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## This file is a general .xdc for the Basys3 rev B board
## To use it in a project:
## - uncomment the lines corresponding to used pins
## - rename the used ports (in each line, after get_ports) according to the top level signal names in
the project

# Clock signal
set_property PACKAGE_PIN W5 [get_ports CLK100MHZ]
        set_property IOSTANDARD LVCMOS33 [get_ports CLK100MHZ]
        create_clock -add -name sys_clk_pin -period 10.00 -waveform {0 5} [get_ports CLK100MHZ]

# Switches
set_property PACKAGE_PIN V17 [get_ports {sw[0]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {sw[0]}]
set_property PACKAGE_PIN V16 [get_ports {sw[1]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {sw[1]}]
#set_property PACKAGE_PIN W16 [get_ports {sw[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[2]}]
#set_property PACKAGE_PIN W17 [get_ports {sw[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[3]}]
#set_property PACKAGE_PIN W15 [get_ports {sw[4]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[4]}]
#set_property PACKAGE_PIN V15 [get_ports {sw[5]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[5]}]
#set_property PACKAGE_PIN W14 [get_ports {sw[6]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[6]}]
#set_property PACKAGE_PIN W13 [get_ports {sw[7]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[7]}]
#set_property PACKAGE_PIN V2 [get_ports {sw[8]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[8]}]
#set_property PACKAGE_PIN T3 [get_ports {sw[9]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[9]}]
#set_property PACKAGE_PIN T2 [get_ports {sw[10]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[10]}]
#set_property PACKAGE_PIN R3 [get_ports {sw[11]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[11]}]
#set_property PACKAGE_PIN W2 [get_ports {sw[12]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[12]}]
#set_property PACKAGE_PIN U1 [get_ports {sw[13]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[13]}]
#set_property PACKAGE_PIN T1 [get_ports {sw[14]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[14]}]
#set_property PACKAGE_PIN R2 [get_ports {sw[15]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {sw[15]}]


# LEDs
set_property PACKAGE_PIN U16 [get_ports {LED[0]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[0]}]
set_property PACKAGE_PIN E19 [get_ports {LED[1]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[1]}]
set_property PACKAGE_PIN U19 [get_ports {LED[2]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[2]}]
set_property PACKAGE_PIN V19 [get_ports {LED[3]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[3]}]
set_property PACKAGE_PIN W18 [get_ports {LED[4]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[4]}]
set_property PACKAGE_PIN U15 [get_ports {LED[5]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[5]}]
set_property PACKAGE_PIN U14 [get_ports {LED[6]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[6]}]
set_property PACKAGE_PIN V14 [get_ports {LED[7]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[7]}]
set_property PACKAGE_PIN V13 [get_ports {LED[8]}]
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        set_property IOSTANDARD LVCMOS33 [get_ports {LED[8]}]
set_property PACKAGE_PIN V3 [get_ports {LED[9]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[9]}]
set_property PACKAGE_PIN W3 [get_ports {LED[10]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[10]}]
set_property PACKAGE_PIN U3 [get_ports {LED[11]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[11]}]
set_property PACKAGE_PIN P3 [get_ports {LED[12]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[12]}]
set_property PACKAGE_PIN N3 [get_ports {LED[13]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[13]}]
set_property PACKAGE_PIN P1 [get_ports {LED[14]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[14]}]
set_property PACKAGE_PIN L1 [get_ports {LED[15]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {LED[15]}]


#7 segment display
set_property PACKAGE_PIN W7 [get_ports {seg[0]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[0]}]
set_property PACKAGE_PIN W6 [get_ports {seg[1]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[1]}]
set_property PACKAGE_PIN U8 [get_ports {seg[2]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[2]}]
set_property PACKAGE_PIN V8 [get_ports {seg[3]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[3]}]
set_property PACKAGE_PIN U5 [get_ports {seg[4]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[4]}]
set_property PACKAGE_PIN V5 [get_ports {seg[5]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[5]}]
set_property PACKAGE_PIN U7 [get_ports {seg[6]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {seg[6]}]

set_property PACKAGE_PIN V7 [get_ports dp]
        set_property IOSTANDARD LVCMOS33 [get_ports dp]

set_property PACKAGE_PIN U2 [get_ports {an[0]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {an[0]}]
set_property PACKAGE_PIN U4 [get_ports {an[1]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {an[1]}]
set_property PACKAGE_PIN V4 [get_ports {an[2]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {an[2]}]
set_property PACKAGE_PIN W4 [get_ports {an[3]}]
        set_property IOSTANDARD LVCMOS33 [get_ports {an[3]}]


