Reference Schematic for LAN9252-SPI/SQI+GPIO16 Mode

Configurations

SPI/SQI+GPIO16 Mode
EEPROM - 24FC512 (High)
2Port mode
Port0 & Port1 = Copper

Page No.	Schematic Page
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3	LAN9252(Part1)
4	LAN9252(Part2), Strap & EEPROM
5	Copper Mode Interface

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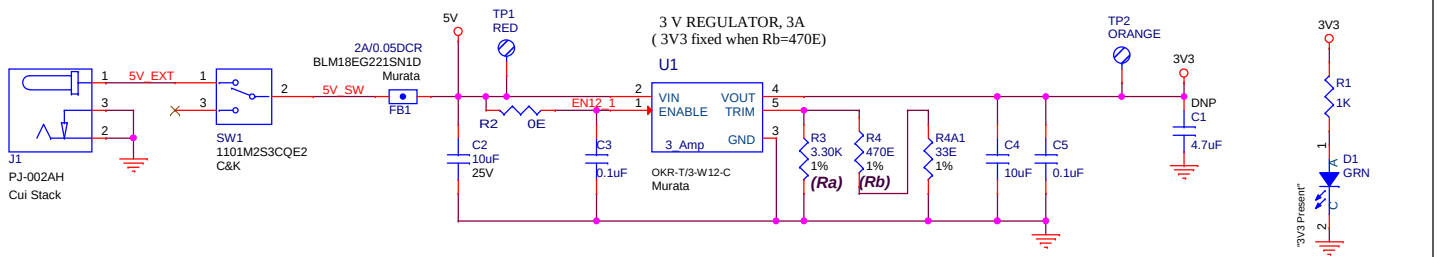
POWER SUPPLY



