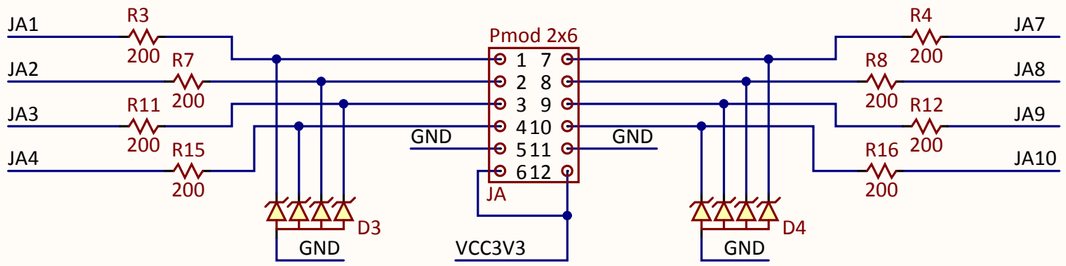

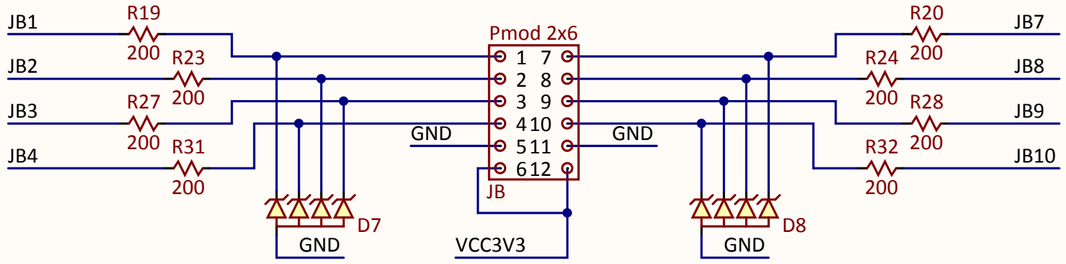

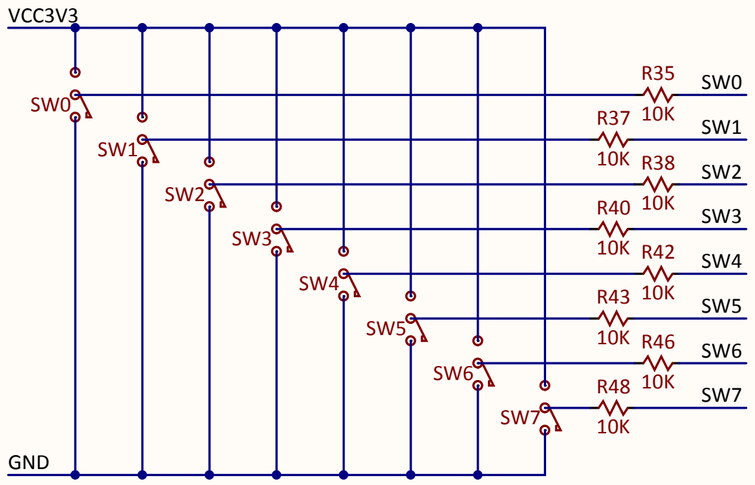

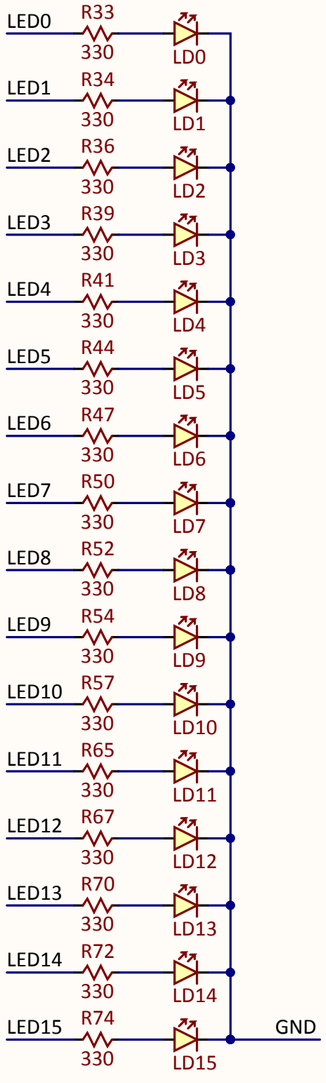

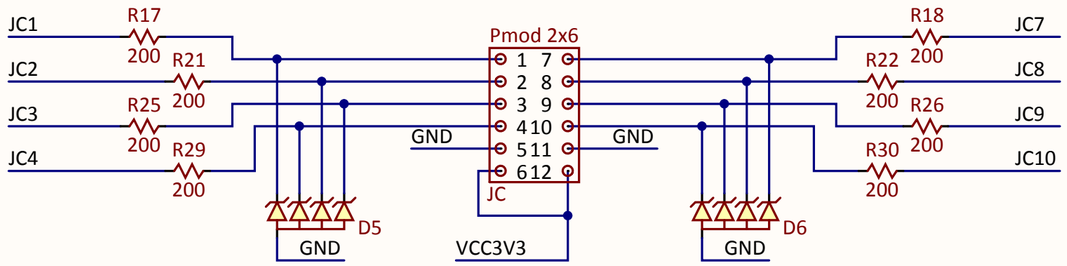

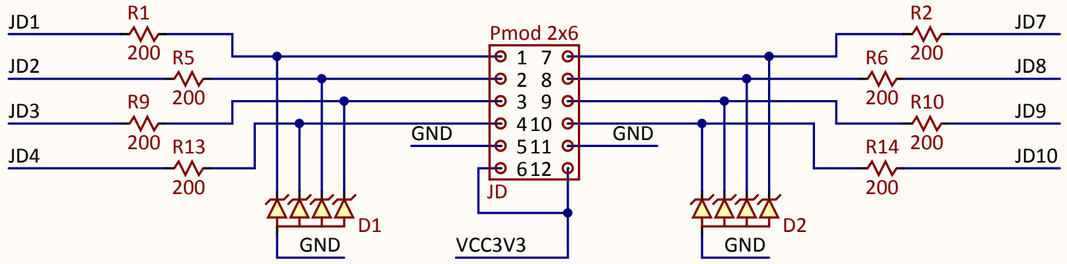

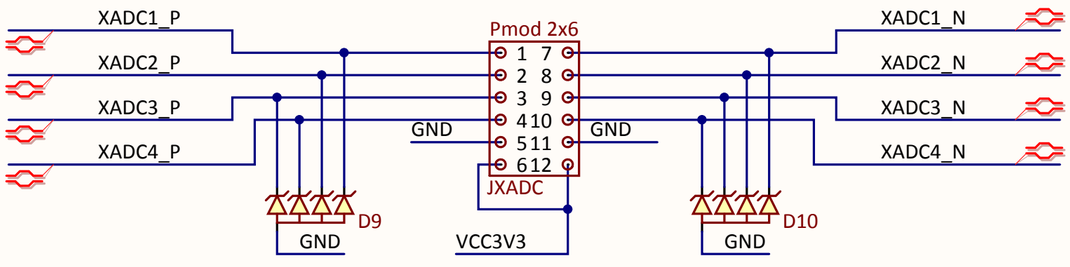

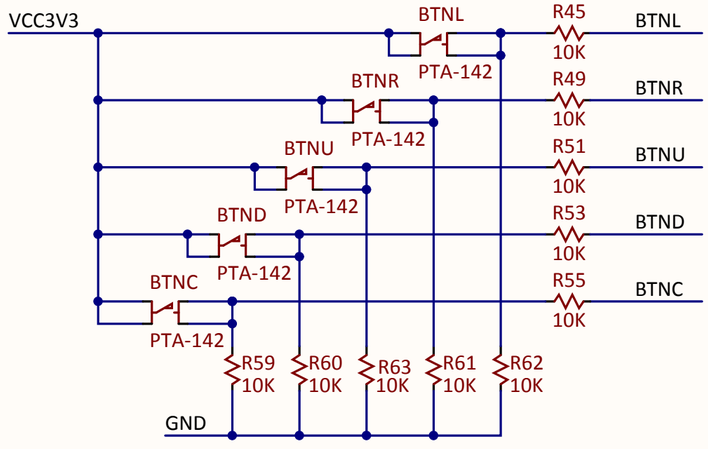

CE

ROHS

Xilinx

Digilent Inc.

