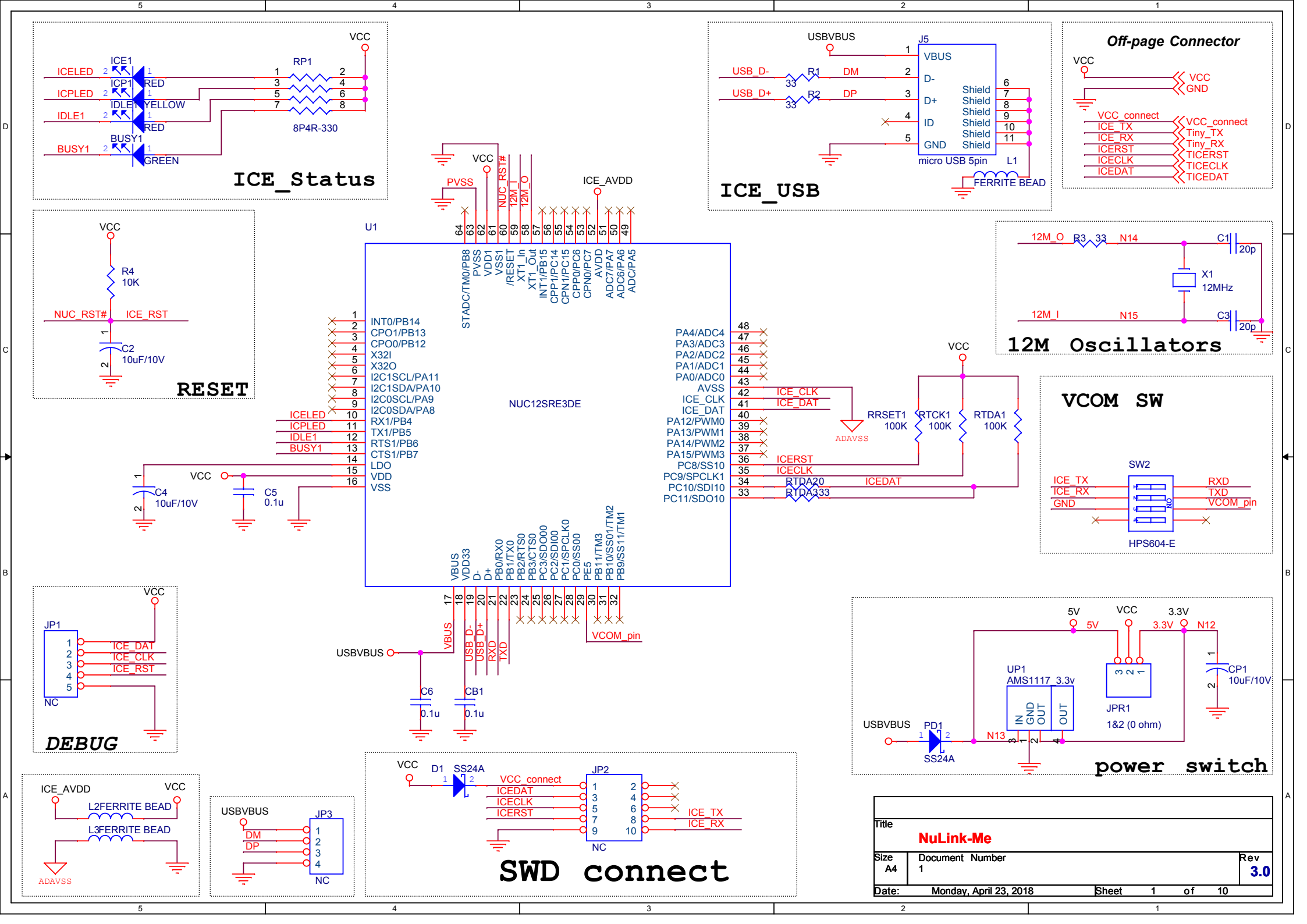
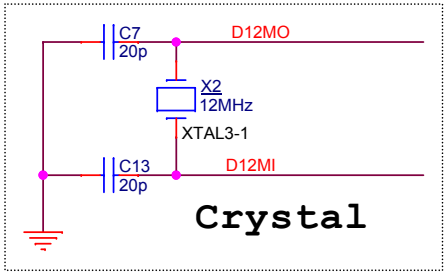
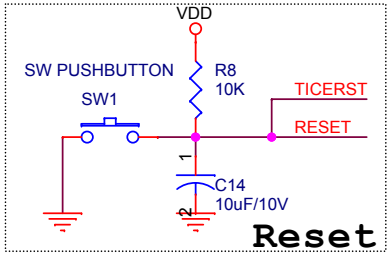
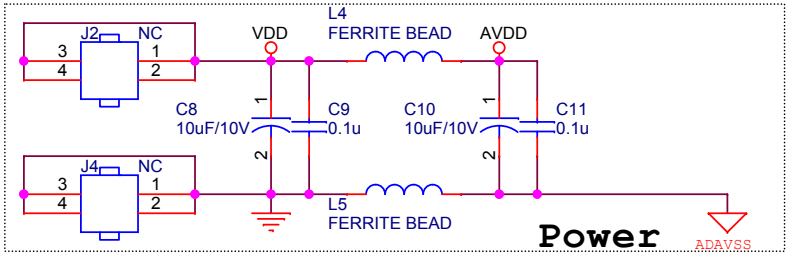
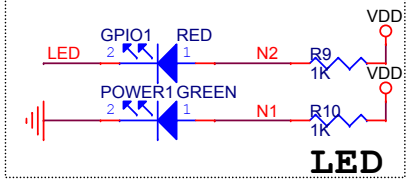
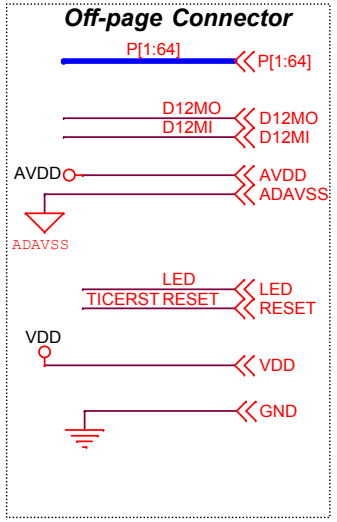

ICE_Status
ICE1
ICELED
ICP1
RED
ICPLED
IDLE1
YELLOW
IDLE1
RED
BUSY1
BUSY1
GREEN
RP1
8P4R-330
VCC
ICE_USB
USBVBUS
J5
USB_D-
USB_D+
R1
R2
33
33
DM
DP
VBUS
D-
D+
ID
GND
Shield
micro USB 5pin
L1
FERRITE BEAD
Off-page Connector
VCC
VCC
GND
VCC_connect
ICE_TX
ICE_RX
ICERST
ICECLK
ICEDAT
Tiny_TX
Tiny_RX
TICERST
TICECLK
TICEDAT
RESET
R4
10K
NUC_RST#
ICE_RST
C2
10uF/10V
U1
NUC12SRE3DE
PVSS
ICE_AVDD
STADC/TM0/PB8
PVSS
VDD1
VSS1
/RESET
XT1_In
XT1_Out
INT1/PB15
CPP1/PC14
CPN1/PC15
CPP0/PC6
CPN0/PC7
AVDD
ADC7/PA7
ADC6/PA6
ADC/PA5
INT0/PB14
CPO1/PB13
CPO0/PB12
X32I
X32O
I2C1SCL/PA11
I2C1SDA/PA10
