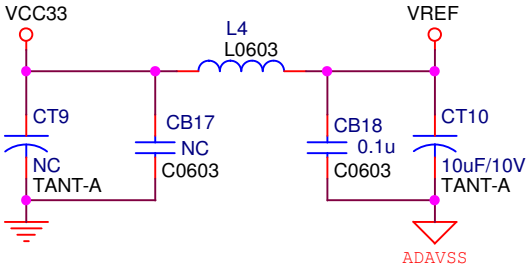
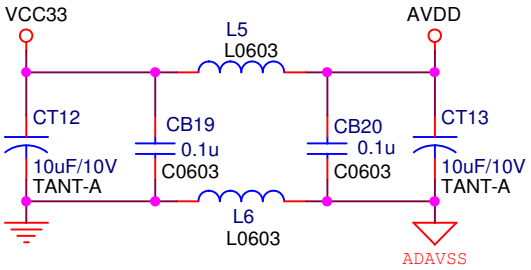
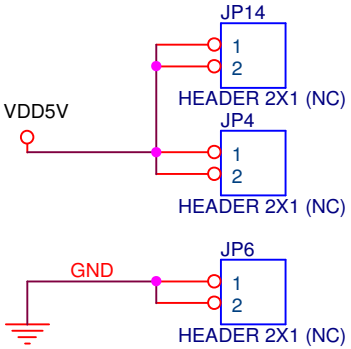
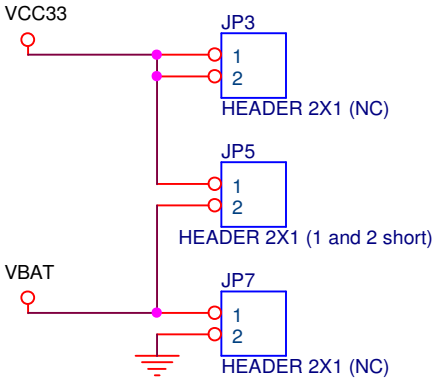
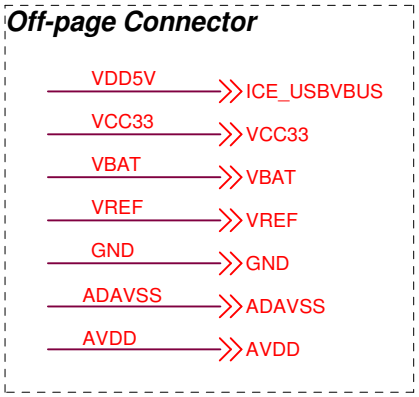