Nexys 4 DDR

Chinese ROHS

Analog Devices

F1 Foot

F2 Foot

F3 Foot

F4 Foot

Title
Nexys 4 DDR

Rev
C.1
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Circuit	PMOD, I/O
Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	1 out of 11

DIGILENT
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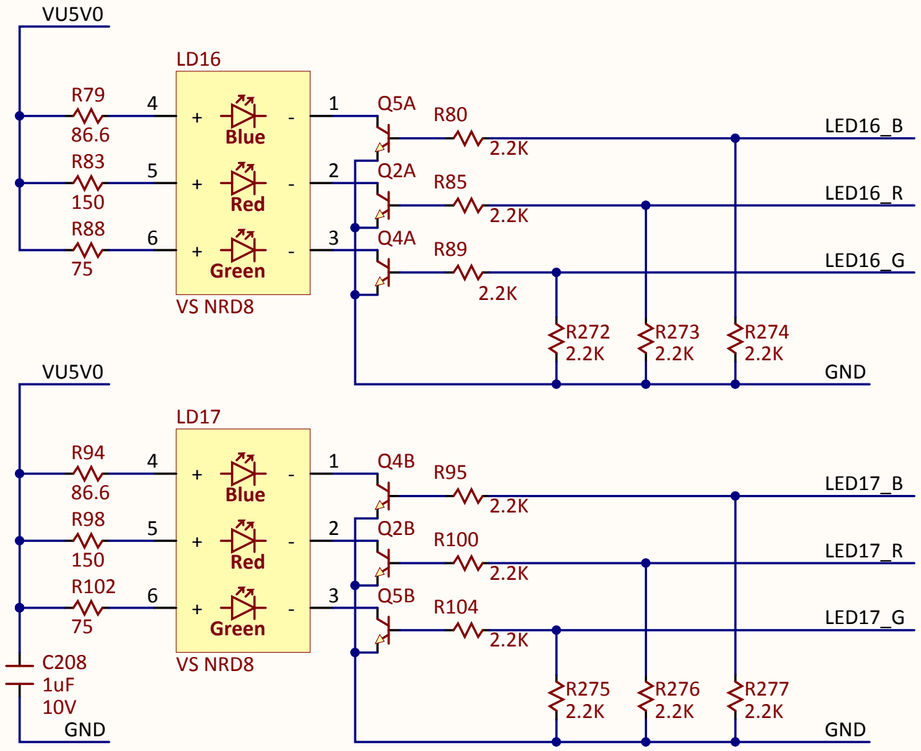
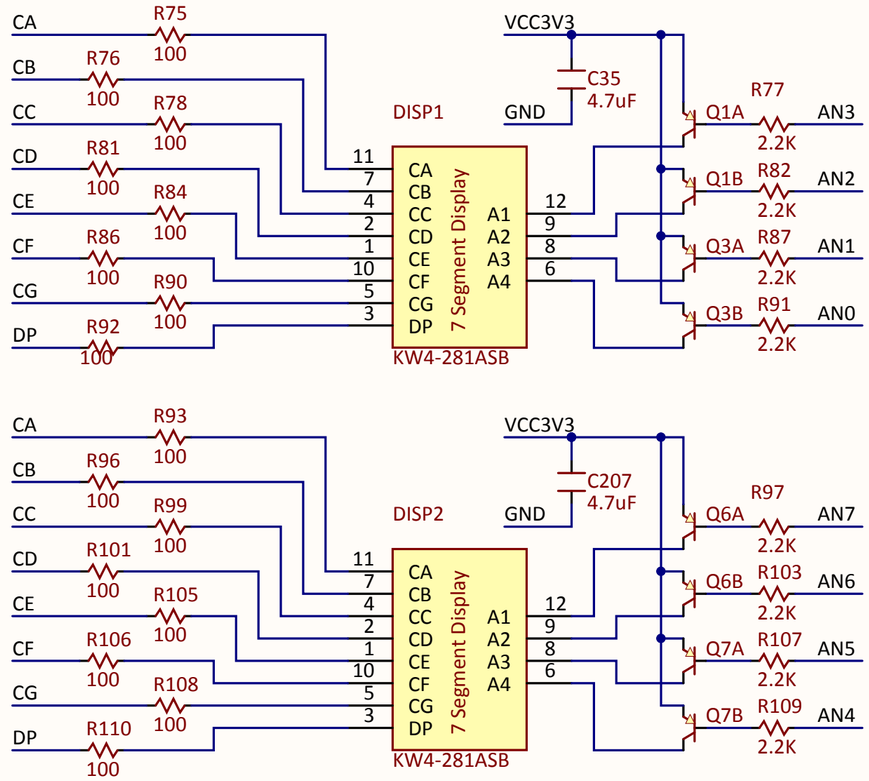
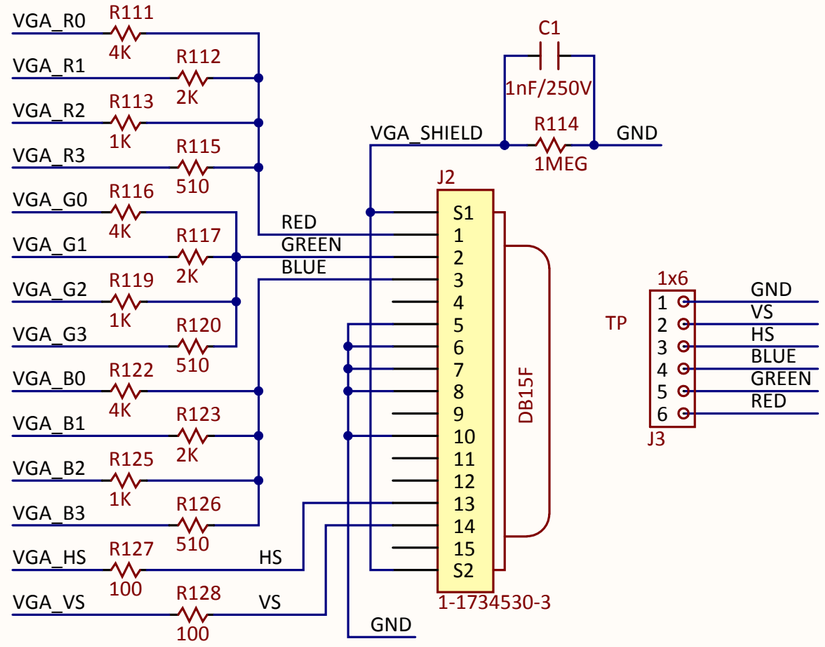
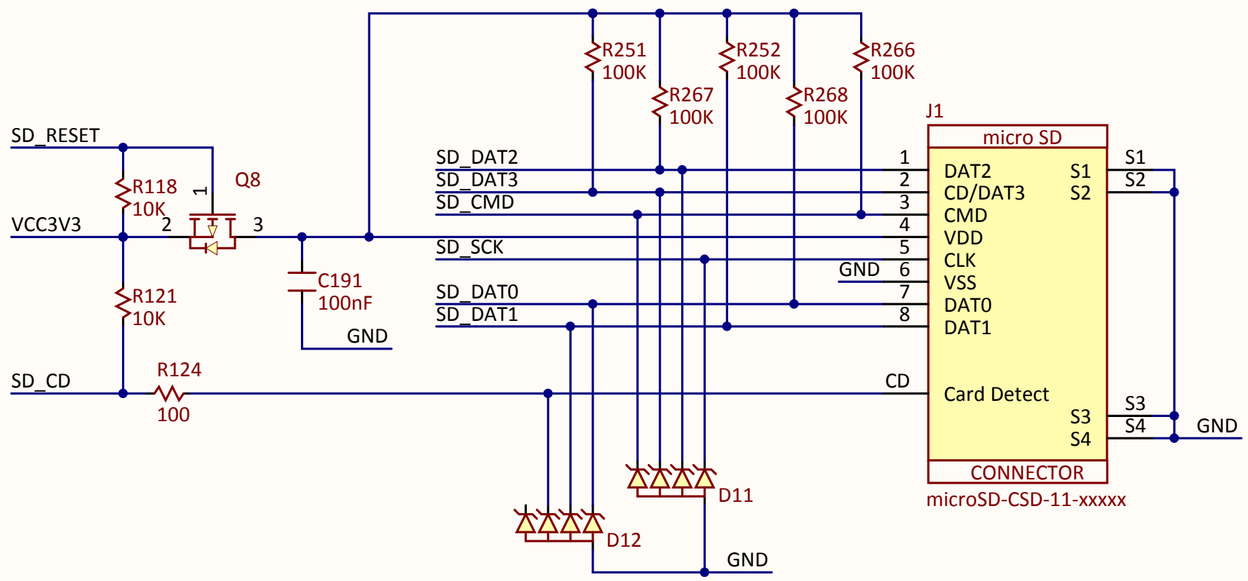