##Buttons
#set_property PACKAGE_PIN U18 [get_ports btnC]
        #set_property IOSTANDARD LVCMOS33 [get_ports btnC]
#set_property PACKAGE_PIN T18 [get_ports btnU]
        #set_property IOSTANDARD LVCMOS33 [get_ports btnU]
#set_property PACKAGE_PIN W19 [get_ports btnL]
        #set_property IOSTANDARD LVCMOS33 [get_ports btnL]
#set_property PACKAGE_PIN T17 [get_ports btnR]
        #set_property IOSTANDARD LVCMOS33 [get_ports btnR]
#set_property PACKAGE_PIN U17 [get_ports btnD]
        #set_property IOSTANDARD LVCMOS33 [get_ports btnD]


##Pmod Header JA
##Sch name = JA1
#set_property PACKAGE_PIN J1 [get_ports {JA[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[0]}]
##Sch name = JA2
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```
#set_property PACKAGE_PIN L2 [get_ports {JA[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[1]}]
##Sch name = JA3
#set_property PACKAGE_PIN J2 [get_ports {JA[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[2]}]
##Sch name = JA4
#set_property PACKAGE_PIN G2 [get_ports {JA[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[3]}]
##Sch name = JA7
#set_property PACKAGE_PIN H1 [get_ports {JA[4]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[4]}]
##Sch name = JA8
#set_property PACKAGE_PIN K2 [get_ports {JA[5]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[5]}]
##Sch name = JA9
#set_property PACKAGE_PIN H2 [get_ports {JA[6]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[6]}]
##Sch name = JA10
#set_property PACKAGE_PIN G3 [get_ports {JA[7]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JA[7]}]



##Pmod Header JB
##Sch name = JB1
#set_property PACKAGE_PIN A14 [get_ports {JB[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[0]}]
##Sch name = JB2
#set_property PACKAGE_PIN A16 [get_ports {JB[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[1]}]
##Sch name = JB3
#set_property PACKAGE_PIN B15 [get_ports {JB[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[2]}]
##Sch name = JB4
#set_property PACKAGE_PIN B16 [get_ports {JB[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[3]}]
##Sch name = JB7
#set_property PACKAGE_PIN A15 [get_ports {JB[4]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[4]}]
##Sch name = JB8
#set_property PACKAGE_PIN A17 [get_ports {JB[5]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[5]}]
##Sch name = JB9
#set_property PACKAGE_PIN C15 [get_ports {JB[6]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[6]}]
##Sch name = JB10
#set_property PACKAGE_PIN C16 [get_ports {JB[7]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JB[7]}]



##Pmod Header JC
##Sch name = JC1
#set_property PACKAGE_PIN K17 [get_ports {JC[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[0]}]
##Sch name = JC2
#set_property PACKAGE_PIN M18 [get_ports {JC[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[1]}]
##Sch name = JC3
#set_property PACKAGE_PIN N17 [get_ports {JC[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[2]}]
##Sch name = JC4
#set_property PACKAGE_PIN P18 [get_ports {JC[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[3]}]
##Sch name = JC7
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#set_property PACKAGE_PIN L17 [get_ports {JC[4]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[4]}]
##Sch name = JC8
#set_property PACKAGE_PIN M19 [get_ports {JC[5]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[5]}]
##Sch name = JC9
#set_property PACKAGE_PIN P17 [get_ports {JC[6]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[6]}]
##Sch name = JC10
#set_property PACKAGE_PIN R18 [get_ports {JC[7]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {JC[7]}]