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Part Number: LAN9252-SPI/SQI+GPIO16 Mode		Page: Power Supply	
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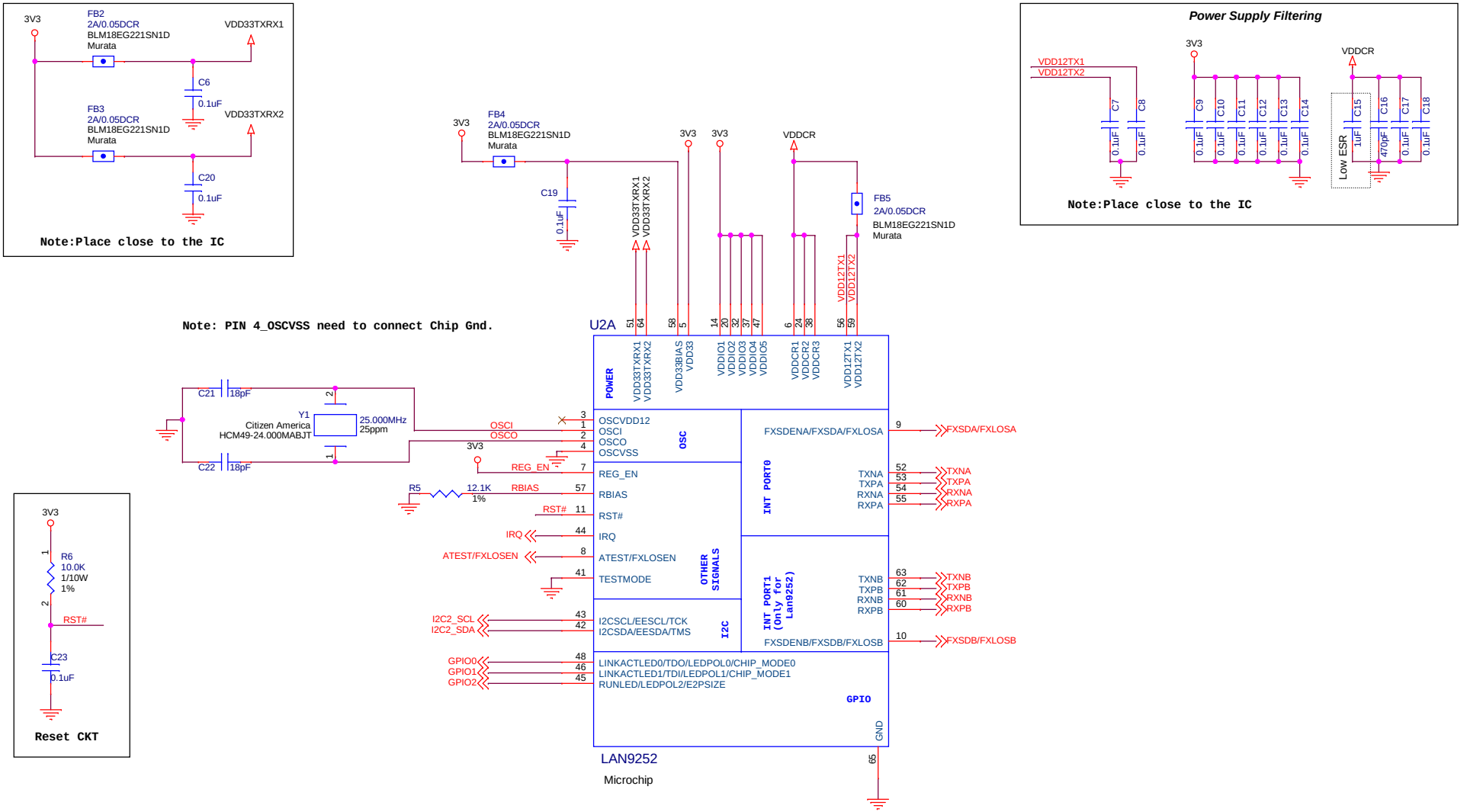
3V3
FB2
2A/0.05DCR
BLM18EG221SN1D
Murata
VDD33TXRX1
C6
0.1uF
FB3
2A/0.05DCR
BLM18EG221SN1D
Murata
VDD33TXRX2
C20
0.1uF
Note:Place close to the IC
FB4
2A/0.05DCR
BLM18EG221SN1D
Murata
C19
0.1uF
VDD33TXRX1
VDD33TXRX2
3V3
3V3
VDDCR
FB5
2A/0.05DCR
BLM18EG221SN1D
Murata
VDD12TX1
VDD12TX2
Power Supply Filtering
VDD12TX1
VDD12TX2
C7
C8
0.1uF
0.1uF
3V3
C9
C10
C11
C12
C13
C14
VDDCR
Low ESR
C15
C16
C17
C18
1uF
470pF
0.1uF
0.1uF
Note:Place close to the IC
Note: PIN 4_OSCVSS need to connect Chip Gnd.
U2A
POWER
VDD33TXRX1
VDD33TXRX2
VDD33BIAS
VDD33
VDDIO1
VDDIO2
VDDIO3
VDDIO4
VDDIO5
VDDCR1
VDDCR2
VDDCR3
VDD12TX1
VDD12TX2
OSC
OSCVDD12
OSCI
OSCO
OSCVSS
C21
18pF
C22
18pF
Y1
Citizen America
HCM49-24.000MABJT
25.000MHz
25ppm
OSCI
OSCO
REG_EN
R5
12.1K
1%
RBIAS
RST#
IRQ
ATEST/FXLOSEN
OTHER SIGNALS
REG_EN
RBIAS
RST#
IRQ
ATEST/FXLOSEN
TESTMODE
I2C
I2C2_SCL
I2C2_SDA
I2CSCL/EESCL/TCK
I2CSDA/EESDA/TMS
GPIO0
GPIO1
GPIO2
LINKACTLED0/TDO/LEDPOL0/CHIP_MODE0
LINKACTLED1/TDI/LEDPOL1/CHIP_MODE1
RUNLED/LEDPOL2/E2PSIZE
GPIO
GND
INT PORT0
FXSDENA/FXSDA/FXLOSA
TXNA
TXPA
RXNA
RXPA
FXSDA/FXLOSA
TXNA
TXPA
RXNA
RXPA
INT PORT1 (Only for Lan9252)
TXNB
TXPB
RXNB
RXPB
FXSDENB/FXSDB/FXLOSB
TXNB
TXPB
RXNB
RXPB
FXSDB/FXLOSB
LAN9252
Microchip
3V3
R6
10.0K
1/10W
1%
RST#
C23
0.1uF
Reset CKT
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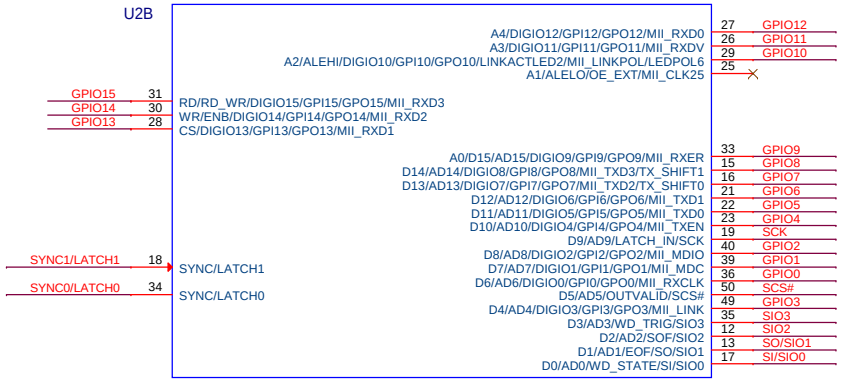
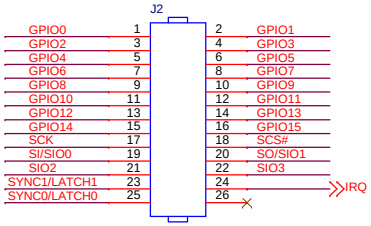