I2C0SCL/PA9
I2C0SDA/PA8
RX1/PB4
TX1/PB5
RTS1/PB6
CTS1/PB7
LDO
VDD
VSS
ICELED
ICPLED
IDLE1
BUSY1
C4
10uF/10V
C5
0.1u
PA4/ADC4
PA3/ADC3
PA2/ADC2
PA1/ADC1
PA0/ADC0
AVSS
ICE_CLK
ICE_DAT
PA12/PWM0
PA13/PWM1
PA14/PWM2
PA15/PWM3
PC8/SS10
PC9/SPCLK1
PC10/SDI10
PC11/SDO10
ADAVSS
RRSET1
100K
RTCK1
100K
RTDA1
100K
RTDA20
RTDA33
ICERST
ICECLK
ICEDAT
12M Oscillators
12M_O
R3
33
N14
C1
20p
X1
12MHz
12M_I
N15
C3
20p
VCOM SW
SW2
ICE_TX
ICE_RX
GND
RXD
TXD
VCOM_pin
HPS604-E
VBUS
VDD33
D-
D+
PB0/RX0
PB1/TX0
PB2/RTS0
PB3/CTS0
PC3/SDO00
PC2/SDI00
PC1/SPCLK0
PC0/SS00
PE5
PB11/TM3
PB10/SS01/TM2
PB9/SS11/TM1
VCOM_pin
USBVBUS
C6
0.1u
CB1
0.1u
DEBUG
JP1
ICE_DAT
ICE_CLK
ICE_RST
NC
power switch
5V
VCC
3.3V
N12
UP1
AMS1117_3.3v
IN
GND
OUT
OUT
JPR1
1&2 (0 ohm)
CP1
10uF/10V
USBVBUS
PD1
SS24A
N13
ICE_AVDD
L2FERRITE BEAD
L3FERRITE BEAD
ADAVSS
USBVBUS
JP3