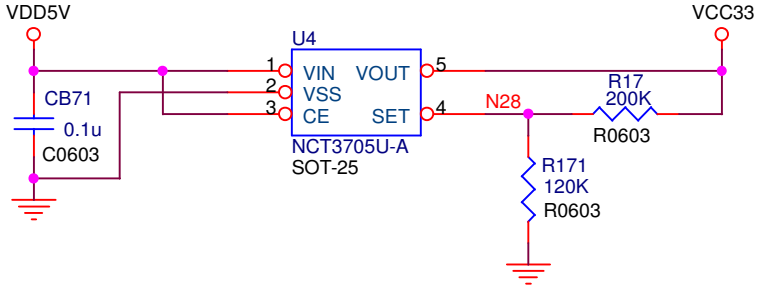




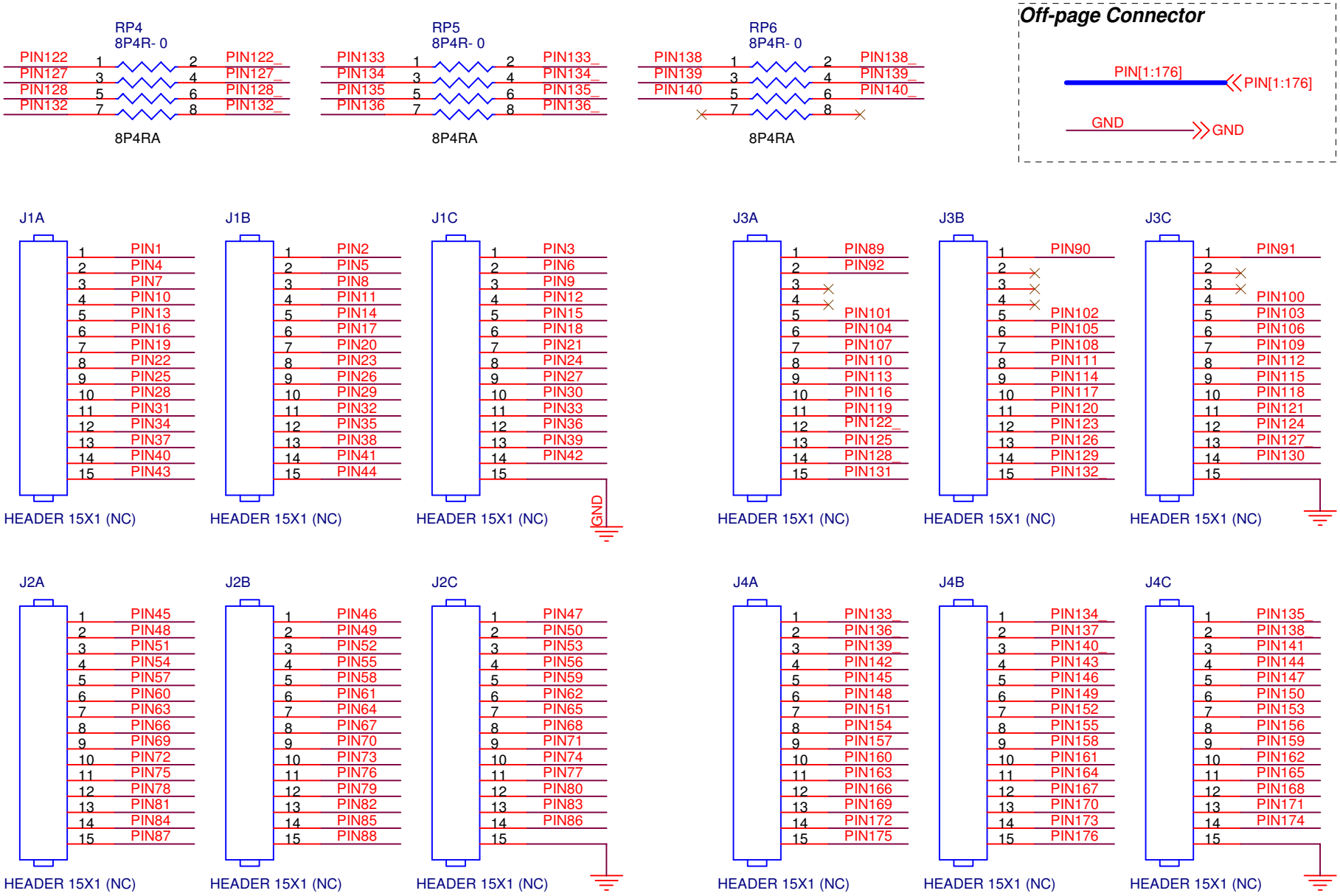




POWER

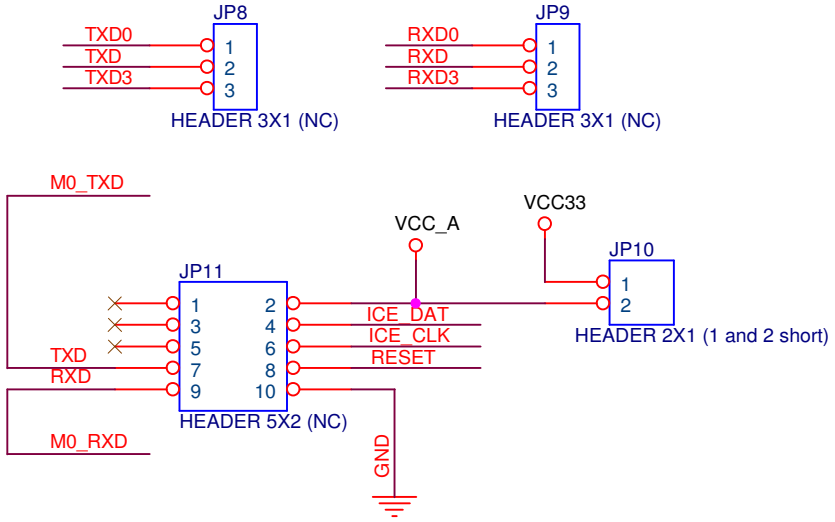


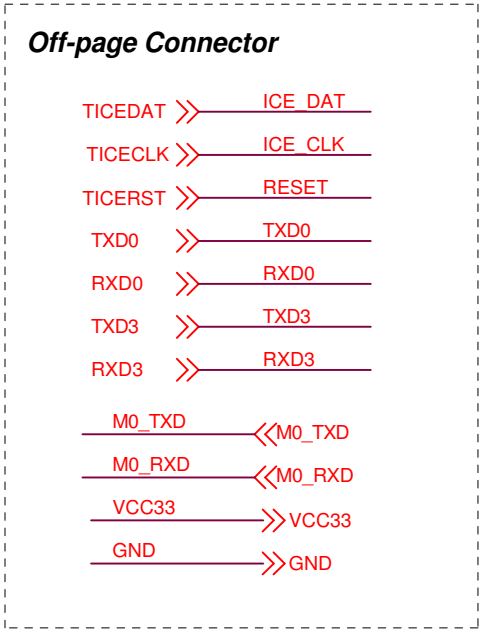
Title: Power		
Size: A	Document Number: <Doc>	Rev: V3.0
Date: Friday, March 06, 2015	Sheet 1 of 1	