#Pmod Header JXADC
#Sch name = XA1_P
set_property PACKAGE_PIN J3 [get_ports {vauxp6}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxp6}]
#Sch name = XA2_P
set_property PACKAGE_PIN L3 [get_ports {vauxp14}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxp14}]
#Sch name = XA3_P
set_property PACKAGE_PIN M2 [get_ports {vauxp7}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxp7}]
#Sch name = XA4_P
set_property PACKAGE_PIN N2 [get_ports {vauxp15}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxp15}]
#Sch name = XA1_N
set_property PACKAGE_PIN K3 [get_ports {vauxn6}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxn6}]
#Sch name = XA2_N
set_property PACKAGE_PIN M3 [get_ports {vauxn14}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxn14}]
#Sch name = XA3_N
set_property PACKAGE_PIN M1 [get_ports {vauxn7}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxn7}]
#Sch name = XA4_N
set_property PACKAGE_PIN N1 [get_ports {vauxn15}]
        set_property IOSTANDARD LVCMOS33 [get_ports {vauxn15}]



##VGA Connector
#set_property PACKAGE_PIN G19 [get_ports {vgaRed[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaRed[0]}]
#set_property PACKAGE_PIN H19 [get_ports {vgaRed[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaRed[1]}]
#set_property PACKAGE_PIN J19 [get_ports {vgaRed[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaRed[2]}]
#set_property PACKAGE_PIN N19 [get_ports {vgaRed[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaRed[3]}]
#set_property PACKAGE_PIN N18 [get_ports {vgaBlue[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaBlue[0]}]
#set_property PACKAGE_PIN L18 [get_ports {vgaBlue[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaBlue[1]}]
#set_property PACKAGE_PIN K18 [get_ports {vgaBlue[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaBlue[2]}]
#set_property PACKAGE_PIN J18 [get_ports {vgaBlue[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaBlue[3]}]
#set_property PACKAGE_PIN J17 [get_ports {vgaGreen[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaGreen[0]}]
#set_property PACKAGE_PIN H17 [get_ports {vgaGreen[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaGreen[1]}]
#set_property PACKAGE_PIN G17 [get_ports {vgaGreen[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaGreen[2]}]
#set_property PACKAGE_PIN D17 [get_ports {vgaGreen[3]}]
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        #set_property IOSTANDARD LVCMOS33 [get_ports {vgaGreen[3]}]
#set_property PACKAGE_PIN P19 [get_ports Hsync]
        #set_property IOSTANDARD LVCMOS33 [get_ports Hsync]
#set_property PACKAGE_PIN R19 [get_ports Vsync]
        #set_property IOSTANDARD LVCMOS33 [get_ports Vsync]


##USB-RS232 Interface
#set_property PACKAGE_PIN B18 [get_ports RsRx]
        #set_property IOSTANDARD LVCMOS33 [get_ports RsRx]
#set_property PACKAGE_PIN A18 [get_ports RsTx]
        #set_property IOSTANDARD LVCMOS33 [get_ports RsTx]


##USB HID (PS/2)
#set_property PACKAGE_PIN C17 [get_ports PS2Clk]
        #set_property IOSTANDARD LVCMOS33 [get_ports PS2Clk]
        #set_property PULLUP true [get_ports PS2Clk]
#set_property PACKAGE_PIN B17 [get_ports PS2Data]
        #set_property IOSTANDARD LVCMOS33 [get_ports PS2Data]
        #set_property PULLUP true [get_ports PS2Data]


##Quad SPI Flash
##Note that CCLK_0 cannot be placed in 7 series devices. You can access it using the
##STARTUPE2 primitive.
#set_property PACKAGE_PIN D18 [get_ports {QspiDB[0]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {QspiDB[0]}]
#set_property PACKAGE_PIN D19 [get_ports {QspiDB[1]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {QspiDB[1]}]
#set_property PACKAGE_PIN G18 [get_ports {QspiDB[2]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {QspiDB[2]}]
#set_property PACKAGE_PIN F18 [get_ports {QspiDB[3]}]
        #set_property IOSTANDARD LVCMOS33 [get_ports {QspiDB[3]}]
#set_property PACKAGE_PIN K19 [get_ports QspiCSn]
        #set_property IOSTANDARD LVCMOS33 [get_ports QspiCSn]
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