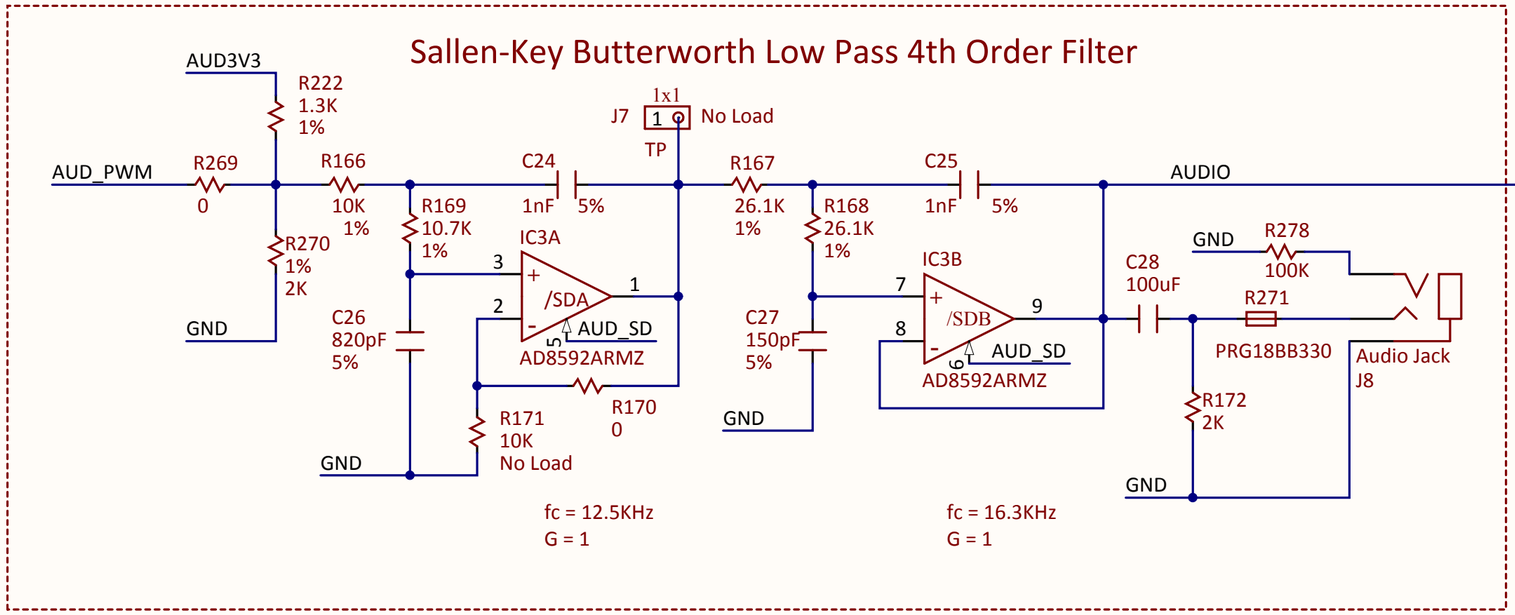


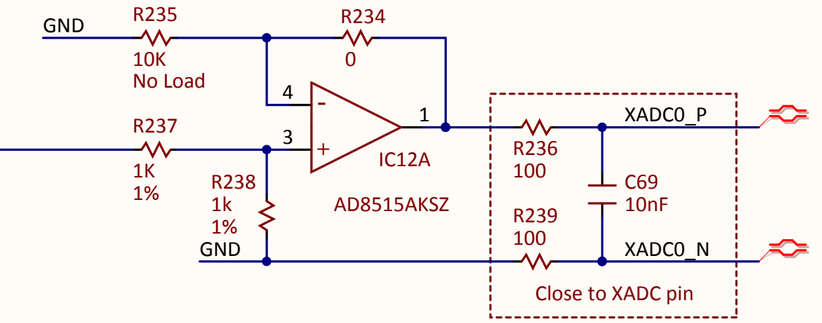


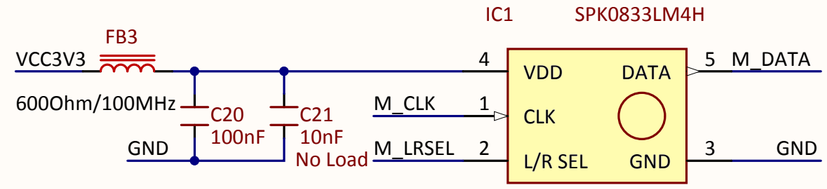


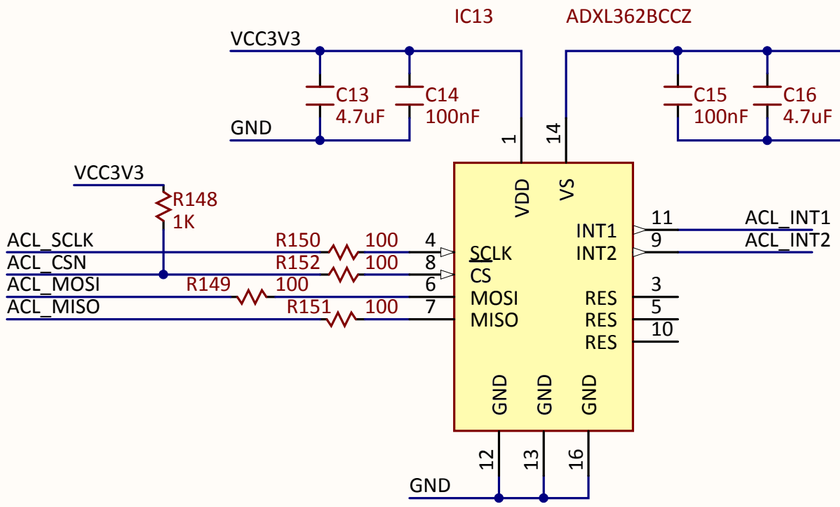
Title	Nexys 4 DDR
Rev	C.1
Copyright	2014
Circuit	7 SEG, VGA, SD
Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	2 out of 11

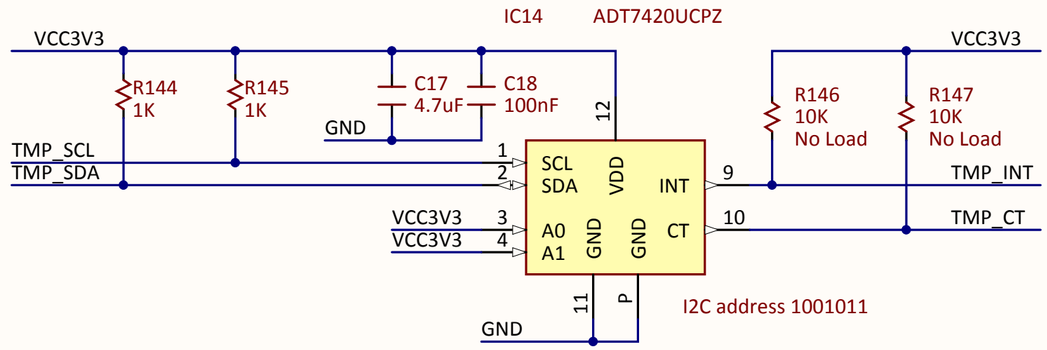
DIGILENT
BEYOND THEORY

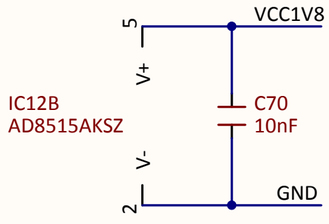


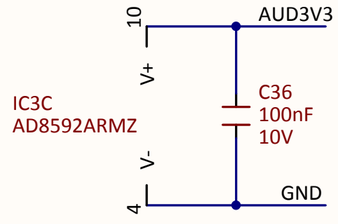












For more information on the parts used in this design, please refer to:

http://www.analog.com/ad8592 (CMOS Single Supply RRIO Dual Op Amp with±250 mA Output Current and Shutdown Mode)

