

DM8203 3-port Switch Evaluation Board

User Manual

Applicable version information:

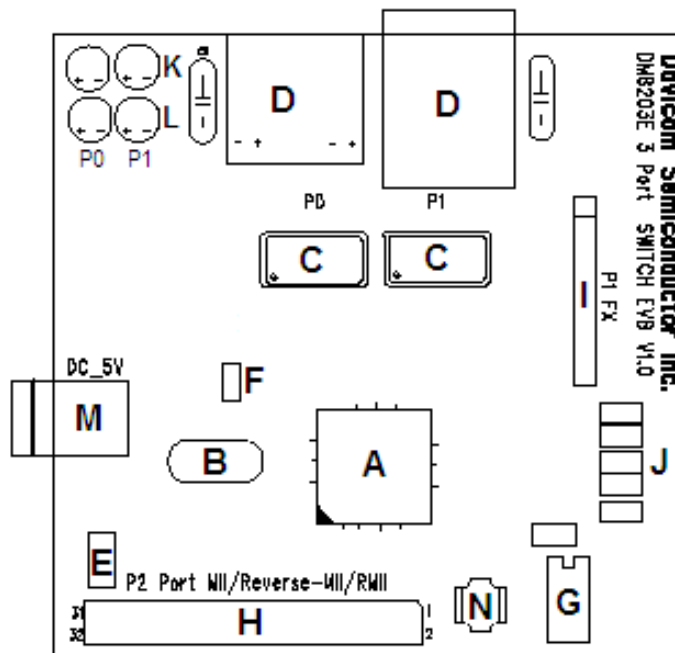
IC version: V5

EVB version: 1.0

Circuit version: 1.0 and 1.1

The user manual for the DM8203 3-port Switch evaluation board provides information for a design engineer to be able to connect the DM8203 to any architecture.

The DM8203 3-port Switch evaluation board is shown below:



A	DM8203	H	MII (P2) Interface Connector
B	25MHz Crystal	I	Test Port interface
C	P0, P1 Ethernet Transformer	J	Jumper Setting
D	P0, P1 RJ-45 Phone Jack	K	P0, P1 Link/ACT status LEDs
E	5V to 3.3V Regulator	L	P0, P1 Speed status LEDs
F	3.3V to 1.8V Transistor	M	DC 5V in Jack
G	93LC46 EEPROM	N	Reset switch

The detailed description of the table above is shown respectively below.

A. DM8203

The Davicom DM8203 is a 3-port Ethernet Switch with built-in 2 ports of 10/100Mbps Ethernet PHY and one port with MII / Reverse MII or RMII interface. The AUTO-MDIX capability of the 2 built-in Ethernet PHYs can connect to either straight through or crossover cables is also supported.

B. 25MHz Crystal

The requirement of the crystal is of 25MHz +/-30ppm.

Vendor	Part Number
NSK	D97-002_25M
ITTI	1300574-25.000MHZ

C. P0, P1 Ethernet Transformer

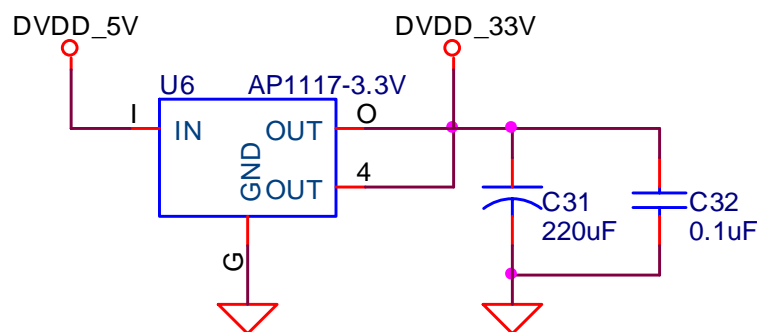
The suitable transformers shown as follows are for the design engineers' reference.

Vendor	Part Number
MAGCOM	HS9016, HS9024
Delta	LFE8563-DC, LFE8563T-DC

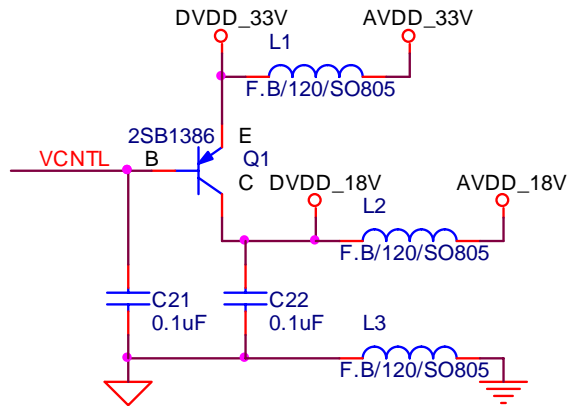
D. P0, P1 RJ-45 Phone Jack

E. 5V to 3.3V Regulator

The reference circuit of 5V to 3.3V regulator is shown below. The design engineer should take notice of that the specification of the regulator chosen should have output voltage of 3.3V +/- 5%.