LAN9252
Microchip

SPI/SQI+GPIO16 Mode



SoC Interface Header
TSW-113-7-G-D
Samtec

Signals	SPI	Dual SPI	Quad SPI	SQI
SCK	SCK	SCK	SCK	SCK
SCS#	SCS#	SCS#	SCS#	SCS#
SIO0	SI	SIO0	SIO0	SIO0
SIO1	SO	SIO1	SIO1	SIO1
SIO2	NA	NA	SIO2	SIO2
SIO3	NA	NA	SIO3	SIO3

Strap Details

Signals Functions

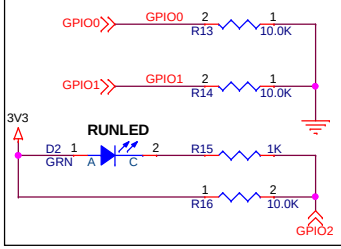
GPIO0 = LINKACTLED0/TDO/LEDPOL0/CHIP_MODE0

GPIO1 =LINKACTLED1/TDI/LEDPOL1/CHIP_MODE1

GPIO2 = RUNLED/LEDPOL2/E2PSIZE

E2PSIZE (GPIO2) (RUNLED)	0	The LED is set as active high. Low EEPROM Size P/N = 24C04 1K bits (128 x 8) through 16K bits (2K x 8);
	1	The LED is set as active low, EEPROM Size P/N = 24FC512 32K bits (4K x 8) through 512K bits (64K x 8) or 4Mbits (512K x 8) (LAN9252 only) [Default]

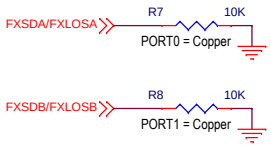
GPIO [0:2] & LED_POL_Strap



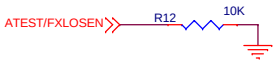
CHIP_MODE[1:0] Strap Details

CHIP_MODE[1:0] GPIO[1:0]	Port Description	MODE
00[Default]	Port 0 = PHY A, Port 1 = PHY B	2 PORT MODE
01	RESERVED	RESERVED
10	Port 0 = PHY A, Port 1 = PHY B, Port 2 = MII	3 PORT DOWNSTREAM MODE (Port2 = Downstream)
11	Port 0 = MII, Port 1 = PHY B, Port 2 = PHY A	3 PORT UPSTREAM MODE (Port0 = Upstream)

FX_Mode_Strap_1 & 2

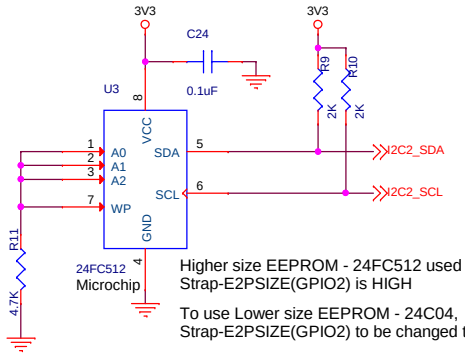


FX_Los_Strap_1 & 2



Signal	Ref.Voltage	Function
ATEST/ FXLOSEN	0	Level of 0V Selects FX-SD / copper twisted pair for ports 0 and 1 further determined by FXSDA and FXSDB.