DM
DP
NC
SWD connect
D1
SS24A
JP2
VCC_connect
ICEDAT
ICECLK
ICERST
ICE_TX
ICE_RX
NC
Title
NuLink-Me
Size
A4
Document Number
1
Rev
3.0
Date:
Monday, April 23, 2018
Sheet
1
of
10



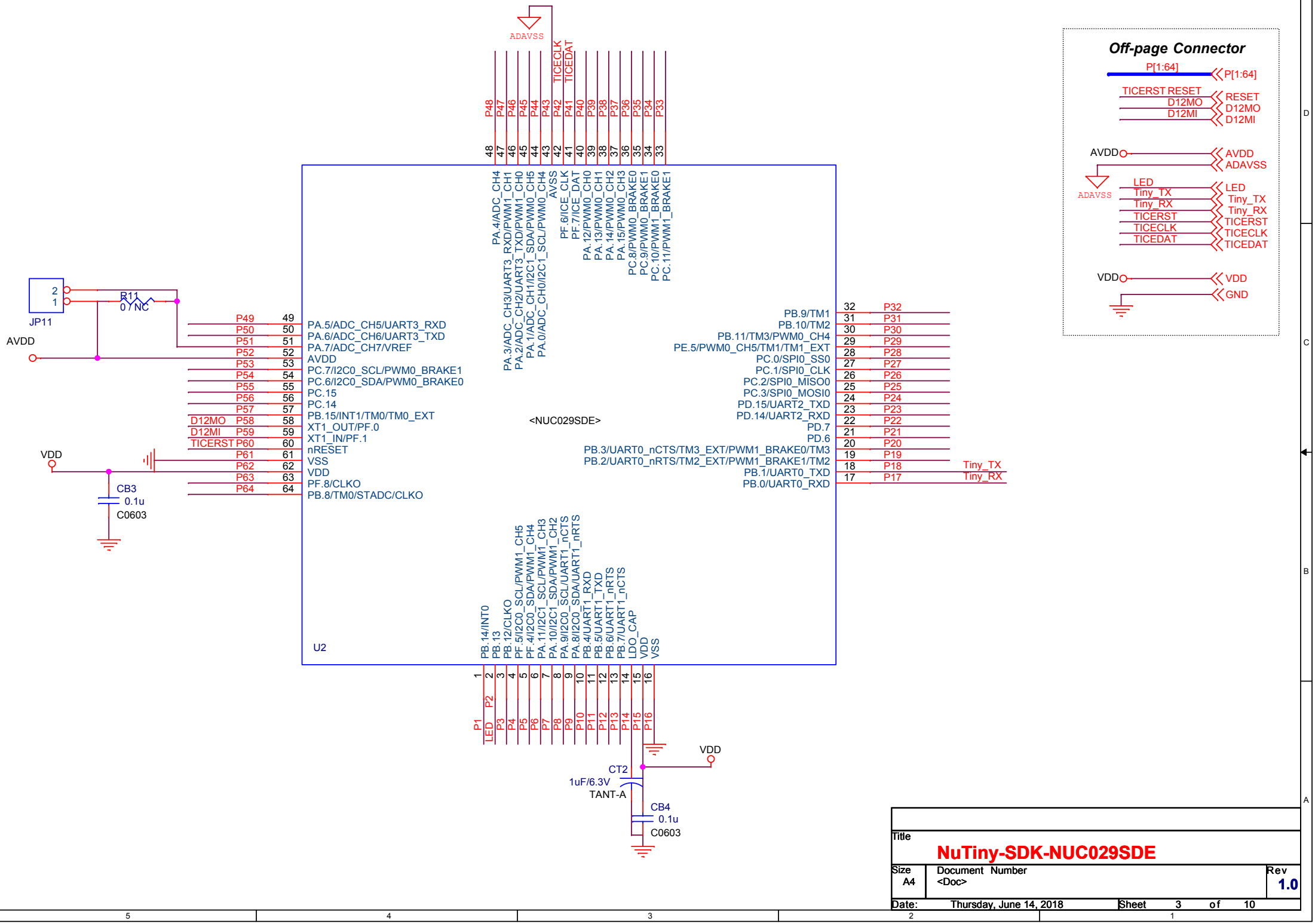


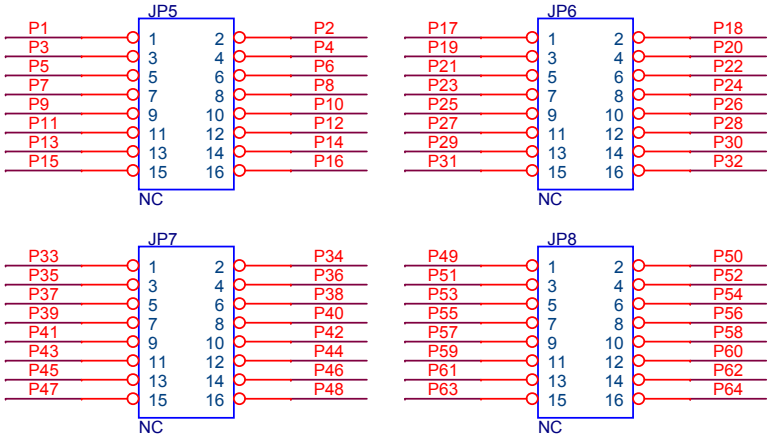


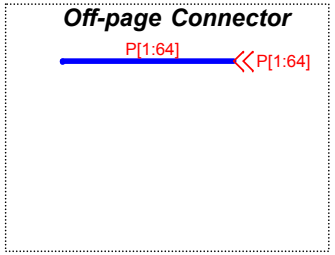




Title: SDK Circuit		
Size: A4	Document Number: 2	Rev: 1.0
Date: Thursday, April 26, 2018	Sheet 2 of 10	


ADAVSS
TICECLK
TICEDAT
P48 P47 P46 P45 P44 P43 P42 P41 P40 P39 P38 P37 P36 P35 P34 P33
48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
PA.4/ADC_CH4
PA.3/ADC_CH3/UART3_RXD/PWM1_CH1
PA.2/ADC_CH2/UART3_TXD/PWM1_CH0
PA.1/ADC_CH1/I2C1_SDA/PWM0_CH5
PA.0/ADC_CH0/I2C1_SCL/PWM0_CH4
AVSS
PF.6/ICE_CLK
PF.7/ICE_DAT
PA.12/PWM0_CH0
PA.13/PWM0_CH1
PA.14/PWM0_CH2
PA.15/PWM0_CH3
PC.8/PWM0_BRAKE0
PC.9/PWM0_BRAKE1
PC.10/PWM1_BRAKE0
