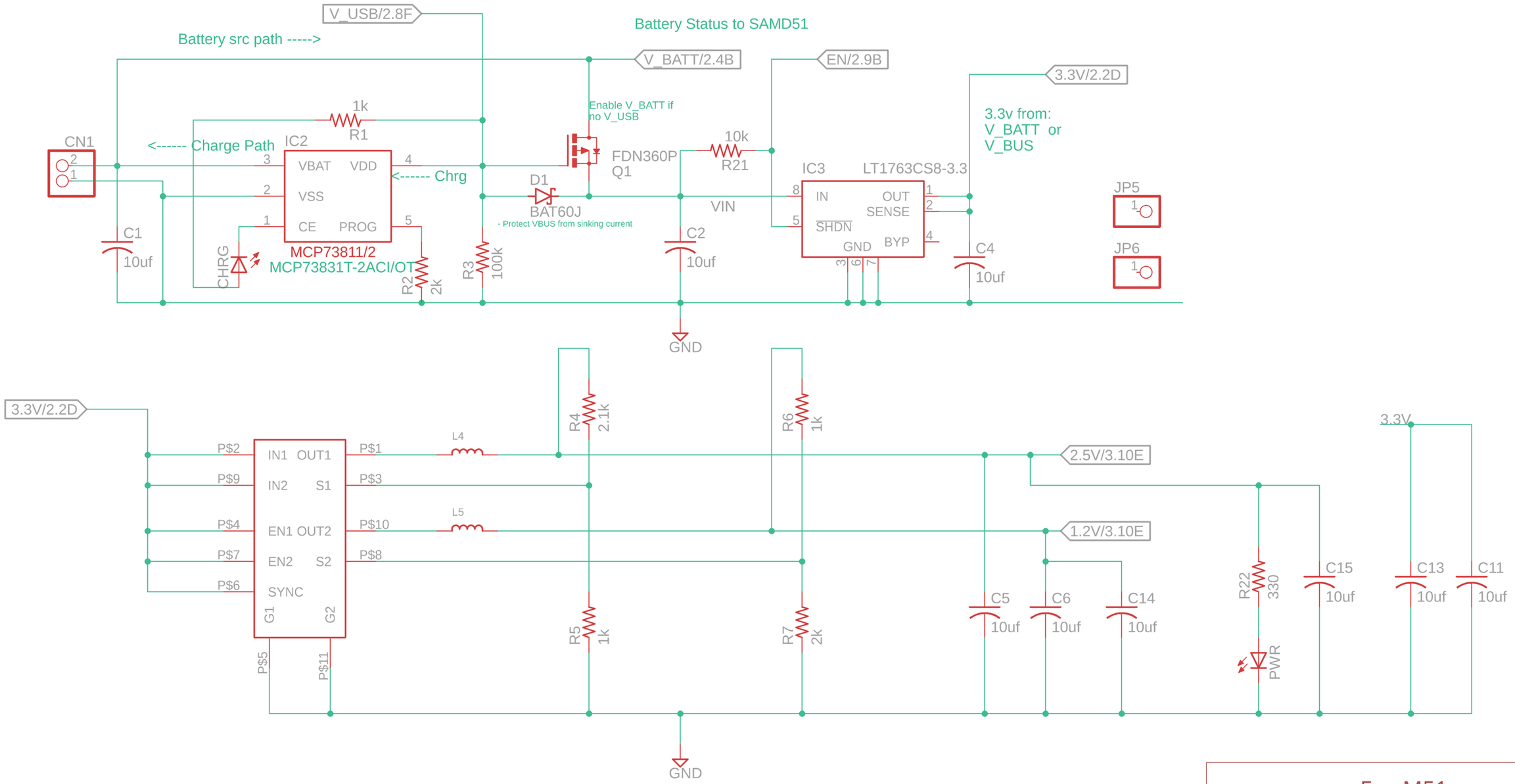

Evo M51	
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