PIN CONNECTOR

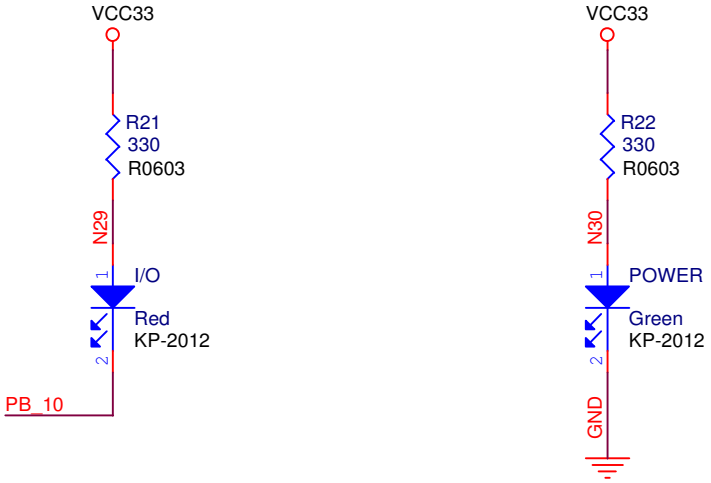
Title	Pin Connector	
Size A	Document Number <Doc>	Rev V3.0
Date: Friday, March 06, 2015	Sheet 1 of 1	



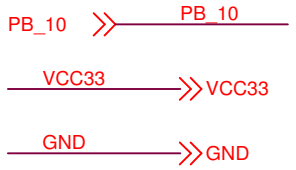


ICE INTERFACE

Title: ICE Interface		
Size: A	Document Number: <Doc>	Rev: V3.0
Date: Friday, March 06, 2015	Sheet 1 of 1	

