

Свойства

4 независимых full-duplex канала

до 25,78Gb/s на канал

VCSEL 850nm лазеры

Модели до 100м на OM4 оптическом кабеле

Длина соединителя определяется в модели цифрой X, например X = 5 для соединителя 5 метров



Применение

100G Ethernet

● Максимальные параметры

Parameter	Symbol	Min.	Typical	Max.	Unit
Storage Temperature	T _s	-40		+85	°C
Supply Voltage	V _{CC}	-0.5		3.6	V
Relative Humidity	RH	0		85	%

● Рекомендованные параметры

Parameter	Symbol	Min	Typical	Max	Units
Operating Case Temperature	T _{OP}	-20		75	degC
Power Supply Voltage	V _{CC}	3.135	3.3	3.465	V
Data Rate, each Lane			25.78125	28.05	Gb/s
Control Input Voltage High		2		V _{CC}	V
Control Input Voltage Low		0		0.8	V
Link Distance (OM3 MMF)	D1			70	m
Link Distance (OM4 MMF)	D2			100	m

● **Электрические характеристики**

Parameter	Symbol	Min	Typical	Max	Units	Notes
PowerConsumption, each Terminal				3.5	W	
Supply Current, each Terminal	I _{cc}			1060	mA	
Transceiver Power-on Initialization Time				2000	ms	1
Transmitter (each Lane)						
Single Ended Input Voltage Tolerance (Note 2)		-0.3		3.6	V	
AC Common Mode Input Voltage Tolerance		15			mV	RMS
Differential Input Voltage Swing Threshold		50			mVpp	LOSA Threshold
Differential Input Voltage Swing	V _{in,pp}	180		1000	mVpp	
Differential Input Impedance	Z _{in}	90	100	110	Ohm	
Total Jitter				0.40	UI	
Deterministic Jitter				0.15	UI	
Receiver (each Lane)						
Single Ended Output Voltage		-0.3		4	V	
AC Common Mode Output Voltage				7.5	mV	RMS
Differential Output Voltage Swing	V _{out,pp}	300		1000	mVpp	
Differential Output Impedance	Z _{out}	90	100	110	Ohm	
Total Jitter				0.3	UI	
Deterministic Jitter				0.15	UI	

Notes:

1. Power-on Initialization Time is the time from when the power supply voltages reach and remain above the minimum recommended operating supply voltages to the time when the module is fullfunctional.
- 2.The single ended input voltage tolerance is the allowable range of the instantaneous input signals.

● Блок-схема

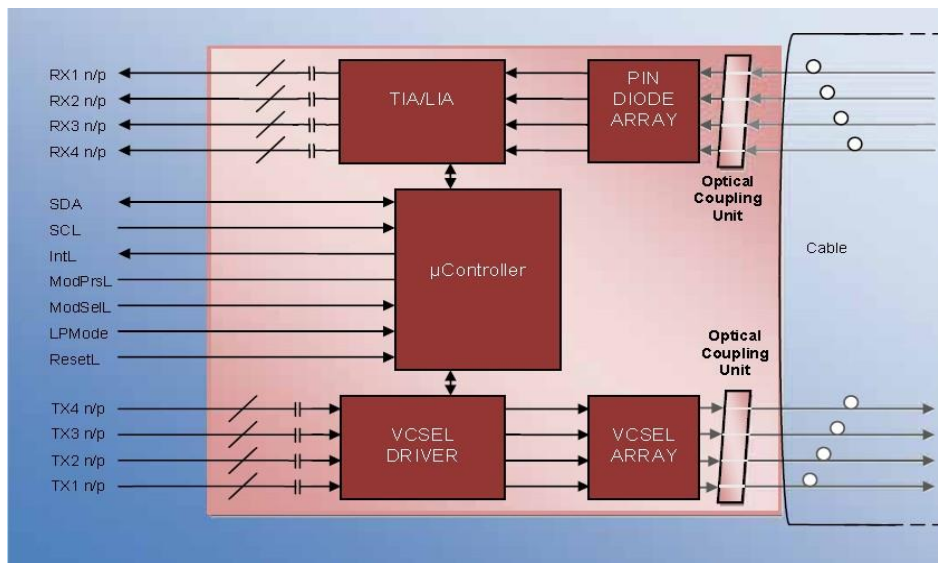
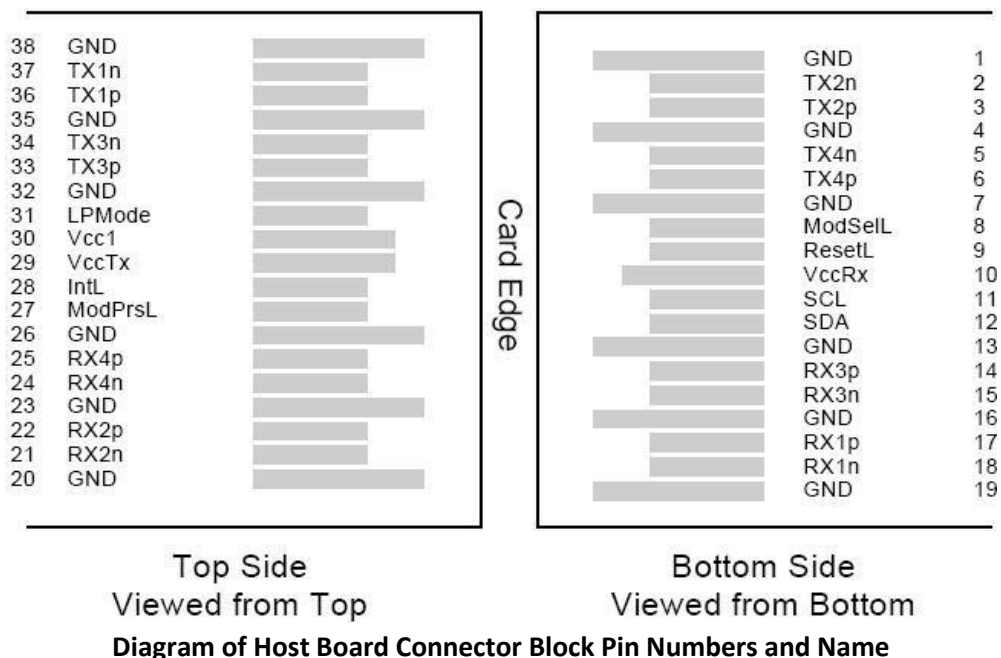