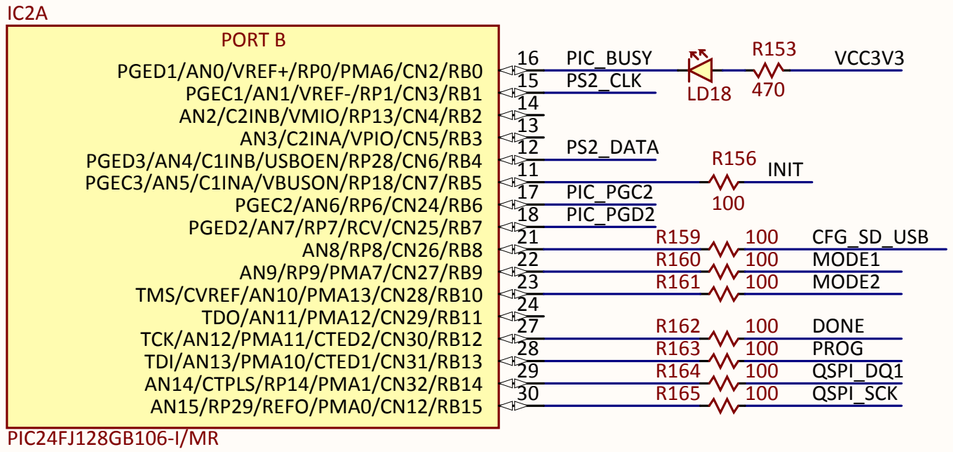
http://www.analog.com/ad8515 (1.8 V Low Power CMOS Rail-to-Rail Input/Output Operational Amplifier)

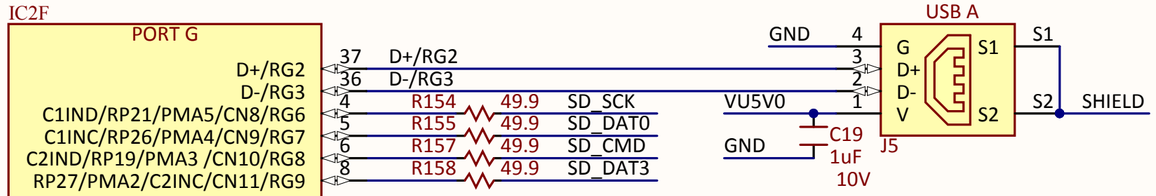
http://www.analog.com/adxl362 (Micropower, 3-Axis, ±2 g/±4 g/±8 g Digital Output MEMS Accelerometer)

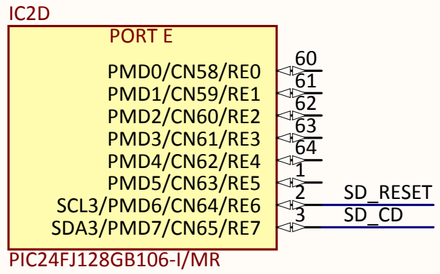
http://www.analog.com/adt7420 (±0.25°C Accurate, 16-Bit Digital I2C Temperature Sensor)

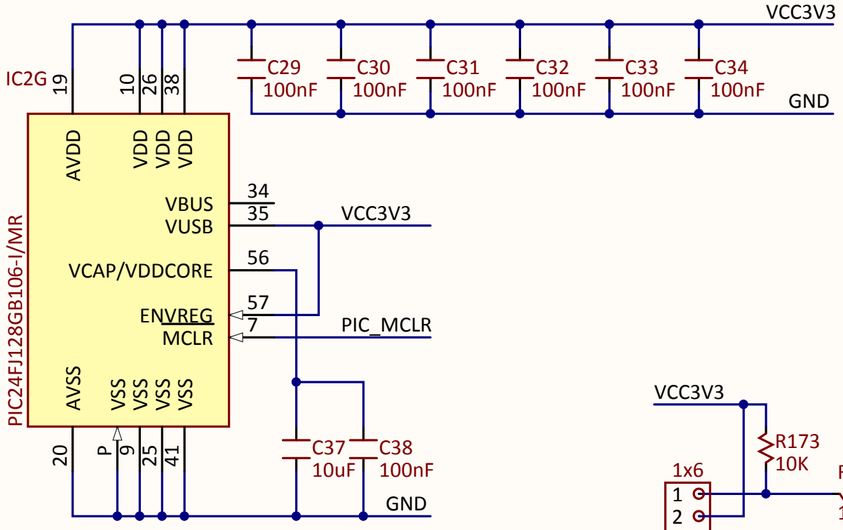
Title	Nexys 4 DDR
Rev	C.1
Copyright	2014
Circuit	ETH, TMP, ACL,AUDIO
Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	3 out of 11

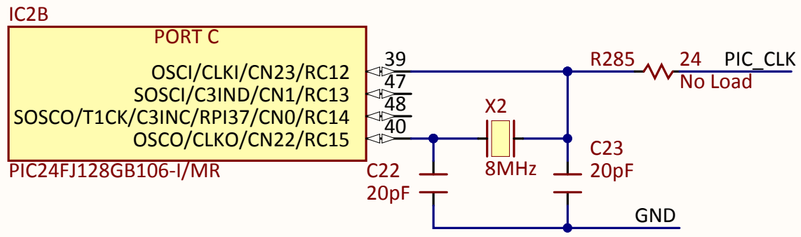
DIGILENT® BEYOND THEORY

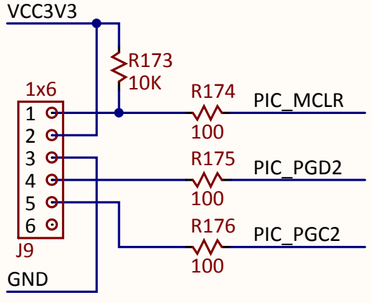






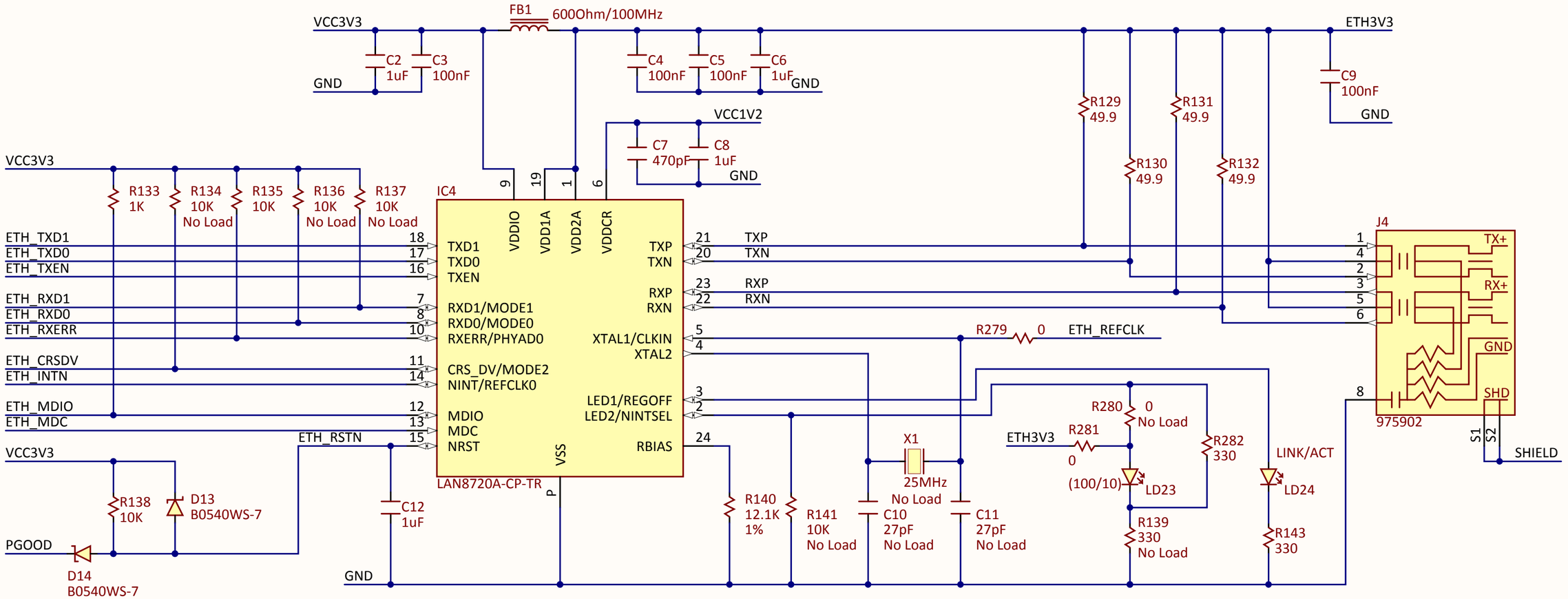






Title	Nexys 4 DDR
Rev	C.1
Copyright	2014
Circuit	USB HID
Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	4 out of 11

