digit 4[0] |
| HEX43 PIN_J18 Seven Segment Digit 4[3] HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX41 | PIN_E20 | Seven Segment Digit 4[1] |
| HEX44 PIN_H19 Seven Segment Digit 4[4] HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX42 | PIN_E19 | Seven Segment Digit 4[2] |
| HEX45 PIN_F19 Seven Segment Digit 4[5] HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX43 | PIN_J18 | Seven Segment Digit 4[3] |
| HEX46 PIN_F20 Seven Segment Digit 4[6] HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX44 | PIN_H19 | Seven Segment Digit 4[4] |
| HEX47 PIN_F17 Seven Segment Digit 4[7], DP HEX50 PIN_J20 Seven Segment Digit 5[0] HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX45 | PIN_F19 | Seven Segment Digit 4[5] |
| HEX50PIN_J20Seven Segment Digit 5[0]HEX51PIN_K20Seven Segment Digit 5[1]HEX52PIN_L18Seven Segment Digit 5[2]HEX53PIN_N18Seven Segment Digit 5[3]HEX54PIN_M20Seven Segment Digit 5[4]HEX55PIN_N19Seven Segment Digit 5[5]HEX56PIN_N20Seven Segment Digit 5[6] | HEX46 | PIN_F20 | Seven Segment Digit 4[6] |
| HEX51 PIN_K20 Seven Segment Digit 5[1] HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX47 | PIN_F17 | Seven Segment Digit 4[7], DP |
| HEX52 PIN_L18 Seven Segment Digit 5[2] HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX50 | PIN_J20 | Seven Segment Digit 5[0] |
| HEX53 PIN_N18 Seven Segment Digit 5[3] HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX51 | PIN_K20 | Seven Segment Digit 5[1] |
| HEX54 PIN_M20 Seven Segment Digit 5[4] HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX52 | PIN_L18 | Seven Segment Digit 5[2] |
| HEX55 PIN_N19 Seven Segment Digit 5[5] HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX53 | PIN_N18 | Seven Segment Digit 5[3] |
| HEX56 PIN_N20 Seven Segment Digit 5[6] | HEX54 | PIN_M20 | Seven Segment Digit 5[4] |
| | HEX55 | PIN_N19 | Seven Segment Digit 5[5] |
| HEX57 PIN_L19 Seven Segment Digit 5[7]. DP | HEX56 | PIN_N20 | Seven Segment Digit 5[6] |
| | HEX57 | PIN_L19 | Seven Segment Digit 5[7] , DP |



CONECTORES DE EXPANSÃO - GPIO 2X20):