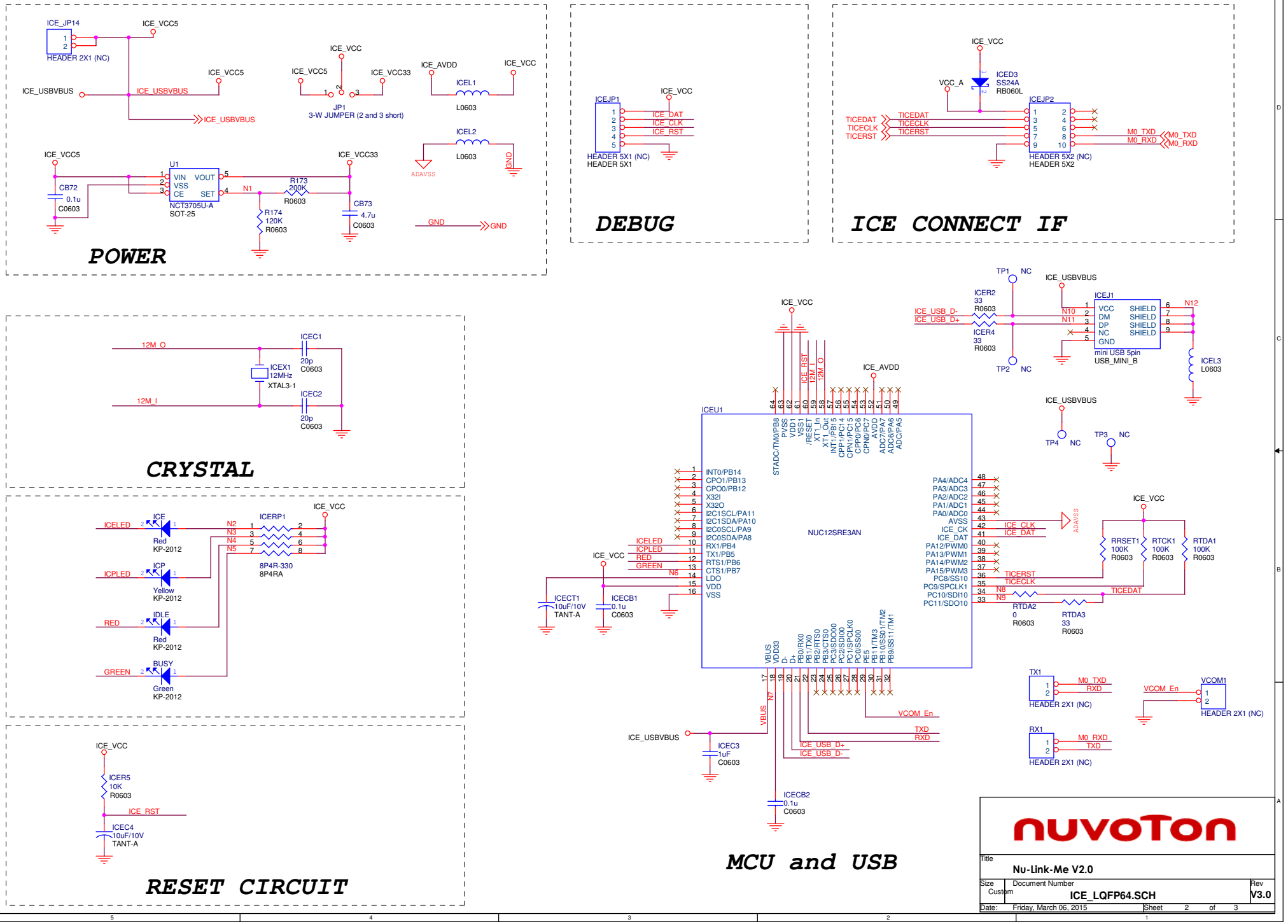


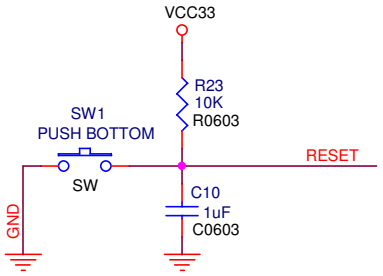
Off-page Connector

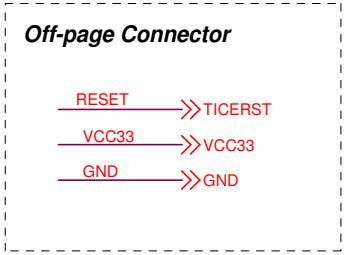


LED

Title: LED		
Size: A	Document Number: <Doc>	Rev: V3.0
Date: Friday, March 06, 2015	Sheet 1 of 1	