DIGILENT® BEYOND THEORY



NOTE: REF_CLK In Mode (ETH_REFCLK = 50MHz)

Title	Nexys 4 DDR
Rev	C.1
Copyright	2014
Circuit	ETHERNET
Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	5 out of 11

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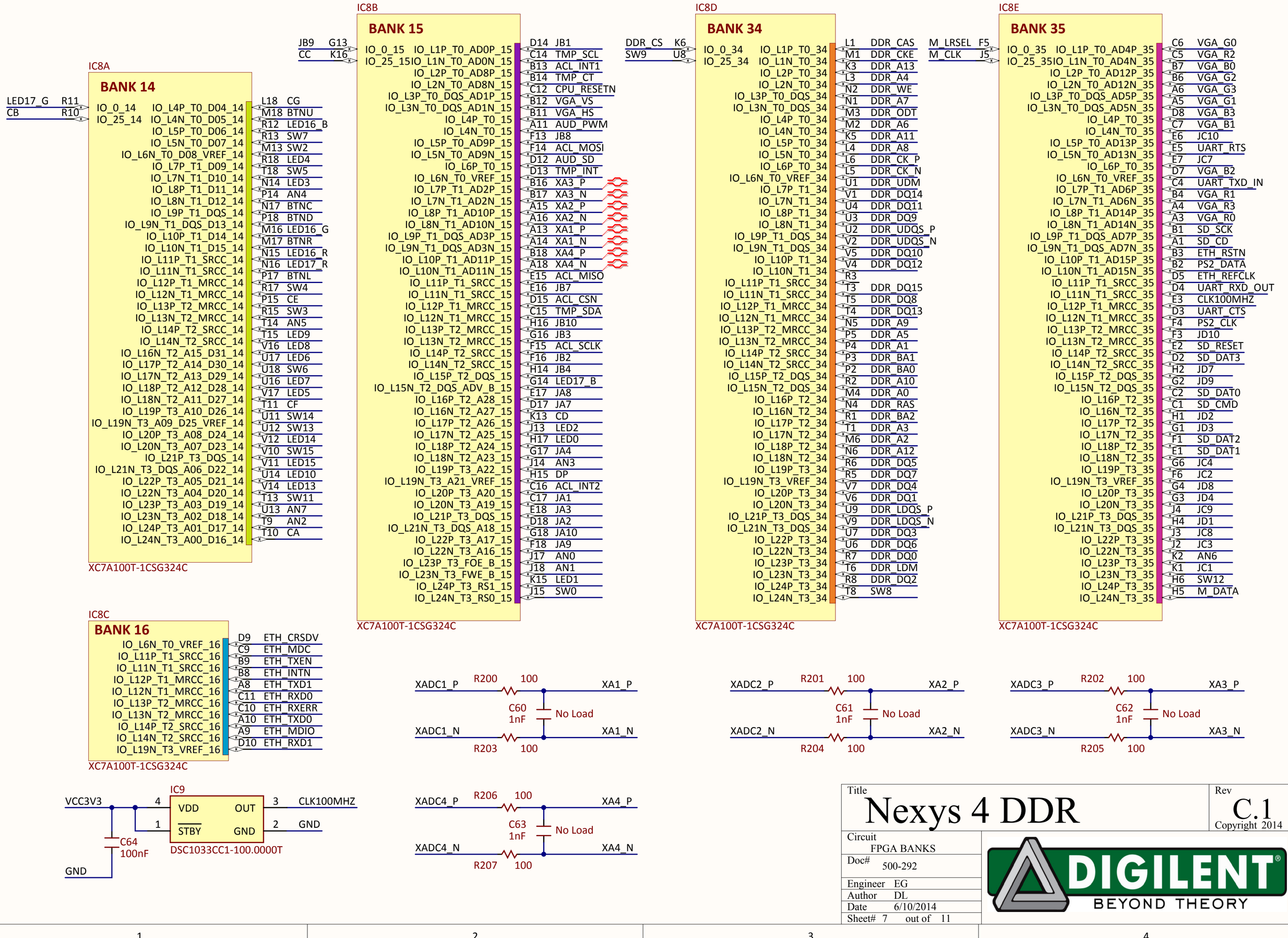
IC8A
BANK 14
LED17_G R11
CB R10
IO_0_14 IO_L4P_T0_D04_14 L18 CG
IO_25_14 IO_L4N_T0_D05_14 M18 BTNU
IO_L5P_T0_D06_14 R12 LED16_B
IO_L5N_T0_D07_14 R13 SW7
IO_L6N_T0_D08_VREF_14 M13 SW2
IO_L7P_T1_D09_14 R18 LED4
IO_L7N_T1_D10_14 T18 SW5
IO_L8P_T1_D11_14 N14 LED3
IO_L8N_T1_D12_14 P14 AN4
IO_L9P_T1_DQS_14 N17 BTNC
IO_L9N_T1_DQS_D13_14 P18 BTND
IO_L10P_T1_D14_14 M16 LED16_G
IO_L10N_T1_D15_14 M17 BTNR
IO_L11P_T1_SRCC_14 N15 LED16_R
IO_L11N_T1_SRCC_14 N16 LED17_R
IO_L12P_T1_MRCC_14 P17 BTNL
IO_L12N_T1_MRCC_14 R17 SW4
IO_L13P_T2_MRCC_14 P15 CE
IO_L13N_T2_MRCC_14 R15 SW3
IO_L14P_T2_SRCC_14 T14 AN5
IO_L14N_T2_SRCC_14 T15 LED9
IO_L16N_T2_A15_D31_14 V16 LED8
IO_L17P_T2_A14_D30_14 U17 LED6
IO_L17N_T2_A13_D29_14 U18 SW6
IO_L18P_T2_A12_D28_14 U16 LED7
IO_L18N_T2_A11_D27_14 V17 LED5
IO_L19P_T3_A10_D26_14 T11 CF
IO_L19N_T3_A09_D25_VREF_14 U11 SW14
IO_L20P_T3_A08_D24_14 U12 SW13
IO_L20N_T3_A07_D23_14 V12 LED14
IO_L21P_T3_DQS_14 V10 SW15
IO_L21N_T3_DQS_A06_D22_14 V11 LED15
IO_L22P_T3_A05_D21_14 U14 LED10
IO_L22N_T3_A04_D20_14 V14 LED13
IO_L23P_T3_A03_D19_14 T13 SW11
IO_L23N_T3_A02_D18_14 U13 AN7
IO_L24P_T3_A01_D17_14 T9 AN2
IO_L24N_T3_A00_D16_14 T10 CA
XC7A100T-1CSG324C
IC8B
BANK 15
JB9 G13
CC K16
IO_0_15 IO_L1P_T0_AD0P_15 D14 JB1
IO_25_15 IO_L1N_T0_AD0N_15 C14 TMP_SCL
IO_L2P_T0_AD8P_15 B13 ACL_INT1
IO_L2N_T0_AD8N_15 B14 TMP_CT
IO_L3P_T0_DQS_AD1P_15 C12 CPU_RESETN
IO_L3N_T0_DQS_AD1N_15 B12 VGA_VS
IO_L4P_T0_15 B11 VGA_HS
IO_L4N_T0_15 A11 AUD_PWM
IO_L5P_T0_AD9P_15 F13 JB8
IO_L5N_T0_AD9N_15 F14 ACL_MOSI
IO_L6P_T0_15 D12 AUD_SD
IO_L6N_T0_VREF_15 D13 TMP_INT
IO_L7P_T1_AD2P_15 B16 XA3_P
IO_L7N_T1_AD2N_15 B17 XA3_N
IO_L8P_T1_AD10P_15 A15 XA2_P
IO_L8N_T1_AD10N_15 A16 XA2_N
IO_L9P_T1_DQS_AD3P_15 A13 XA1_P
IO_L9N_T1_DQS_AD3N_15 A14 XA1_N
IO_L10P_T1_AD11P_15 B18 XA4_P
IO_L10N_T1_AD11N_15 A18 XA4_N
IO_L11P_T1_SRCC_15 E15 ACL_MISO
IO_L11N_T1_SRCC_15 E16 JB7
IO_L12P_T1_MRCC_15 D15 ACL_CSN
IO_L12N_T1_MRCC_15 C15 TMP_SDA
IO_L13P_T2_MRCC_15 H16 JB10
IO_L13N_T2_MRCC_15 G16 JB3
IO_L14P_T2_SRCC_15 F15 ACL_SCLK
IO_L14N_T2_SRCC_15 F16 JB2
IO_L15P_T2_DQS_15 H14 JB4
IO_L15N_T2_DQS_ADV_B_15 G14 LED17_B
IO_L16P_T2_A28_15 E17 JA8
IO_L16N_T2_A27_15 D17 JA7
IO_L17P_T2_A26_15 K13 CD
IO_L17N_T2_A25_15 J13 LED2
IO_L18P_T2_A24_15 H17 LED0
IO_L18N_T2_A23_15 G17 JA4
IO_L19P_T3_A22_15 J14 AN3
IO_L19N_T3_A21_VREF_15 H15 DP
IO_L20P_T3_A20_15 C16 ACL_INT2
IO_L20N_T3_A19_15 C17 JA1
IO_L21P_T3_DQS_15 E18 JA3
IO_L21N_T3_DQS_A18_15 D18 JA2
IO_L22P_T3_A17_15 G18 JA10
IO_L22N_T3_A16_15 F18 JA9
IO_L23P_T3_FOE_B_15 J17 AN0
IO_L23N_T3_FWE_B_15 J18 AN1
IO_L24P_T3_RS1_15 K15 LED1
IO_L24N_T3_RS0_15 J15 SW0
XC7A100T-1CSG324C
IC8D
BANK 34
DDR_CS K6
SW9 U8
IO_0_34 IO_L1P_T0_34 L1 DDR_CAS
IO_25_34 IO_L1N_T0_34 M1 DDR_CKE
IO_L2P_T0_34 K3 DDR_A13
IO_L2N_T0_34 L3 DDR_A4
IO_L3P_T0_DQS_34 N2 DDR_WE
IO_L3N_T0_DQS_34 N1 DDR_A7
IO_L4P_T0_34 M3 DDR_ODT
IO_L4N_T0_34 M2 DDR_A6
IO_L5P_T0_34 K5 DDR_A11
IO_L5N_T0_34 L4 DDR_A8
IO_L6P_T0_34 L6 DDR_CK_P
IO_L6N_T0_VREF_34 L5 DDR_CK_N
IO_L7P_T1_34 U1 DDR_UDM
IO_L7N_T1_34 V1 DDR_DQ14
IO_L8P_T1_34 U4 DDR_DQ11
