**LAN9252-HBI&SPI+GPIO-EVB**

LAN9252(Config 3 & Config 5)

<table>
<thead>
<tr>
<th>Page No.</th>
<th>Schematic Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Title</td>
</tr>
<tr>
<td>2</td>
<td>Block Diagram</td>
</tr>
<tr>
<td>3</td>
<td>Power Supply &amp; RST</td>
</tr>
<tr>
<td>4</td>
<td>LAN9252</td>
</tr>
<tr>
<td>5</td>
<td>Copper Mode Interface</td>
</tr>
<tr>
<td>6</td>
<td>SFP Interface</td>
</tr>
<tr>
<td>7</td>
<td>STRAP,GPIO,I2C &amp; FXLOS</td>
</tr>
<tr>
<td>8</td>
<td>B2B Interface</td>
</tr>
<tr>
<td>9</td>
<td>ON-Board-PIC32MX</td>
</tr>
<tr>
<td>10</td>
<td>16GPIO(Config5)</td>
</tr>
</tbody>
</table>
POWER SUPPLY

RESET Options

1. POR -> Reset to ASIC & SOC (Default)
2. RESET O/P from ASIC -> Reset to EX-PHY (PORT2) & SOC :Only Ethercat sku
3. RESET from SOC (GPIO/RST-O/P) -> Reset to ASIC
4. RESET from Push Button -> Reset to ASIC & SOC

Note:
- 3V3 Present
- “Reset”
- 3V3 fixed when Rb=470E

TPS3125
- SOF23.5
- Threshold = 2.64V
- Delay = 150ms

Reset Generator

SW1: P/N: 1101M2S3CQE2
- Switch, SPDT, Slide

U1
- 3Amp
- GND
- VIN
- ENABLE
- TRIM
- VOUT

U2
- U2
- VDD
- GND
- VIN
- ENABLE
- TRIM
- VOUT

C1
- 4.7uF
- 25V

C2
- 10uF
- 1/10W

C3
- 0.1uF

C4
- 10uF

C5
- 5uF

C6
- 0.1uF

C7
- 10uF

C8
- 5uF

R1
- 100

R2
- 1K

R3
- 3.30K

R4
- 470E

R5
- 5K

R6
- 10K

R7
- 100K

R8
- 10.0K

R9
- 1K

R10
- 33E

R11
- 4.7k

R12
- 1K

R13
- 1/10W

R14
- 1%
Note: OSCVSS need to connect to Chip gnd.

Power Supply Filtering
- Low ESR
Note: Capacitors C28 through C31 are optional for EMI purposes and are not populated on the LAN9252 evaluation board. These capacitors are required for operation in an EMI constrained environment.

Note: Capacitors C33 through C36 are optional for EMI purposes and are not populated on the LAN9252 evaluation board. These capacitors are required for operation in an EMI constrained environment.
Note: Place capacitors, and resistors close to FOT.
Note: Place resistors close to ASIC.
GPIO [0:2] & LED_POL Strap

Signals Functions
GPIO0 = LINKACT/LED0/TDO/LEDPOL0/CHIP_MODE0
GPIO1 = LINKACT/LED1/TDI/LEDPOL1/CHIP_MODE1
GPIO2 = RUNLED/LEDPOL2/E2PSIZE

Strap Details

<table>
<thead>
<tr>
<th>Signal Name</th>
<th>Logic</th>
<th>Connector</th>
<th>LED Polarity Strap</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHIP_MODE 0</td>
<td>0</td>
<td>J4 (24)</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>J4_J7 (142)</td>
<td>The LED is set as active high.</td>
</tr>
<tr>
<td>CHIP_MODE1</td>
<td>0</td>
<td>J6 (26)</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>J6_J9 (142)</td>
<td>The LED is set as active low.</td>
</tr>
<tr>
<td>E2PSIZE</td>
<td>0</td>
<td>J5 (26)</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>J5_J8 (142)</td>
<td>The LED is set as active high.</td>
</tr>
</tbody>
</table>

Note:
- To use GPIOs as LED
  * Short 2-3 of both jumpers (ex. for GPIO0 short 2-3 of J4 & J7)

I2C EEPROM

Different sizes can be mounted
I2C EEPROM Lower size
- Below 16K (2K x 8)
I2C EEPROM Higher size
- Above 16K (2K x 8)

Port Description

CHIP_MODE[1:0]

11
- 3 PORT UPSTREAM MODE
- Port 0 = PHY A, Port 1 = PHY B
- Port 2 = MII

10
- 3 PORT DOWNSTREAM MODE
- Port 0 = PHY A, Port 1 = PHY B, Port 2 = MII

01
- 2 PORT MODE
- Port 0 = MII, Port 1 = PHY B
- Port 2 = PHY A

Reserved

FX_LOS_Strap_1 & 2

Signals Functions
- GPIO0 = LINKACT/LED0/TDO/LEDPOL0/CHIP_MODE0
- GPIO1 = LINKACT/LED1/TDI/LEDPOL1/CHIP_MODE1
- GPIO2 = RUNLED/LEDPOL2/E2PSIZE

FX_Mode_Strap_1 & 2

Note: --To use GPIOs as LED
* Short 2-3 of both jumpers (ex. for GPIO0 short 2-3 of J4 & J7)
Host SOC EEPROM

I2C EEPROM

Default: All 4 signals OFF

For Host SOC

SV power to
HOST SOC board
from EVB Board

Board to Board Connectors for SoC

LAN9252

HBI or SPI/GPIO Config selection

| Short 1-2 & 4-5 for HBI Config (2-3 & 5-6 open) [Default] |
| Short 2-3 & 5-6 for SPI/GPIO Config (1-2 & 4-5 open) |

Jane, Chennai India

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Project Name: EVB2-9252-HBI&SPI+GPIO-RevB

Board: B

Sheet: 10

Sheet Size: B

Short 1-2 = To Reset ASIC from SoC-GPIO
Short 1-3 = To Reset SoC from ASIC

*Default Short
**Digital Inputs**

Default

SW34 & SW40 are in OFF position (Pullup active)

For Pull Down, move SW34 & SW40 to ON position

**Default KNOB position**

SW28-SW33, SW35-SW39, SW41-SW45 (1-3)

**Digital Outputs**

Default: All 8 signals OFF