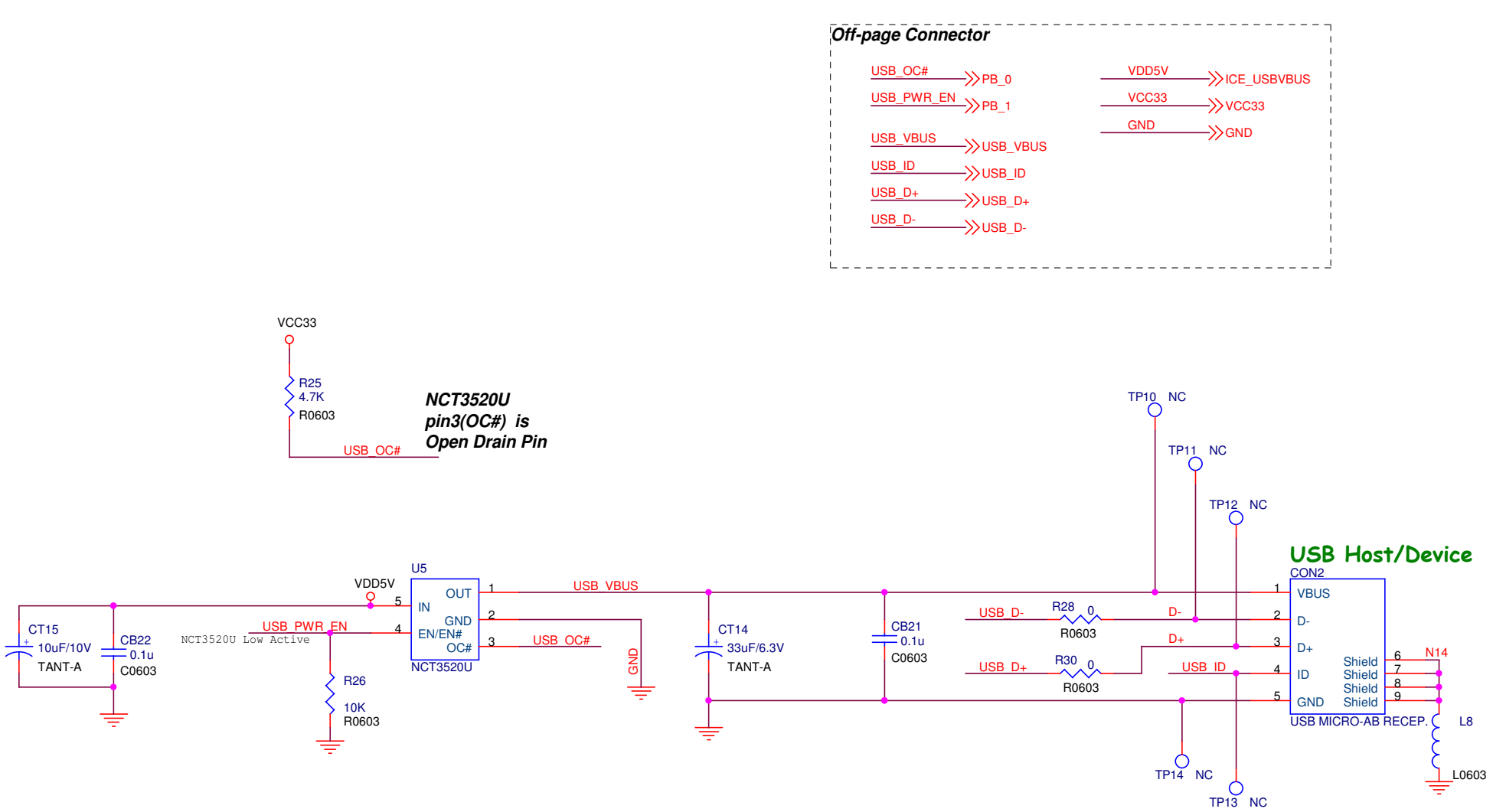

POWER
ICE_JP14
HEADER 2X1 (NC)
ICE_VCC5
ICE_USBVBUS
JP1
3-W JUMPER (2 and 3 short)
ICE_VCC33
ICE_AVDD
ICEL1
L0603
ICEL2
ADAVSS
GND
U1
NCT3705U-A
SOT-25
CB72
0.1u
C0603
R173
200K
R0603
R174
120K
R0603
CB73
4.7u
C0603
DEBUG
ICEJP1
HEADER 5X1 (NC)
HEADER 5X1
ICE_DAT
ICE_CLK
ICE_RST
ICE CONNECT IF
ICED3
SS24A
RB060L
VCC_A
ICEJP2
HEADER 5X2 (NC)
HEADER 5X2
TICEDAT
TICECLK
TICERST
M0_TXD
M0_RXD
CRYSTAL
ICEC1
ICEC2
20p
C0603
ICEX1
12MHz
XTAL3-1
12M_O
12M_I
ICE
ICP
IDLE
BUSY
Red
Yellow
Green
KP-2012
ICELED
ICPLED
RED
GREEN
ICERP1
8P4R-330
8P4RA
RESET CIRCUIT
ICER5
10K
R0603
ICEC4
10uF/10V
TANT-A
MCU and USB
ICEU1
NUC12SRE3AN
ICER2
ICER4
33
R0603
ICEJ1
mini USB 5pin
USB_MINI_B
ICEL3
L0603
TP1
TP2
TP3
TP4
NC
ICECT1
10uF/10V
TANT-A
ICECB1
ICECB2
ICEC3
1uF
C0603
0.1u
C0603
RRSET1
RTCK1
RTDA1
RTDA2
RTDA3
100K
0
33
R0603
TX1
RX1
HEADER 2X1 (NC)
VCOM1
VCOM_En
TXD
RXD
nuvoTon
Title
Nu-Link-Me V2.0
Size
Custom
Document Number
ICE_LQFP64.SCH
Rev
V3.0
Date:
Friday, March 06, 2015
Sheet
2
of
3