IO_L8N_T1_34 U3 DDR_DQ9
IO_L9P_T1_DQS_34 U2 DDR_UDQS_P
IO_L9N_T1_DQS_34 V2 DDR_UDQS_N
IO_L10P_T1_34 V5 DDR_DQ10
IO_L10N_T1_34 V4 DDR_DQ12
IO_L11P_T1_SRCC_34 R3
IO_L11N_T1_SRCC_34 T3 DDR_DQ15
IO_L12P_T1_MRCC_34 T5 DDR_DQ8
IO_L12N_T1_MRCC_34 T4 DDR_DQ13
IO_L13P_T2_MRCC_34 N5 DDR_A9
IO_L13N_T2_MRCC_34 P5 DDR_A5
IO_L14P_T2_SRCC_34 P4 DDR_A1
IO_L14N_T2_SRCC_34 P3 DDR_BA1
IO_L15P_T2_DQS_34 P2 DDR_BA0
IO_L15N_T2_DQS_34 R2 DDR_A10
IO_L16P_T2_34 M4 DDR_A0
IO_L16N_T2_34 N4 DDR_RAS
IO_L17P_T2_34 R1 DDR_BA2
IO_L17N_T2_34 T1 DDR_A3
IO_L18P_T2_34 M6 DDR_A2
IO_L18N_T2_34 N6 DDR_A12
IO_L19P_T3_34 R6 DDR_DQ5
IO_L19N_T3_VREF_34 R5 DDR_DQ7
IO_L20P_T3_34 V7 DDR_DQ4
IO_L20N_T3_34 V6 DDR_DQ1
IO_L21P_T3_DQS_34 U9 DDR_LDQS_P
IO_L21N_T3_DQS_34 V9 DDR_LDQS_N
IO_L22P_T3_34 U7 DDR_DQ3
IO_L22N_T3_34 U6 DDR_DQ6
IO_L23P_T3_34 R7 DDR_DQ0
IO_L23N_T3_34 T6 DDR_LDM
IO_L24P_T3_34 R8 DDR_DQ2
IO_L24N_T3_34 T8 SW8
XC7A100T-1CSG324C
IC8E
BANK 35
M_LRSEL F5
M_CLK J5
IO_0_35 IO_L1P_T0_AD4P_35 C6 VGA_G0
IO_25_35 IO_L1N_T0_AD4N_35 C5 VGA_R2
IO_L2P_T0_AD12P_35 B7 VGA_B0
IO_L2N_T0_AD12N_35 B6 VGA_G2
IO_L3P_T0_DQS_AD5P_35 A6 VGA_G3
IO_L3N_T0_DQS_AD5N_35 A5 VGA_G1
IO_L4P_T0_35 D8 VGA_B3
IO_L4N_T0_35 C7 VGA_B1
IO_L5P_T0_AD13P_35 E6 JC10
IO_L5N_T0_AD13N_35 E5 UART_RTS
IO_L6P_T0_35 E7 JC7
IO_L6N_T0_VREF_35 D7 VGA_B2
IO_L7P_T1_AD6P_35 C4 UART_TXD_IN
IO_L7N_T1_AD6N_35 B4 VGA_R1
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IO_L8N_T1_AD14N_35 A3 VGA_R0
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IO_L9N_T1_DQS_AD7N_35 A1 SD_CD
IO_L10P_T1_AD15P_35 B3 ETH_RSTN
IO_L10N_T1_AD15N_35 B2 PS2_DATA
IO_L11P_T1_SRCC_35 D5 ETH_REFCLK
IO_L11N_T1_SRCC_35 D4 UART_RXD_OUT
IO_L12P_T1_MRCC_35 E3 CLK100MHZ
IO_L12N_T1_MRCC_35 D3 UART_CTS
IO_L13P_T2_MRCC_35 F4 PS2_CLK
IO_L13N_T2_MRCC_35 F3 JD10
IO_L14P_T2_SRCC_35 E2 SD_RESET
IO_L14N_T2_SRCC_35 D2 SD_DAT3
IO_L15P_T2_DQS_35 H2 JD7
IO_L15N_T2_DQS_35 G2 JD9
IO_L16P_T2_35 C2 SD_DAT0
IO_L16N_T2_35 C1 SD_CMD
IO_L17P_T2_35 H1 JD2
IO_L17N_T2_35 G1 JD3
IO_L18P_T2_35 F1 SD_DAT2
IO_L18N_T2_35 E1 SD_DAT1
IO_L19P_T3_35 G6 JC4
IO_L19N_T3_VREF_35 F6 JC2
IO_L20P_T3_35 G4 JD8
IO_L20N_T3_35 G3 JD4
IO_L21P_T3_DQS_35 J4 JC9
IO_L21N_T3_DQS_35 H4 JD1
IO_L22P_T3_35 J3 JC8
IO_L22N_T3_35 J2 JC3
IO_L23P_T3_35 K2 AN6
IO_L23N_T3_35 K1 JC1
IO_L24P_T3_35 H6 SW12
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XC7A100T-1CSG324C
IC8C
BANK 16
IO_L6N_T0_VREF_16 D9 ETH_CRSDV
IO_L11P_T1_SRCC_16 C9 ETH_MDC
IO_L11N_T1_SRCC_16 B9 ETH_TXEN
IO_L12P_T1_MRCC_16 B8 ETH_INTN
IO_L12N_T1_MRCC_16 A8 ETH_TXD1
IO_L13P_T2_MRCC_16 C11 ETH_RXD0
IO_L13N_T2_MRCC_16 C10 ETH_RXERR
IO_L14P_T2_SRCC_16 A10 ETH_TXD0
IO_L14N_T2_SRCC_16 A9 ETH_MDIO
IO_L19N_T3_VREF_16 D10 ETH_RXD1
XC7A100T-1CSG324C
XADC1_P R200 100 XA1_P
C60 1nF No Load
XADC1_N R203 100 XA1_N
XADC2_P R201 100 XA2_P
C61 1nF No Load
XADC2_N R204 100 XA2_N
XADC3_P R202 100 XA3_P
C62 1nF No Load
XADC3_N R205 100 XA3_N
XADC4_P R206 100 XA4_P
C63 1nF No Load
XADC4_N R207 100 XA4_N
IC9
VCC3V3
4 VDD OUT 3 CLK100MHZ
1 STBY GND 2 GND
C64 100nF
GND
DSC1033CC1-100.0000T
Title
Nexys 4 DDR
Rev
C.1
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Circuit
FPGA BANKS
Doc#
500-292
Engineer EG
Author DL
Date 6/10/2014
Sheet# 7 out of 11
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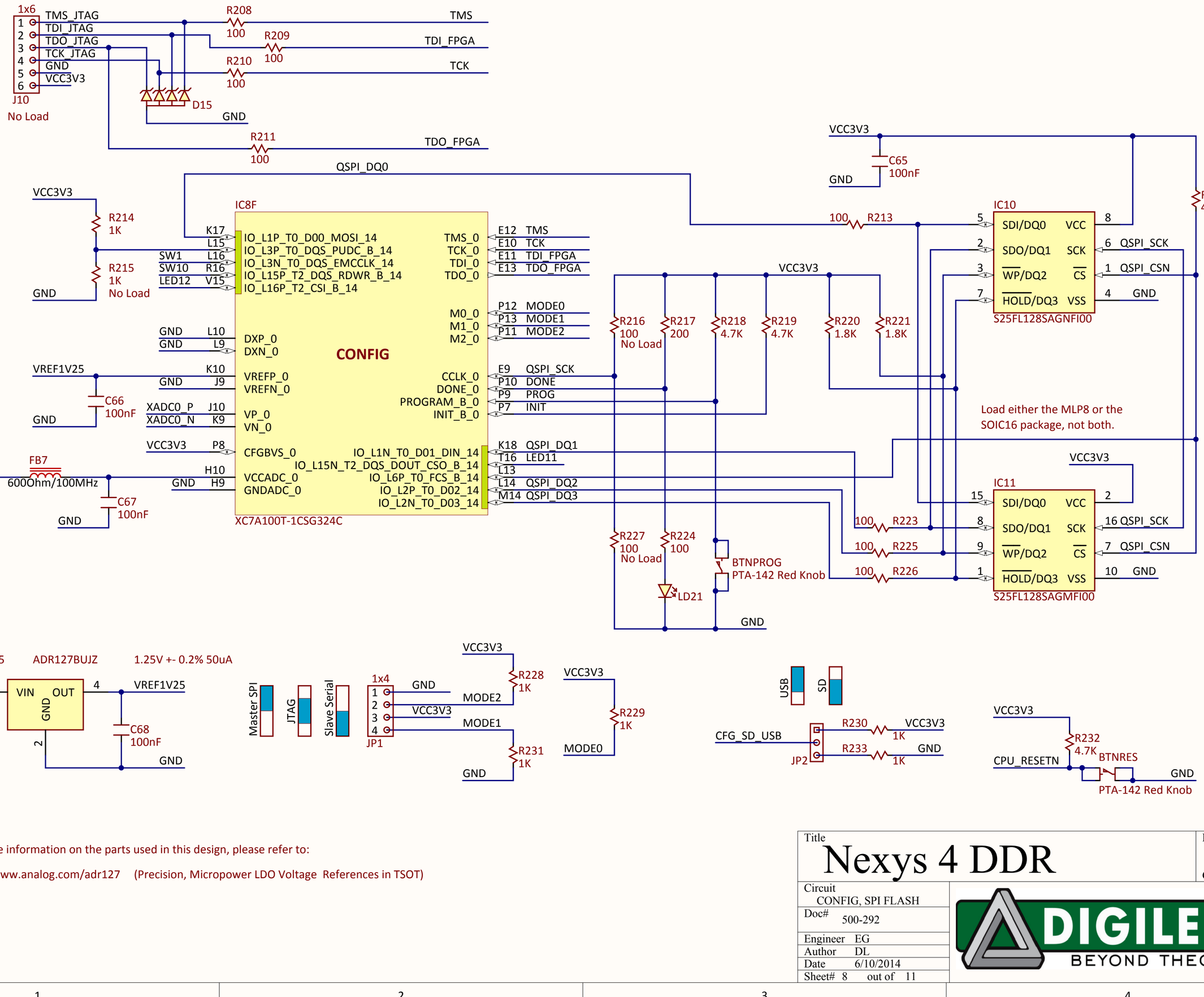
BEYOND THEORY