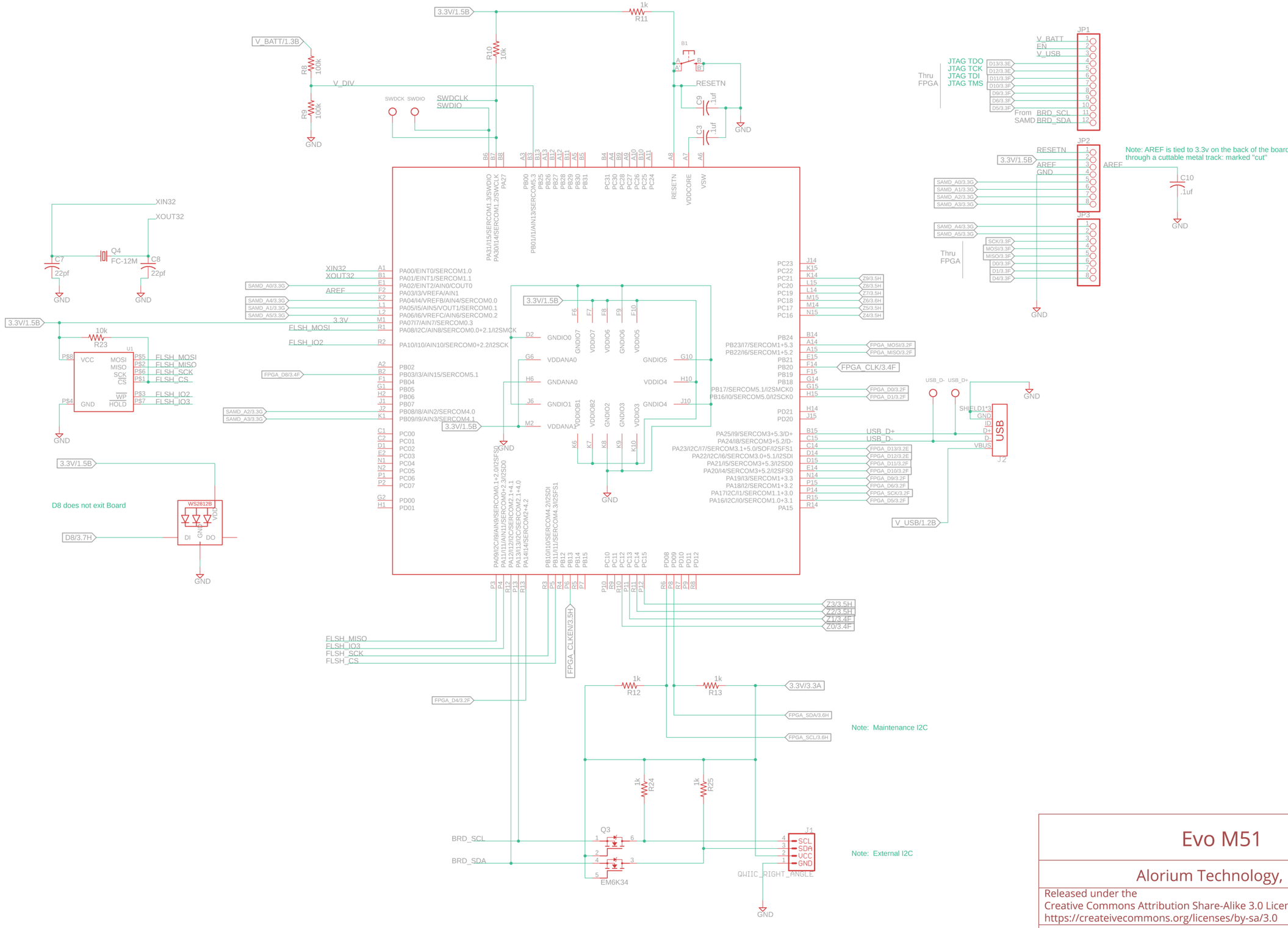
Date: 05/27/20	Sheet: 1/3