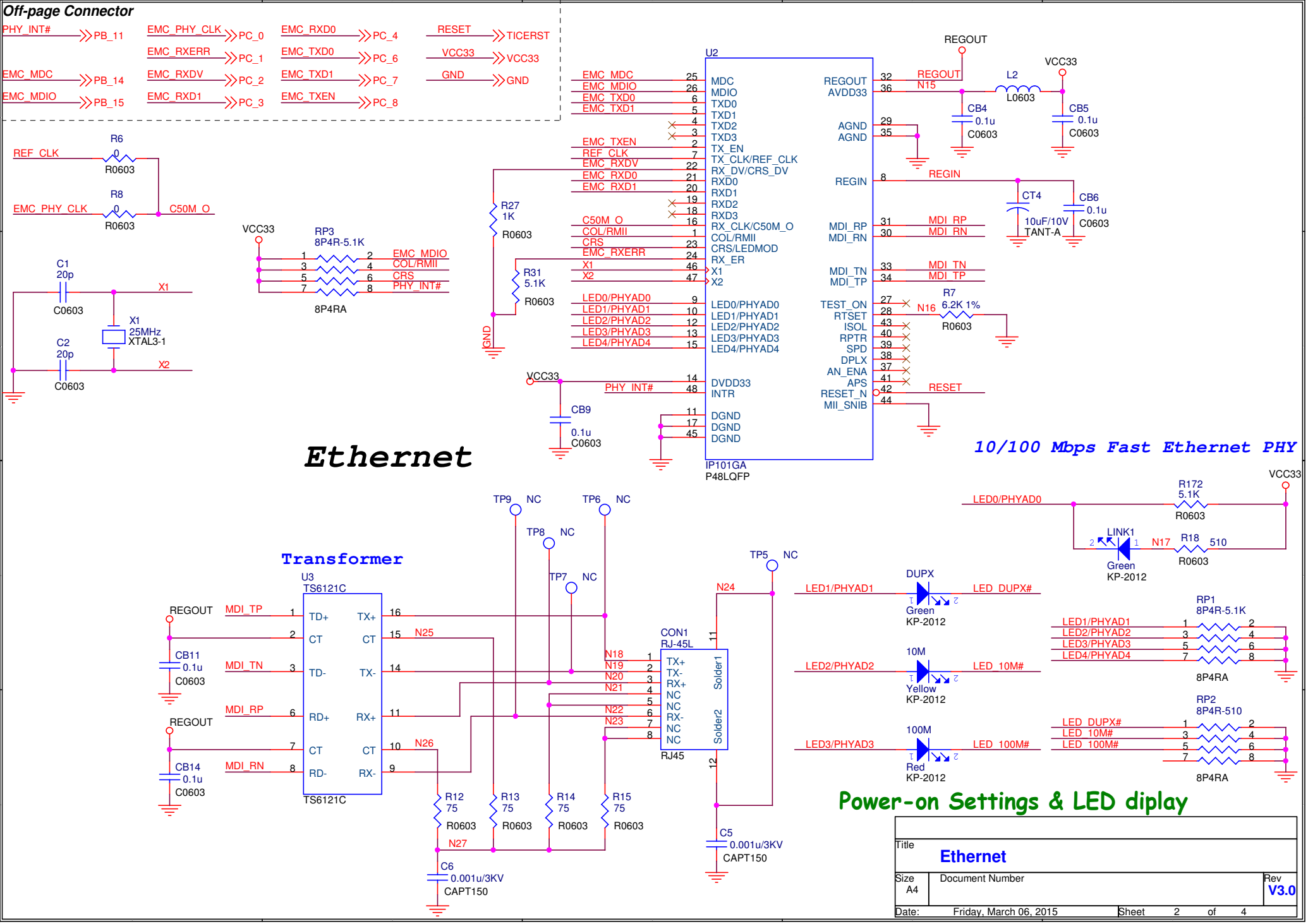
RESET

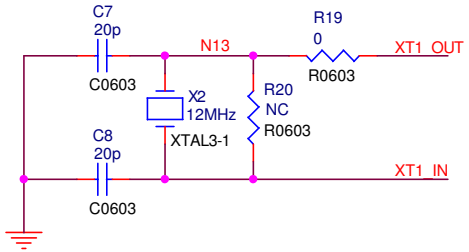
Title: Reset		
Size: A4	Document Number	Rev: V3.0
Date: Friday, March 06, 2015	Sheet 2 of 4	

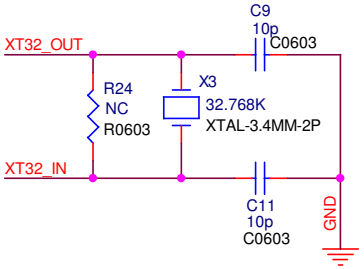


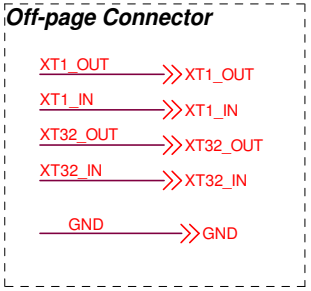
USB OTG Host/Device

Title	USB OTG Host/Device	
Size A4	Document Number	Rev V3.0
Date: Friday, March 06, 2015	Sheet 2 of 4	