For more information on the parts used in this design, please refer to:

http://www.analog.com/adr127 (Precision, Micropower LDO Voltage References in TSOT)

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Sheet#	8 out of 11

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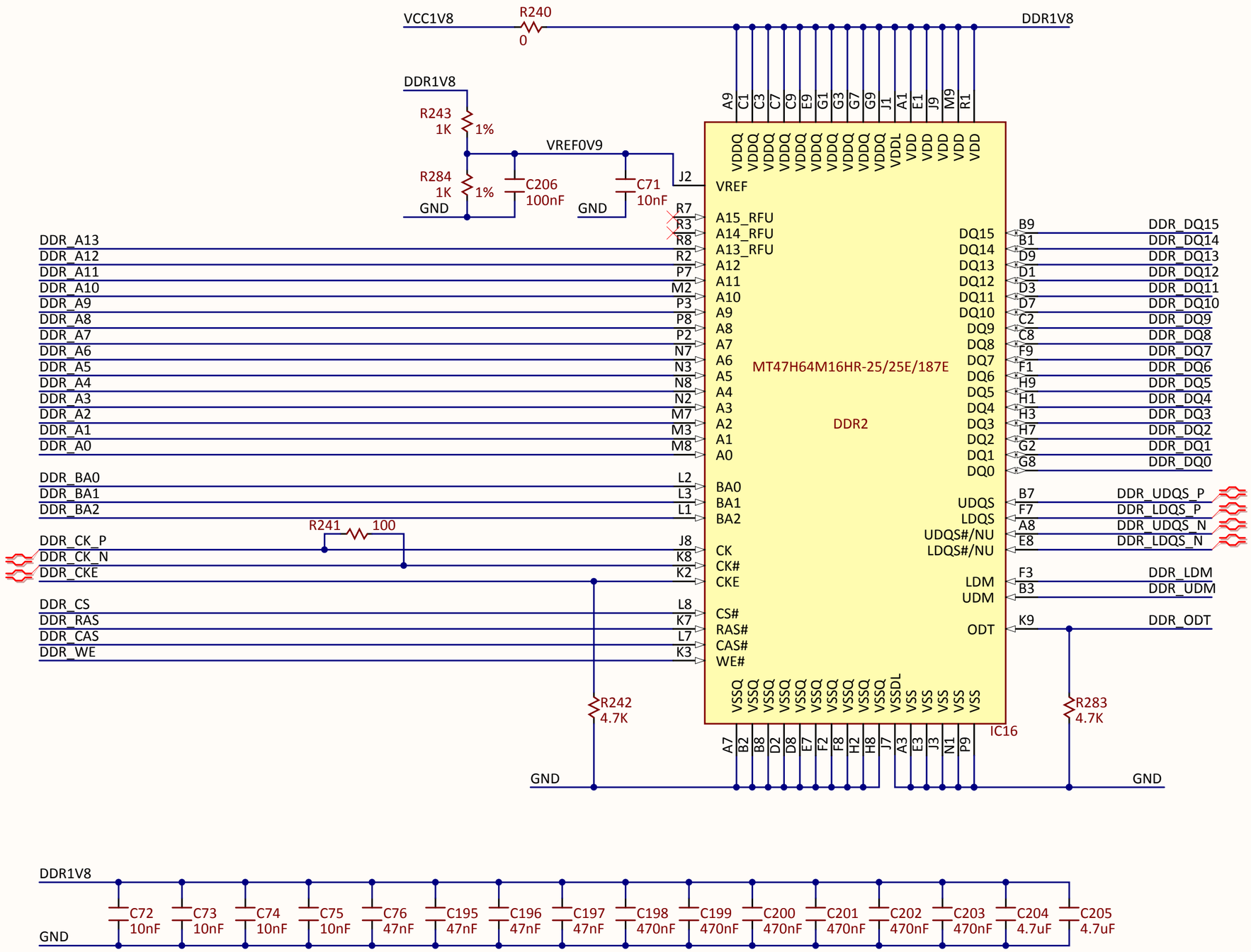