Evo M51

Alorium Technology, LLC

Rev 1.0

Date: 05/27/20

Sheet: 2/3

Note: D13 is an output from FPGA.
It is not connected to the D13 I/O pin

3.3V/2.9C
1k R17
1k R18
1k R19
1k R20
330 R14
D13
GND
RESETN/2.9C

IC5G$8 10M50DA_256
VREFBN0 NA NCONFIG CONFIG_SEL PLL_T_CLKOUTP_DIFFIO_RX_T52P PLL_T_CLKOUTN_DIFFIO_RX_T52N DIFFIO_RX_T51P DIFFIO_RX_T51N NSTATUS_DIFFIO_RX_T50P CONF_DONE_DIFFIO_RX_T50N DIFFIO_RX_T49P DIFFIO_RX_T49N DIFFIO_RX_T48P DIFFIO_RX_T48N CRC_ERROR_DIFFIO_RX_T46N DIFFIO_RX_T47P DIFFIO_RX_T47N DIFFIO_RX_T46P DIFFIO_RX_T46N DIFFIO_RX_T45P DIFFIO_RX_T45N DEV_OE_DIFFIO_RX_T44P DIFFIO_RX_T44N DIFFIO_RX_T43P DIFFIO_RX_T43N DEV_CLRN_DIFFIO_RX_T42P DIFFIO_RX_T42N DIFFIO_RX_T41P DIFFIO_RX_T41N CLK5P_DIFFIO_RX_T40P CLK5N_DIFFIO_RX_T40N CLK4P_DIFFIO_RX_T39P CLK4N_DIFFIO_RX_T39N

IC5G$7 10M50DA_256
VREFB7N0 NA DIFFIO_RX_T30P DIFFIO_RX_T30N DIFFIO_RX_T29P DIFFIO_RX_T29N DIFFIO_RX_T17P DIFFIO_RX_T17N DIFFIO_RX_T2P DIFFIO_RX_T2N DIFFIO_RX_T1P DIFFIO_RX_T1N

Low Speed = Banks 1A,1B, 8
High Speed = Banks 2,3,4,5,6,7
DIFFIO_TX_T = True LVDS outputs on TOP side
DIFFIO_RX_L = True LVDS inputs on Left side
DIFFIO_RX_R = True LVDS inputs on Right side
DIFFIO_TX_RX_B = True LVDS I/O on bottom side
DIFFIO_RX_B = True LVDS inputs on bottom side

Switching Regulator
LTC3315A Dual w/2.25v to 5v in
LTC3622 Dual w/2.7v to 17v in
ADP5310 Triple w/2.7v to 15v in
ADP5040 Triple w/3.3vin Switcher and LDO

VCCIO 8:1 1.2v to 3.3v

VCCA_ADC_Analog = 2.5V VCCA = PLL_Analog = 2.5
VCC = Core Digital = 1.2v VCCINT = ADC Digital = 1.2v VCCD_PLL = Digital PLL = 1.2v

IC5G$9 10M50DA_256
GND REFGND VCC VCCD_PLL1 VCCD_PLL2 VCCD_PLL3 VCCD_PLL4 VCCIO1A VCCO1B VCCO2 VCCO3 VCCO4 VCCO5 VCCO6 VCCO7 VCCO8 VCCA1 VCCA2 VCCA3 VCCA4 VCCA_ADC VCCINT ADC_VREF ANAIN1 ANAIN2
1.2V/1.5D 1.2V/1.5D 3.3V/2.9C 3.3V/2.9C 2.5V/1.5C 2.5V/1.5C 1.2V/1.5D