Off-page Connector
PHY_INT# PB_11
EMC_MDC PB_14
EMC_MDIO PB_15
EMC_PHY_CLK PC_0
EMC_RXERR PC_1
EMC_RXDV PC_2
EMC_RXD1 PC_3
EMC_RXD0 PC_4
EMC_TXD0 PC_6
EMC_TXD1 PC_7
EMC_TXEN PC_8
RESET TICERST
VCC33 VCC33
GND GND
REF_CLK
R6 0 R0603
EMC_PHY_CLK
R8 0 R0603
C50M_O
C1 20p C0603
C2 20p C0603
X1 25MHz XTAL3-1
VCC33
RP3 8P4R-5.1K
EMC_MDIO COL/RMII CRS PHY_INT#
8P4RA
R27 1K R0603
R31 5.1K R0603
GND
U2
MDC MDIO TXD0 TXD1 TXD2 TXD3 TX_EN TX_CLK/REF_CLK RX_DV/CRS_DV RXD0 RXD1 RXD2 RXD3 RX_CLK/C50M_O COL/RMII CRS/LEDMOD RX_ER X1 X2
LED0/PHYAD0 LED1/PHYAD1 LED2/PHYAD2 LED3/PHYAD3 LED4/PHYAD4
DVDD33 INTR
DGND DGND DGND
REGOUT AVDD33 AGND AGND REGIN MDI_RP MDI_RN MDI_TN MDI_TP TEST_ON RTSET ISOL RPTR SPD DPLX AN_ENA APS RESET_N MII_SNIB
IP101GA
P48LQFP
REGOUT
L2 L0603
VCC33
CB4 0.1u C0603
CB5 0.1u C0603
REGIN
CT4 10uF/10V TANT-A
CB6 0.1u C0603
MDI_RP MDI_RN MDI_TN MDI_TP
R7 6.2K 1% R0603
N16
RESET
VCC33
PHY_INT#
CB9 0.1u C0603
Ethernet
10/100 Mbps Fast Ethernet PHY
Transformer
U3 TS6121C
REGOUT MDI_TP CB11 0.1u C0603
MDI_TN
REGOUT MDI_RP CB14 0.1u C0603
MDI_RN
TD+ TD- RD+ RD- CT TX+ TX- RX+ RX-
TS6121C
N25 N26
TP9 NC TP8 NC TP7 NC TP6 NC TP5 NC
CON1 RJ-45L
TX+ TX- RX+ RX- NC Solder1 Solder2
RJ45
N18 N19 N20 N21 N22 N23 N24
R12 75 R0603
R13 75 R0603
R14 75 R0603
R15 75 R0603
N27
C6 0.001u/3KV CAPT150
C5 0.001u/3KV CAPT150
LED0/PHYAD0
R172 5.1K R0603
LINK1 Green KP-2012
N17 R18 510 R0603
VCC33
LED1/PHYAD1 DUPX Green KP-2012 LED_DUPX#
LED2/PHYAD2 10M Yellow KP-2012 LED_10M#
LED3/PHYAD3 100M Red KP-2012 LED_100M#
RP1 8P4R-5.1K
LED1/PHYAD1 LED2/PHYAD2 LED3/PHYAD3 LED4/PHYAD4
8P4RA
RP2 8P4R-510
LED_DUPX# LED_10M# LED_100M#
8P4RA
Power-on Settings & LED diplay
Title Ethernet
Size A4
Document Number
Rev V3.0
Date: Friday, March 06, 2015
Sheet 2 of 4
PHY address-->00001H
LED mode 2