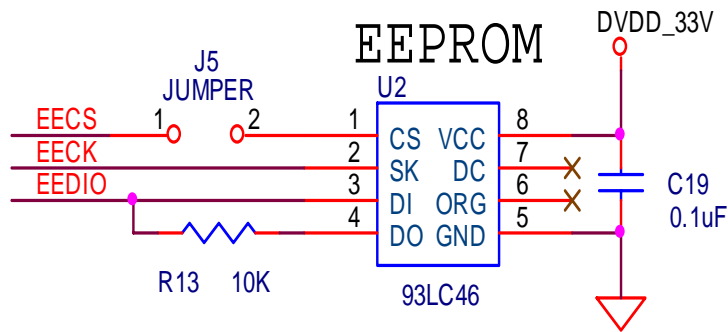


F. 3.3V to 1.8V Transistor

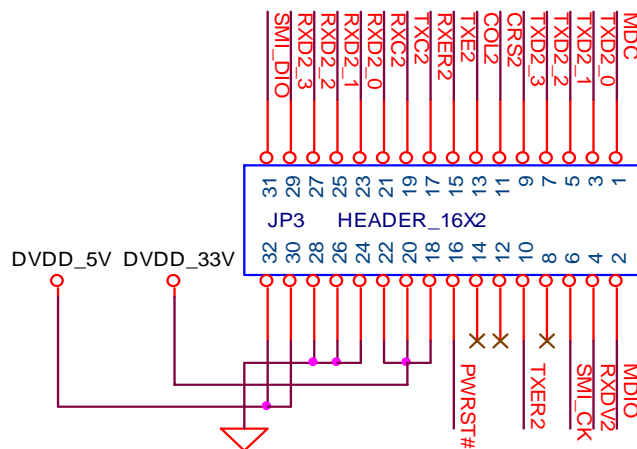


G. 93LC46 EEPROM

The package of 93LC46 is DIP-8pins and the pin out of the 93LC46 should be the same as the figure below.



H. MII (JP3) Interface Connector



I. Test Port interface

Do not use. Contact Davicom Semi. Inc, if needed.

J. Jumper setting:

1. J5: Enable EEPROM

ON: Enable EEPROM 93C46

OFF: Disable EEPROM 93C46

2. J7: P2 in NORMAL or FORCED mode

ON: Port 2 in FORCED mode, SPEED set by J8

OFF: Port 2 in NORMAL mode, LINK and SPEED status read from external PHY*

3. J8: P2 speed in FORCED mode

ON: Speed 10 in Port 2 force mode

OFF: Speed 100 in Port 2 force mode*

4. J9, J11: Port2 MII / RMII / Reverse-MII link mode setting

P2 MII / RMII / Reverse-MII link mode.

J11	J9	
0	0	Port 2 is MII mode (*=Default)
0	1	Port 2 is in reverse MII mode
1	0	Port 2 is in RMII mode
1	1	Reserved, do not use.

5. J10: Clock input for Port 2 Reverse MII Receive Clock

ON: Port 2 Receive Clock from Transmit clock*

OFF: Port 2 Receive Clock disconnect from Transmit clock

K. P0, P1 Link/ACT status LED

The LINK/ACT LED is the link LED. If the LINK/ACT LED is on, it represents the link status is good. If the LINK/ACT LED is blinking, it presents that data are transmitting or receiving. If the LINK/ACT LED is off, then the link status is off.

L. P0, P1 Speed Status LEDs

The SPEED LED represents the link speed is 10M or 100Mbps.

If the SPEED LED is on, the link speed is 100Mbps. If the SPEED LED is off, the link speed is 10Mbps.

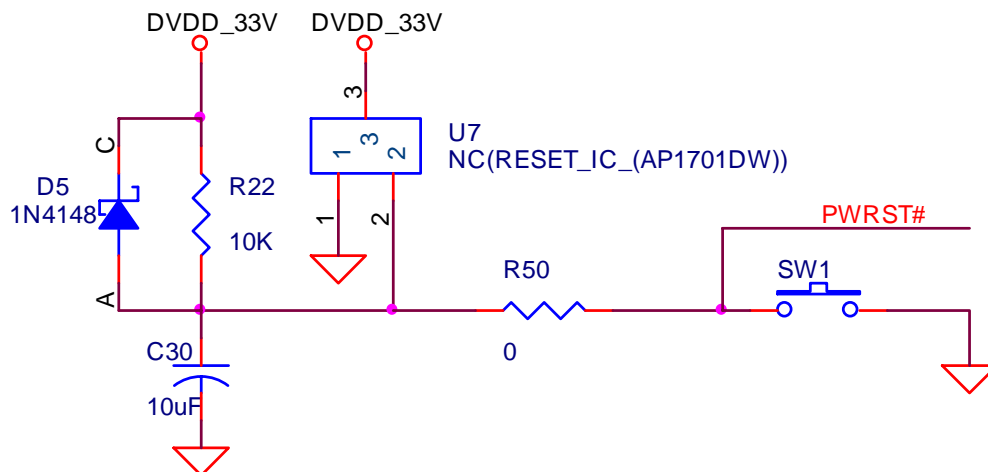
M. DC 5V in Jack

DC 5V power support for 3-port Switch.