JTE
1k R15
1k R16
JTAGEN
D12
GND

SAMD51 <--> M50 <--> board_edge
FPGA_D13/2.8E FPGA_D13 D13 D13/2.9C
FPGA_D12/2.8E FPGA_D12 D12 D12/2.9C
FPGA_D11/2.8E FPGA_D11 D11 D11/2.9C
FPGA_D10/2.8E FPGA_D10 D10 D10/2.9C
FPGA_D9/2.8F FPGA_D9 D9 D9/2.9C
FPGA_D6/2.8F FPGA_D6 D6 D6/2.9C
FPGA_D5/2.8F FPGA_D5 D5 D5/2.9C
FPGA_D4/2.5G FPGA_D4 D4 D4/2.9D
FPGA_D1/2.8E FPGA_D1 D1 D1/2.9D
FPGA_D0/2.8E FPGA_D0 D0 D0/2.9D
FPGA_SCK/2.8F FPGA_SCK SCK SCK/2.9D
FPGA_MOSI/2.8E FPGA_MOSI MOSI MOSI/2.9D
FPGA_MISO/2.8E FPGA_MISO MISO MISO/2.9D

SAMD51 <------> board_edge
FPGA
SAMD_A0/2.9C SAMD_A0
SAMD_A1/2.8C SAMD_A1
SAMD_A2/2.8D SAMD_A2
SAMD_A3/2.8D SAMD_A3
SAMD_A4/2.8D SAMD_A4
SAMD_A5/2.8D SAMD_A5

IC5G$1 10M50DA_256
ADC1IN1_DIFFIO_RX_L1N ADC1IN2_DIFFIO_RX_L1P
FPGA_D10 ADC2IN1_DIFFIO_RX_L2N ADC2IN8_DIFFIO_RX_L2P
ADC1IN3_DIFFIO_RX_L3N ADC1IN4_DIFFIO_RX_L3P
ADC2IN3_DIFFIO_RX_L4N ADC2IN4_DIFFIO_RX_L4P
ADC1IN5_DIFFIO_RX_L5N ADC1IN6_DIFFIO_RX_L5P
FPGA_D11 FPGA_D13 ADC2IN5_DIFFIO_RX_L6N ADC2IN6_DIFFIO_RX_L6P
ADC1IN7_DIFFIO_RX_L7N ADC1IN8_DIFFIO_RX_L7P
FPGA_MISO FPGA_D12 ADC2IN7_DIFFIO_RX_L8N ADC2IN2_DIFFIO_RX_L8P
JTAGEN JTAGEN
D10 D12 TMS_DIFFIO_RX_L17N_TMS TCK_DIFFIO_RX_L17P_TCK
D11 D13 TDI_DIFFIO_RX_L18N_TDI TDO_DIFFIO_RX_L18P_TDO
DIFFIO_RX_L20N DIFFIO_RX_L20P
FPGA_MOSI DIFFIO_RX_L22N DIFFIO_RX_L22P
VREFB1N0

IC5G$2 10M50DA_256
CLK
FPGA_CLK/2.7E
Z0/2.7G
Z1/2.7G
F0 F1 F5 0 1
CLK0N_DIFFIO_RX_L28N CLK0P_DIFFIO_RX_L28P
FPGA_D0 DIFFIO_RX_L29N DIFFIO_RX_L29P
FPGA_D8 CLK1N_DIFFIO_RX_L36N CLK1P_DIFFIO_RX_L36P
FPGA_D9 DIFFIO_RX_L37N DIFFIO_RX_L37P
FPGA_D6 FPGA_D4 DPCLK0_DIFFIO_RX_L38N DPCLK1_DIFFIO_RX_L38P
FPGA_D1 DIFFIO_RX_L41N DIFFIO_RX_L41P
FPGA_SCK FPGA_D5 PLL_L_CLKOUTN_DIFFIO_RX_L59N PLL_L_CLKOUTP_DIFFIO_RX_L59P
NA VREFB2N0