Title	Nexys 4 DDR
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Sheet#	9 out of 11

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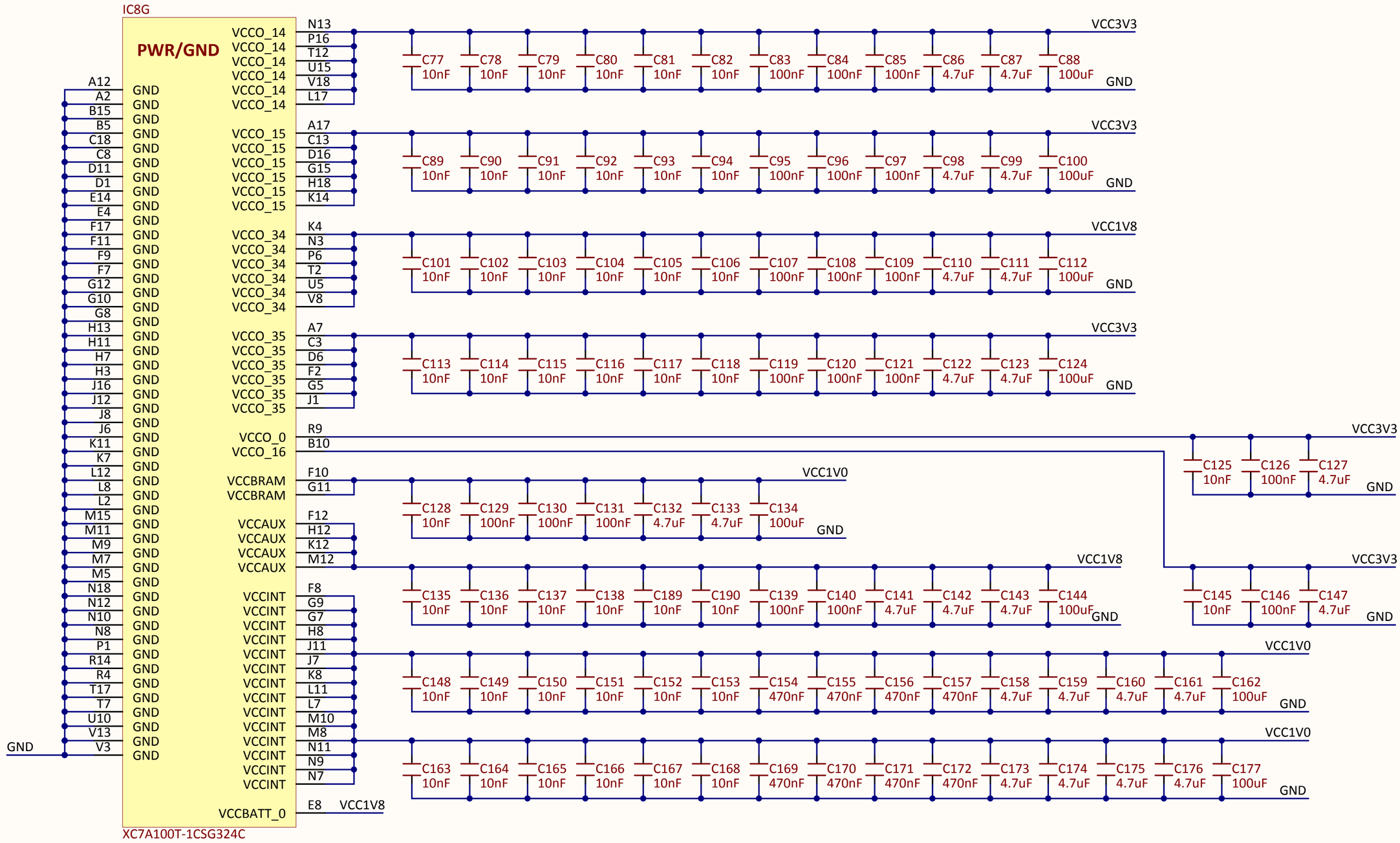

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Sheet#	10 out of 11

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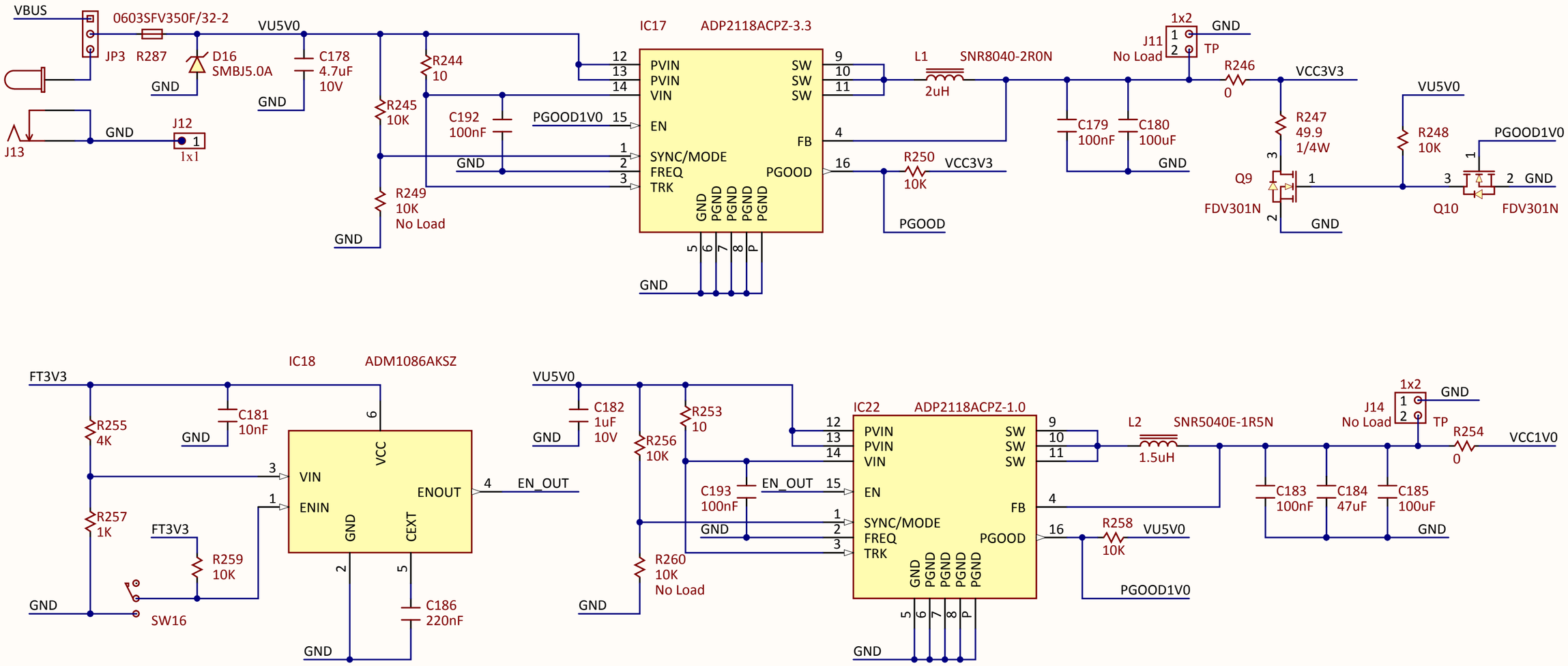

For more information on the parts used in this design, please refer to:

http://www.analog.com/adp2118 (3 A, 1.2 MHz/600 kHz High Efficiency Synchronous Step-Down DC-to-DC Regulator)

http://www.analog.com/adm1086 (Voltage Sequencer with Active High, Push-Pull Enable Output)

http://www.analog.com/adp2138 (Compact, 800 mA, 3 MHz, Step-Down DC-to-DC Converter)

http://www.analog.com/adp121 (CMOS Linear Regulator, 150 mA, Low Quiescent Current)

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Doc#	500-292
Engineer	EG
Author	DL
Date	6/10/2014
Sheet#	11 out of 11

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