I2C EEPROM



Higher size EEPROM - 24FC512 used as Default
Strap-E2PSIZE(GPIO2) is HIGH

To use Lower size EEPROM - 24C04,
Strap-E2PSIZE(GPIO2) to be changed to LOW

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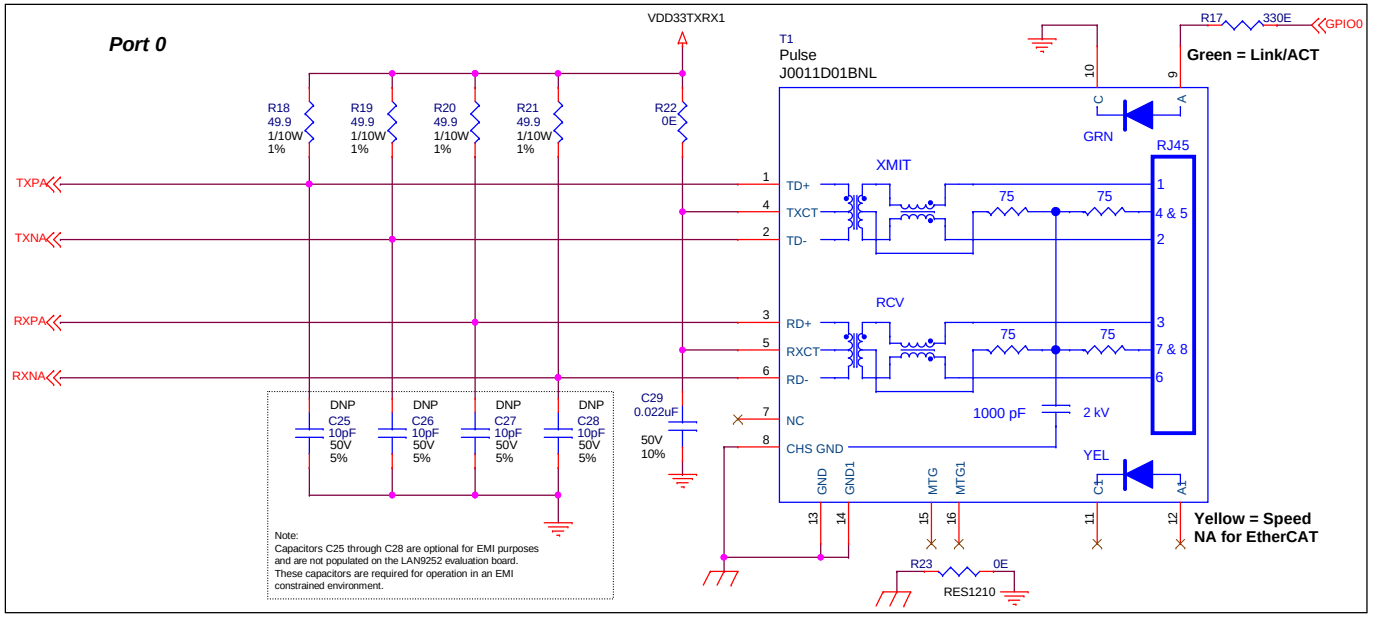

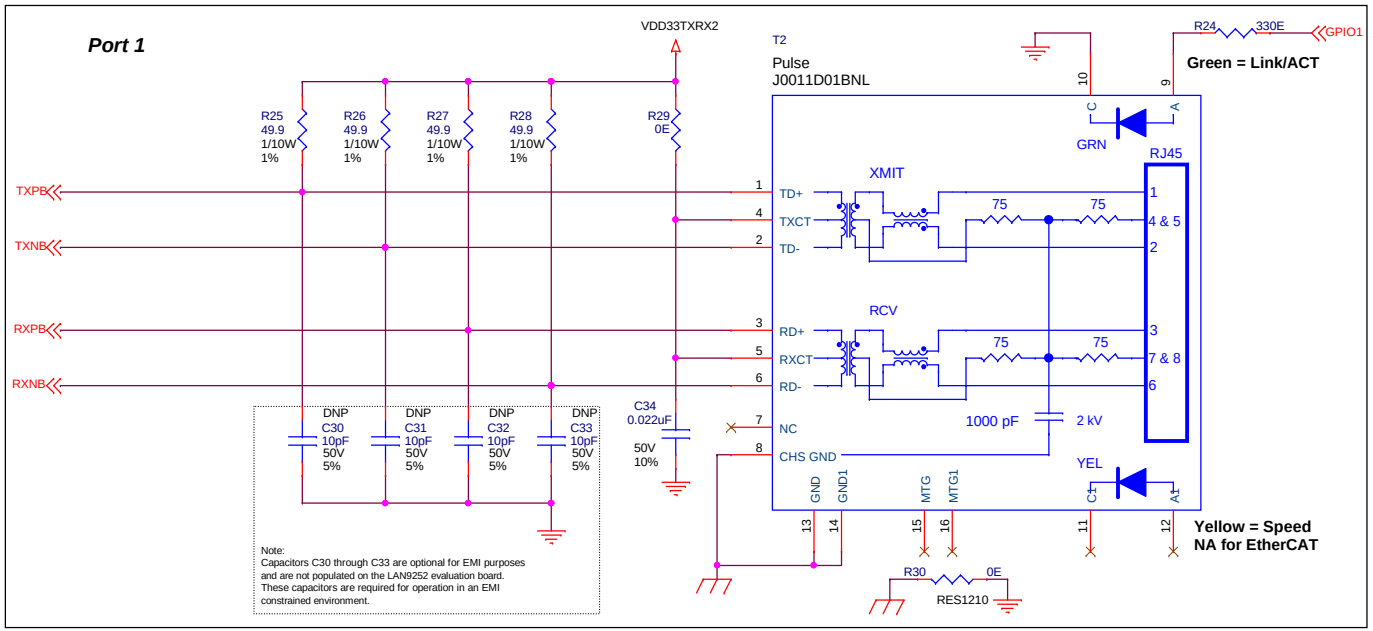

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