IC5G$6 10M50DA_256
VREFB6N0 NA
DIFFIO_RX_R70P DIFFIO_RX_R70N E24
PLL_R_CLKOUTP_DIFFIO_RX_R69P PLL_R_CLKOUTN_DIFFIO_RX_R69N D9 E25
DIFFIO_RX_R52P DIFFIO_RX_R52N E22 E21
DIFFIO_RX_R51P DIFFIO_RX_R51N D5
DPCLK3_DIFFIO_RX_R50P DPCLK2_DIFFIO_RX_R50N
DIFFIO_RX_R47P DIFFIO_RX_R47N E20 E19
DIFFIO_RX_R46P DIFFIO_RX_R46N E18 E17
DIFFIO_RX_R44P DIFFIO_RX_R44N E14
DIFFIO_RX_R42P DIFFIO_RX_R42N E23
DIFFIO_RX_R41P DIFFIO_RX_R41N E16 E15
CLK3P_DIFFIO_RX_R40P CLK3N_DIFFIO_RX_R40N E13 E12
DIFFIO_RX_R39P DIFFIO_RX_R39N E11 E10
CLK2P_DIFFIO_RX_R38P CLK2N_DIFFIO_RX_R38N

IC5G$5 10M50DA_256
VREFB5N0 NA
DIFFIO_RX_R33P DIFFIO_RX_R33N E9 E8
DIFFIO_RX_R32P DIFFIO_RX_R32N E7 E6
DIFFIO_RX_R30P DIFFIO_RX_R30N DIFFIO_RX_R29P DIFFIO_RX_R29N D4
DIFFIO_RX_R28P DIFFIO_RX_R28N E4
DIFFIO_RX_R27P DIFFIO_RX_R27N E2 E5
DIFFIO_RX_R25P DIFFIO_RX_R25N
DIFFIO_RX_R2P DIFFIO_RX_R2N D0 D1
DIFFIO_RX_R1P DIFFIO_RX_R1N MISO E3

IC5G$3 10M50DA_256
DIFFIO_TX_R1N DIFFIO_TX_R1P DIFFIO_RX_B2N DIFFIO_RX_B2P DIFFIO_TX_R3N DIFFIO_TX_R3P DIFFIO_RX_B4N DIFFIO_RX_B4P DIFFIO_TX_R5N DIFFIO_TX_R5P DIFFIO_RX_B6N DIFFIO_RX_B6P DIFFIO_TX_R13N DIFFIO_TX_R13P DIFFIO_RX_B14N DIFFIO_RX_B14P DIFFIO_TX_R15N DIFFIO_TX_R15P DIFFIO_TX_R16N DIFFIO_TX_R16P DIFFIO_RX_B17N DIFFIO_RX_B17P CLK6N_DIFFIO_TX_RX_B18N CLK6P_DIFFIO_TX_RX_B18P DIFFIO_RX_B19N DIFFIO_RX_B19P CLK7N_DIFFIO_TX_RX_B20N CLK7P_DIFFIO_TX_RX_B20P DIFFIO_TX_RX_B22N DIFFIO_TX_RX_B22P NA VREFB3N0
CK2
FPGA_CLKENV2.6E
FPGA_SCLK/2.7D FPGA_SDA/2.7D
9 8 7 2 3 5 4 6

IC5G$4 10M50DA_256
DIFFIO_TX_R34N DIFFIO_TX_R34P DIFFIO_RX_B35N DIFFIO_RX_B35P DIFFIO_TX_R36N DIFFIO_TX_R36P DIFFIO_TX_R37N DIFFIO_TX_R37P PLL_B_CLKOUTN_DIFFIO_TX_RX_B37N PLL_B_CLKOUTP_DIFFIO_TX_RX_B37P NA VREFB4N0
D8
SCK MOSI E1 E0

Evo M51

Alorium Technology, LLC

Rev 1.0

Date: 05/27/20

Sheet: 3/3