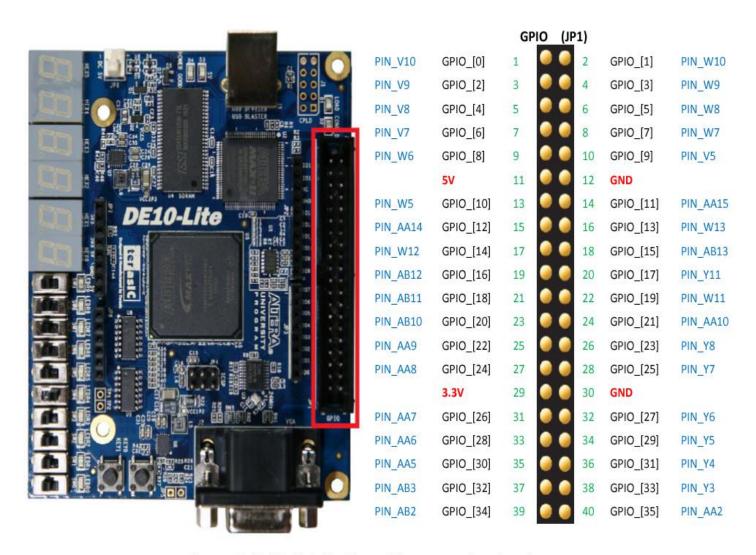


Figure 3-18 I/O distribution of the expansion headers



Table 3-7 Show all Pin Assignment of Expansion Headers

| GPIO_0 PIN_V10 GPIO Connection [0] GPIO_1 PIN_W10 GPIO Connection [1] GPIO_2 PIN_V9 GPIO Connection [2] GPIO_3 PIN_W9 GPIO Connection [3] GPIO_4 PIN_W8 GPIO Connection [4] GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_W7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_W6 GPIO Connection [8] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [15] GPIO_15 PIN_AB13 GPIO Connection [16] GPIO_17 PIN_AB13 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_20 | Signal Name | | |
|---|-------------|--------------|----------------------|
| GPIO_1 PIN_W10 GPIO Connection [1] GPIO_2 PIN_V9 GPIO Connection [2] GPIO_3 PIN_W9 GPIO Connection [3] GPIO_4 PIN_V8 GPIO Connection [4] GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_W5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_M12 GPIO Connection [15] GPIO_15 PIN_AB13 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [17] GPIO_19 PIN_M11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 <th>Signal Name</th> <th>FPGA Pin No.</th> <th>Description</th> | Signal Name | FPGA Pin No. | Description |
| GPIO_2 PIN_V9 GPIO Connection [2] GPIO_3 PIN_W9 GPIO Connection [3] GPIO_4 PIN_V8 GPIO Connection [4] GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [17] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 </td <td></td> <td></td> <td></td> | | | |
| GPIO_3 PIN_W9 GPIO Connection [3] GPIO_4 PIN_V8 GPIO Connection [4] GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [17] GPIO_17 PIN_AB14 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA9 GPIO Connection [21] GPIO | | | |
| GPIO_4 PIN_V8 GPIO Connection [4] GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [17] GPIO_19 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] | | | |
| GPIO_5 PIN_W8 GPIO Connection [5] GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB11 GPIO Connection [19] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 PIN_AA3 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] <t< td=""><td>GPIO_3</td><td>PIN_W9</td><td>GPIO Connection [3]</td></t<> | GPIO_3 | PIN_W9 | GPIO Connection [3] |
| GPIO_6 PIN_V7 GPIO Connection [6] GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB11 GPIO Connection [19] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 PIN_AA30 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA3 GPIO Connection [26] | GPIO_4 | PIN_V8 | GPIO Connection [4] |
| GPIO_7 PIN_W7 GPIO Connection [7] GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_W5 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [16] GPIO_16 PIN_AB12 GPIO Connection [17] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [24] GPIO_24 PIN_AA8 GPIO Connection [25] GPIO_25 PIN_Y7 GPIO Connection [26] < | GPIO_5 | PIN_W8 | GPIO Connection [5] |
| GPIO_8 PIN_W6 GPIO Connection [8] GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [17] GPIO_17 PIN_Y11 GPIO Connection [18] GPIO_18 PIN_AB11 GPIO Connection [19] GPIO_19 PIN_W11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [25] GPIO_25 PIN_Y7 GPIO Connection [26] GPIO_28 PIN_AA6 GPIO Connection [28] | GPIO_6 | PIN_V7 | GPIO Connection [6] |
| GPIO_9 PIN_V5 GPIO Connection [9] GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_MB11 GPIO Connection [19] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AB10 GPIO Connection [21] GPIO_22 PIN_AB3 GPIO Connection [22] GPIO_23 PIN_AA9 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] <tr< td=""><td>GPIO_7</td><td>PIN_W7</td><td>GPIO Connection [7]</td></tr<> | GPIO_7 | PIN_W7 | GPIO Connection [7] |
| GPIO_10 PIN_W5 GPIO Connection [10] GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [19] GPIO_19 PIN_W11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [25] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_AA5 GPIO Connection [30] <tr< td=""><td>GPIO_8</td><td>PIN_W6</td><td>GPIO Connection [8]</td></tr<> | GPIO_8 | PIN_W6 | GPIO Connection [8] |
| GPIO_11 PIN_AA15 GPIO Connection [11] GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_AB11 GPIO Connection [19] GPIO_19 PIN_W11 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 PIN_AB10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [21] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [25] GPIO_25 PIN_Y7 GPIO Connection [26] GPIO_26 PIN_AA7 GPIO Connection [27] GPIO_28 PIN_A6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [30] <t< td=""><td>GPIO_9</td><td>PIN_V5</td><td>GPIO Connection [9]</td></t<> | GPIO_9 | PIN_V5 | GPIO Connection [9] |