PC.11/PWM1_BRAKE1
JP11
2
1
R11
0 / NC
AVDD
P49 49 PA.5/ADC_CH5/UART3_RXD
P50 50 PA.6/ADC_CH6/UART3_TXD
P51 51 PA.7/ADC_CH7/VREF
P52 52 AVDD
P53 53 PC.7/I2C0_SCL/PWM0_BRAKE1
P54 54 PC.6/I2C0_SDA/PWM0_BRAKE0
P55 55 PC.15
P56 56 PC.14
P57 57 PB.15/INT1/TM0/TM0_EXT
D12MO P58 58 XT1_OUT/PF.0
D12MI P59 59 XT1_IN/PF.1
TICERST P60 60 nRESET
P61 61 VSS
P62 62 VDD
P63 63 PF.8/CLKO
P64 64 PB.8/TM0/STADC/CLKO
VDD
CB3
0.1u
C0603
<NUC029SDE>
32 P32 PB.9/TM1
31 P31 PB.10/TM2
30 P30 PB.11/TM3/PWM0_CH4
29 P29 PE.5/PWM0_CH5/TM1/TM1_EXT
28 P28 PC.0/SPI0_SS0
27 P27 PC.1/SPI0_CLK
26 P26 PC.2/SPI0_MISO0
25 P25 PC.3/SPI0_MOSI0
24 P24 PD.15/UART2_TXD
23 P23 PD.14/UART2_RXD
22 P22 PD.7
21 P21 PD.6
20 P20 PB.3/UART0_nCTS/TM3_EXT/PWM1_BRAKE0/TM3
19 P19 PB.2/UART0_nRTS/TM2_EXT/PWM1_BRAKE1/TM2
18 P18 Tiny_TX PB.1/UART0_TXD
17 P17 Tiny_RX PB.0/UART0_RXD