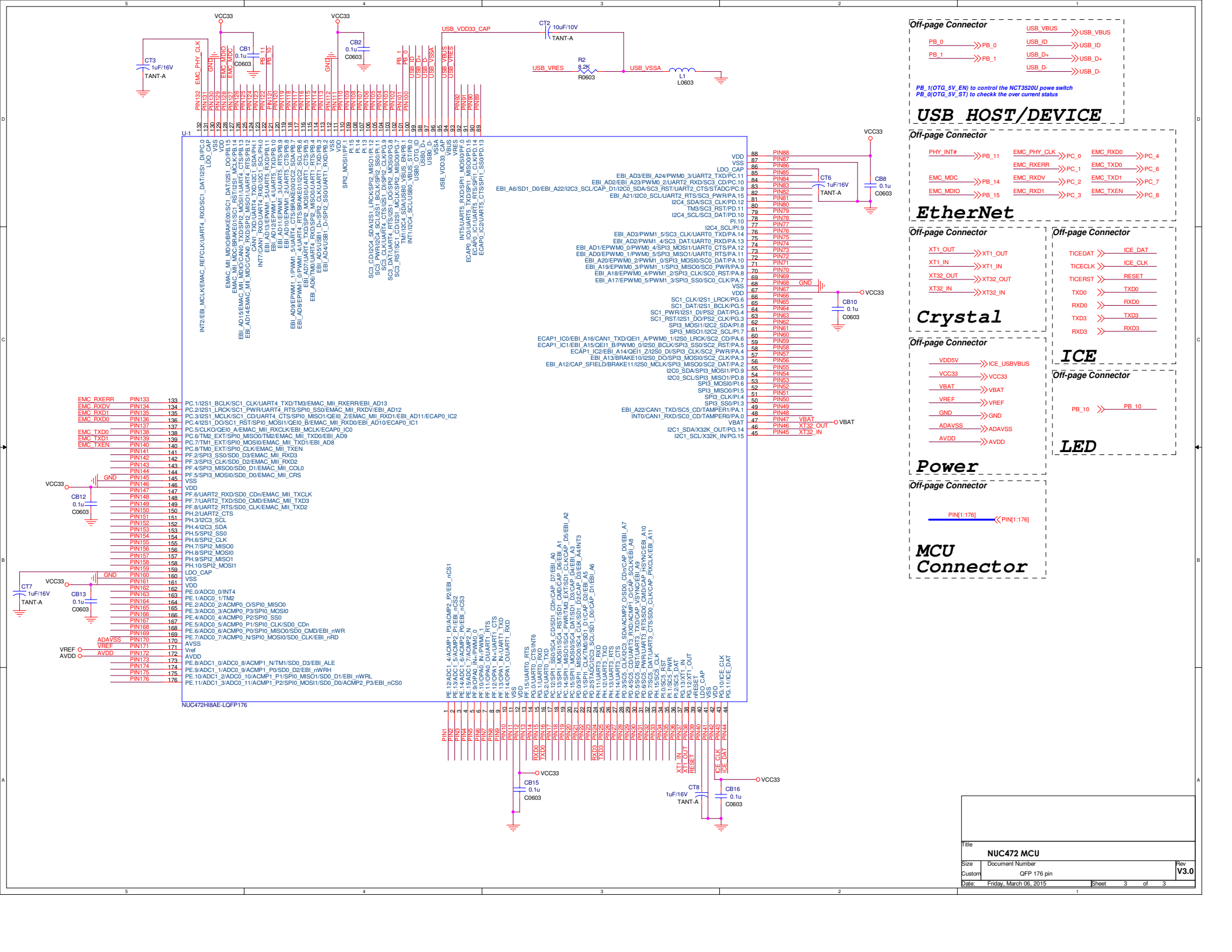






CRYSTAL

Title: Crystal		
Size: A4	Document Number	Rev: V3.0
Date: Friday, March 06, 2015	Sheet 2 of 4	


Off-page Connector
USB_VBUS
USB_ID
USB_D+
USB_D-
PB_0
PB_1
PB_1(OTG_5V_EN) to control the NCT3520U powe switch
PB_0(OTG_5V_ST) to checkk the over current status
USB HOST/DEVICE
Off-page Connector
PHY_INT#
EMC_PHY_CLK
EMC_MDC
EMC_MDIO
EMC_RXERR
EMC_RXDV
EMC_RXD1
EMC_RXD0
EMC_TXD0
EMC_TXD1
EMC_TXEN
EtherNet
Off-page Connector
XT1_OUT
XT1_IN
XT32_OUT
XT32_IN
Crystal
Off-page Connector
TICEDAT
TICECLK
TICERST
TXD0
RXD0
TXD3
RXD3
ICE
Off-page Connector
VDD5V
VCC33
VBAT
VREF
GND
ADAVSS
AVDD
Power
Off-page Connector
PB_10
LED
Off-page Connector
PIN[1:176]
MCU Connector
U-1
NUC472HI8AE-LQFP176
CT3 1uF/16V TANT-A
CB1 0.1u C0603
CB2 0.1u C0603
CT2 10uF/10V TANT-A
R2 8.2K R0603
L1 L0603
CT6 1uF/16V TANT-A
CB8 0.1u C0603
CB10 0.1u C0603
CB12 0.1u C0603
CT7 1uF/16V TANT-A
CB13 0.1u C0603
CB15 0.1u C0603
CT8 1uF/16V TANT-A
CB16 0.1u C0603
Title
NUC472 MCU
Size
Document Number
QFP 176 pin
Rev
V3.0
Custom
Date: Friday, March 06, 2015
Sheet 3 of 3