| GPIO_12 PIN_AA14 GPIO Connection [12] GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_AB12 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_19 PIN_AB10 GPIO Connection [20] GPIO_20 PIN_AB10 GPIO Connection [21] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [28] GPIO_28 PIN_AA6 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [31] <t< td=""><td>GPIO_10</td><td>PIN_W5</td><td>GPIO Connection [10]</td></t<> | GPIO_10 | PIN_W5 | GPIO Connection [10] |
| GPIO_13 PIN_W13 GPIO Connection [13] GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_AB3 GPIO Connection [33] | GPIO_11 | PIN_AA15 | GPIO Connection [11] |
| GPIO_14 PIN_W12 GPIO Connection [14] GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_AA5 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [33] GPIO_33 PIN_Y3 GPIO Connection [34] | GPIO_12 | PIN_AA14 | GPIO Connection [12] |
| GPIO_15 PIN_AB13 GPIO Connection [15] GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_AA5 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [33] GPIO_33 PIN_AB3 GPIO Connection [34] | GPIO_13 | PIN_W13 | GPIO Connection [13] |
| GPIO_16 PIN_AB12 GPIO Connection [16] GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [30] GPIO_30 PIN_AA5 GPIO Connection [31] GPIO_31 PIN_Y4 GPIO Connection [32] GPIO_32 PIN_AB3 GPIO Connection [33] GPIO_33 PIN_AB3 GPIO Connection [34] | GPIO_14 | PIN_W12 | GPIO Connection [14] |
| GPIO_17 PIN_Y11 GPIO Connection [17] GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [30] GPIO_30 PIN_AA5 GPIO Connection [31] GPIO_31 PIN_Y4 GPIO Connection [32] GPIO_32 PIN_AB3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_15 | PIN_AB13 | GPIO Connection [15] |
| GPIO_18 PIN_AB11 GPIO Connection [18] GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [34] | GPIO_16 | PIN_AB12 | GPIO Connection [16] |
| GPIO_19 PIN_W11 GPIO Connection [19] GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [34] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_17 | PIN_Y11 | GPIO Connection [17] |
| GPIO_20 PIN_AB10 GPIO Connection [20] GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [34] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_18 | PIN_AB11 | GPIO Connection [18] |
| GPIO_21 PIN_AA10 GPIO Connection [21] GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_AA5 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [34] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_19 | PIN_W11 | GPIO Connection [19] |
| GPIO_22 PIN_AA9 GPIO Connection [22] GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_20 | PIN_AB10 | GPIO Connection [20] |
| GPIO_23 PIN_Y8 GPIO Connection [23] GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_21 | PIN_AA10 | GPIO Connection [21] |
| GPIO_24 PIN_AA8 GPIO Connection [24] GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_22 | PIN_AA9 | GPIO Connection [22] |
| GPIO_25 PIN_Y7 GPIO Connection [25] GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_23 | PIN_Y8 | GPIO Connection [23] |
| GPIO_26 PIN_AA7 GPIO Connection [26] GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_24 | PIN_AA8 | GPIO Connection [24] |
| GPIO_27 PIN_Y6 GPIO Connection [27] GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_25 | PIN_Y7 | GPIO Connection [25] |
| GPIO_28 PIN_AA6 GPIO Connection [28] GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_26 | PIN_AA7 | GPIO Connection [26] |
| GPIO_29 PIN_Y5 GPIO Connection [29] GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_27 | PIN_Y6 | GPIO Connection [27] |
| GPIO_30 PIN_AA5 GPIO Connection [30] GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_28 | PIN_AA6 | GPIO Connection [28] |
| GPIO_31 PIN_Y4 GPIO Connection [31] GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_29 | PIN_Y5 | GPIO Connection [29] |
| GPIO_32 PIN_AB3 GPIO Connection [32] GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_30 | PIN_AA5 | GPIO Connection [30] |
| GPIO_33 PIN_Y3 GPIO Connection [33] GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_31 | PIN_Y4 | GPIO Connection [31] |
| GPIO_34 PIN_AB2 GPIO Connection [34] | GPIO_32 | PIN_AB3 | GPIO Connection [32] |
| | GPIO_33 | PIN_Y3 | GPIO Connection [33] |
| GPIO 35 PIN AA2 GPIO Connection [35] | GPIO_34 | PIN_AB2 | GPIO Connection [34] |
| C. 10_00 | GPIO_35 | PIN_AA2 | GPIO Connection [35] |