Figure1: Block Diagram

● Назначение контактов



● Описание контактов

PIN	Logic	Symbol	Name/Description	Notes
1		GND	Ground	1
2	CML-I	Tx2n	Transmitter Inverted Data Input	
3	CML-I	Tx2p	Transmitter Non-Inverted Data output	
4		GND	Ground	1
5	CML-I	Tx4n	Transmitter Inverted Data Input	
6	CML-I	Tx4p	Transmitter Non-Inverted Data output	
7		GND	Ground	1
8	LVTLL-I	ModSelL	Module Select	
9	LVTLL-I	ResetL	Module Reset	
10		VccRx	+3.3V Power Supply Receiver	2
11	LVC MOS-I/O	SCL	2-Wire Serial Interface Clock	
12	LVC MOS-I/O	SDA	2-Wire Serial Interface Data	
13		GND	Ground	
14	CML-O	Rx3p	Receiver Non-Inverted Data Output	
15	CML-O	Rx3n	Receiver Inverted Data Output	
16		GND	Ground	1
17	CML-O	Rx1p	Receiver Non-Inverted Data Output	
18	CML-O	Rx1n	Receiver Inverted Data Output	
19		GND	Ground	1
20		GND	Ground	1
21	CML-O	Rx2n	Receiver Inverted Data Output	
22	CML-O	Rx2p	Receiver Non-Inverted Data Output	
23		GND	Ground	1
24	CML-O	Rx4n	Receiver Inverted Data Output	1
25	CML-O	Rx4p	Receiver Non-Inverted Data Output	
26		GND	Ground	1
27	LVTTL-O	ModPrsL	Module Present	
28	LVTTL-O	IntL	Interrupt	
29		VccTx	+3.3 V Power Supply transmitter	2
30		Vcc1	+3.3 V Power Supply	2
31	LVTTL-I	LPMMode	Low Power Mode	
32		GND	Ground	1
33	CML-I	Tx3p	Transmitter Non-Inverted Data Input	
34	CML-I	Tx3n	Transmitter Inverted Data Output	
35		GND	Ground	1
36	CML-I	Tx1p	Transmitter Non-Inverted Data Input	
37	CML-I	Tx1n	Transmitter Inverted Data Output	
38		GND	Ground	1

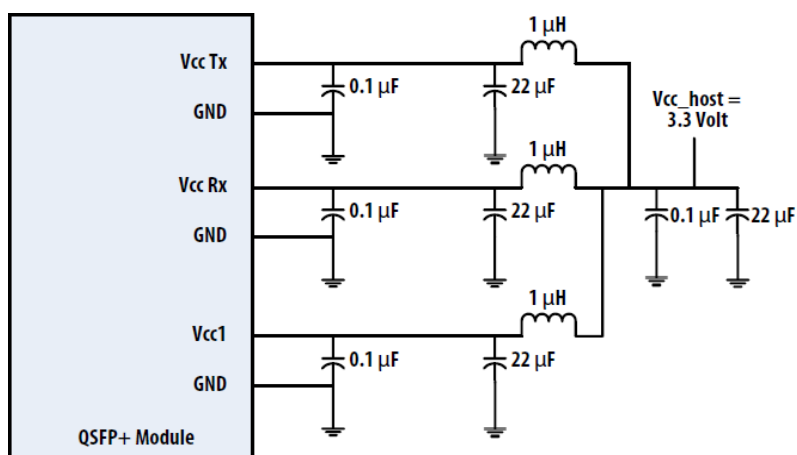
Notes:

1. GND is the symbol for signal and supply (power) common for QSFP28 modules. All are common within the QSFP28 module and all

module voltages are referenced to this potential unless otherwise noted. Connect these directly to the host board signal common ground plane.

2. VccRx, Vcc1 and VccTx are the receiver and transmitter power suppliers and shall be applied concurrently. Recommended host board power supply filtering is shown in Figure 4 below. Vcc Rx, Vcc1 and Vcc Tx may be internally connected within the QSFP28 transceiver module in any combination. The connector pins are each rated for a maximum current of 1000mA.

● Рекомендованная схема включения



● Размеры