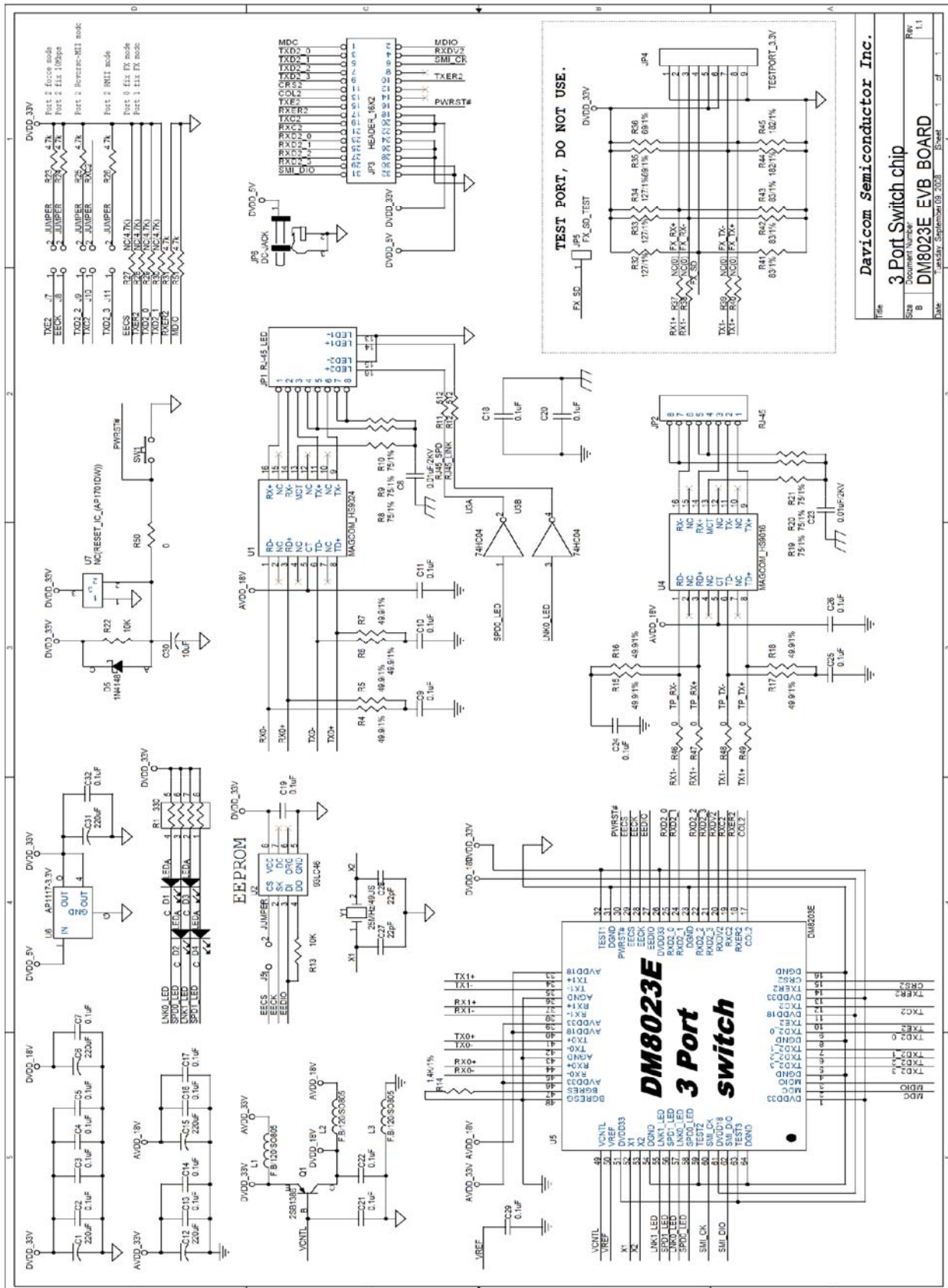
N. Reset switch

Support system reset switch.

Reset IC with reset voltage $\leq 3.0V$ and reset duration of at least 200mS.



Reference circuit:



Davicom Semiconductor Inc.	
File	3 Port Switch chip
Size	Document Number
B	DM8023E EVB BOARD
Rev	1.1
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