CONECTORES DE EXPANSÃO - ARDUINO UNO R3:

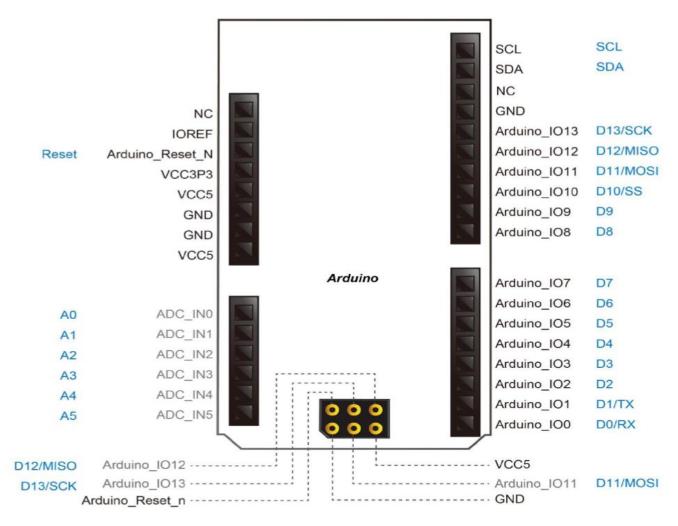


Figure 3-19 lists the all the pin-out signal name of the Arduino Uno connector. The blue font represents the Arduino pin-out definition.



Table 3-8 Pin Assignments for Arduino Uno Expansion Header connector

| Schematic Signal Name | FPGA Pin No. | Description | Specific features For Arduino |
|--------------------------|--------------|---------------------------|-------------------------------|
| Arduino_IO0 | PIN_AB5 | Arduino IO0 | RXD |
| Arduino_IO1 | PIN_AB6 | Arduino IO1 | TXD |
| Arduino_IO2 | PIN_AB7 | Arduino IO2 | |
| Arduino_IO3 | PIN_AB8 | Arduino IO3 | |
| Arduino_IO4 | PIN_AB9 | Arduino IO4 | |
| Arduino_IO5 | PIN_Y10 | Arduino IO5 | |
| Arduino_IO6 | PIN_AA11 | Arduino IO6 | |
| Arduino_IO7 | PIN_AA12 | Arduino IO7 | |
| Arduino_IO8 | PIN_AB17 | Arduino IO8 | |
| Arduino_IO9 | PIN_AA17 | Arduino IO9 | |
| Arduino_IO10 | PIN_AB19 | Arduino IO10 | SS |
| Arduino_IO11 | PIN_AA19 | Arduino IO11 | MOSI |
| Arduino_IO12 | PIN_Y19 | Arduino IO12 | MISO |
| Arduino_IO13 | PIN_AB20 | Arduino IO13 | SCK |
| Arduino_IO14 | PIN_AB21 | Arduino IO14 | SDA |
| Arduino_IO15 | PIN_AA20 | Arduino IO15 | SCL |
| ARDUINO_RESET_N | PIN_F16 | Reset signal, low active. | |