U2
PB.14/INT0
PB.13
PB.12/CLKO
PF.5/I2C0_SCL/PWM1_CH5
PF.4/I2C0_SDA/PWM1_CH4
PA.11/I2C1_SCL/PWM1_CH3
PA.10/I2C1_SDA/PWM1_CH2
PA.9/I2C0_SCL/UART1_nCTS
PA.8/I2C0_SDA/UART1_nRTS
PB.4/UART1_RXD
PB.5/UART1_TXD
PB.6/UART1_nRTS
PB.7/UART1_nCTS
LDO_CAP
VDD
VSS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
P1 P2 P3 P4 P5 P6 P7 P8 P9 P10 P11 P12 P13 P14 P15 P16
LED
VDD
CT2
1uF/6.3V
TANT-A
CB4
0.1u
C0603
Off-page Connector
P[1:64] P[1:64]
TICERST RESET RESET
D12MO D12MO
D12MI D12MI
AVDD AVDD
ADAVSS ADAVSS
LED LED
Tiny_TX Tiny_TX
Tiny_RX Tiny_RX
TICERST TICERST
TICECLK TICECLK
TICEDAT TICEDAT
VDD VDD
GND
Title
NuTiny-SDK-NUC029SDE
Size A4
Document Number <Doc>
Rev 1.0
Date: Thursday, June 14, 2018
Sheet 3 of 10





Title	GPIO for 64 pin	
Size A4	Document Number <Doc>	Rev 1.0
Date: Monday, April 23, 2018	Sheet 5 of 10	