



产品特性

- 符合 IEEE802.3ae 标准
- 符合 XFP MSA 标准
- 符合 RoHS 标准
- 支持带电插拔
- 采用满足 EN 60825-1 标准的 1 类激光器
- 单模光纤传输介质，最大传输距离 30 公里
- 1310nm DML 激光器
- 最高 10.5Gb/s 传输速率
- 数字诊断功能
- 全双工传输方式
- 双 LC 光接口
- 3.3V/5V 电源供电
- 工作温度范围：0°C-70°C



产品应用

- 10GBASE-LR 10G 以太网
- 10GBASE-LW 10G 以太网
- 1200-SM-LL-L 10G 光纤通道
- SONET OC-192 SR-1/SDH STM I-64.1



管脚定义

16	GND	GND	15
17	RD-	RX_LOS	14
18	RD+	Mod_NR	13
19	GND	Mod_ABS	12
20	VCC2	SDA	11
21	P_Down/RST	SCL	10
22	VCC2	VCC3	9
23	GND	VCC3	8
24	RefCLK+	GND	7
25	RefCLK-	VCC5	6
26	GND	TX_DIS	5
27	GND	Interrupt	4
28	TD-	Mod_DESEL	3
29	TD+	VEE5	2
30	GND	GND	1

← Toward ASIC

Toward BEZEL →



管脚定义



Pin#	Symbol	Logic	Description	Remarks
1	GND		Module Ground	1
2	VEE5		Optional - 5.2 power supply(Not required)	
3	Mod-Desel	LVTTL-I	Module De-select; when held low allows the module to respond to 2-wire serial interface commands	
4	Interrupt	LVTTL-O	Indicates presence of an important condition which can be read over the serial 2-wire interface	2
5	TX_DIS	LVTTL-I	Transmitter Disable, Transmitter laser source turned off	
6	VCC5		+5 V Power Supply	
7	GND		Module Ground	1
8	VCC3		+3.3 V Power Supply	
9	VCC3		+3.3 V Power Supply	
10	SCL	LVTTL-I	Serial2-wire Interface Clock	2
11	SDA	LVTTL-I/O	Serial2-wire Interface Data Line	2
12	Mod_Abs	LVTTL-O	Module Absent, Indicates Module is not present. Grounded in the Module	2
13	Mod_NR	LVTTL-O	Module Not Ready; Indicates Module Operational Fault	2
14	RX_LOS	LVTTL-O	Receiver Loss Of Signal Indicator	2
15	GND		Module Ground	1
16	GND		Module Ground	1
17	RD-	CML-O	Receiver Inverted Data Output	
18	RD+	CML-O	Receiver Non-Inverted Data Output	



Pin#	Symbol.	Logic	Description	Remarks
19	GND		Module Ground	1
20	VCC2		+1.8 V Power Supply.	
21	P_Down/RST	LVTTTL-I	Power down: When high, the module is put into a lower power mode. Serial interface is functional in the low power mode. Reset: The falling edge initiates a complete reset of the module including the serial Interface, equivalent to a power cycle.	
22	VCC2		+1.8 V Power Supply.	
23	GND		Module Ground	1
24	RefCLK+	PECL-I	Reference Clock non-Inverted Input, AC coupled on the host board	
25	RefCLK-	PECL-I	Reference Clock Inverted Input, AC coupled on the host board	
26	GND		Module Ground	1
27	GND		Module Ground	1
28	TD-	CML-I	Transmitter Inverted Data Input	
29	TD+	CML-I	Transmitter Non-Inverted Data Input	
30	GND		Module Ground	1

Remarks:

1. Module ground pins (GND) are isolated from the module case and chassis ground within the module.
2. Open Collector should be pulled up with 4.7KΩ-10KΩ on host board to a voltage between 3.15V and 3.6V.



极限工作条件

参数	符号	最小值	最大值	单位	备注
Storage Ambient Temperature	T_S	-40	85	°C	
Supply Voltage 5V	V_{CC_5}	-0.5	5.5	V	
Supply Voltage 3.3V	V_{CC_3}	-0.5	4	V	
Supply Voltage 1.8V	$V_{CC_{1.8}}$	-0.5	2	V	

推荐工作条件

参数	符号	最小值	最大值	单位	备注
Data Rate	DR	9.95	10.5	GBd	10GBASE-LR40/ LW 1200-SM-LL-L
Bit Error Rate	BER		10^{-12}		
Supply Voltage - 3.3V	V_{CC_3}	3.13	3.45	V	Operating Environment
Supply Current - V_{CC_3} supply	I_{CC_3}		600	mA	
Module total power	P		2	W	
Case Operating Temperature	T_{OP}	0	70	°C	



光特性-发射端

$V_{CC_3}=3.13V$ to $3.45V$, $T_{OP}=0^{\circ}C$ to $70^{\circ}C$

参数	符号	最小值	正常值	最大值	单位	备注
Optical Wavelength	λ	1290		1330	nm	
Optical Power	P_{OUT}	0		5	dBm	Average
Launch Power of OFF Transmitter	P_{OUT_OFF}			-30	dBm	Average
Side Mode Suppression Ratio	SMSR	30			dB	
Optical Extinction Ratio	ER	3.5			dB	
Relative Intensity Noise	RIN			-130	dB/Hz	
Transmitter Dispersion Penalty	TDP			2	dB	
Transmitter Jitter	T_j			0.1	UI	

光特性-接收端

$V_{CC_3}=3.13V$ to $3.45V$, $T_{OP}=0^{\circ}C$ to $70^{\circ}C$

参数	符号	最小值	正常值	最大值	单位	备注
Center Wavelength Range	λ_C	1260		1565	nm	
Optical Input Power	P_{IN}			0.5	dBm	
Receiver Sensitivity@10.3Gb/s	P_{SENS1}			-12.6	dBm	Measured with worst ER:BER< 10^{-12} 2 ³¹ -1PRBS
Stressed Receiver Sensitivity in OMA@10.3Gb/s	P_{SENS3}			-10.3	dBm	IEEE802.3ae
Receiver Reflectance	TR_{RX}			-12	dB	
LOS Assert	LOS_A	-30			dBm	
LOS De-Assert	LOS_D			-20	dBm	
LOS Hysteresis		1		5	dB	



电特性-发射端

$V_{CC_3}=3.13V$ to $3.45V$, $T_{OP}=0^{\circ}C$ to $70^{\circ}C$

参数	符号	最小值	正常值	最大值	单位	备注
Input differential impedance	R_{in}		100		Ω	After internal AC coupling
Differential data input swing	V_{IN_PP}	120		820	mV	
Transmit Disable Voltage	V_D	2		V_{CC}	V	Or open circuit
Transmit Enable Voltage	V_{EN}	GND		GND+0.8	V	
Transmit Disable Assert Time				10	us	

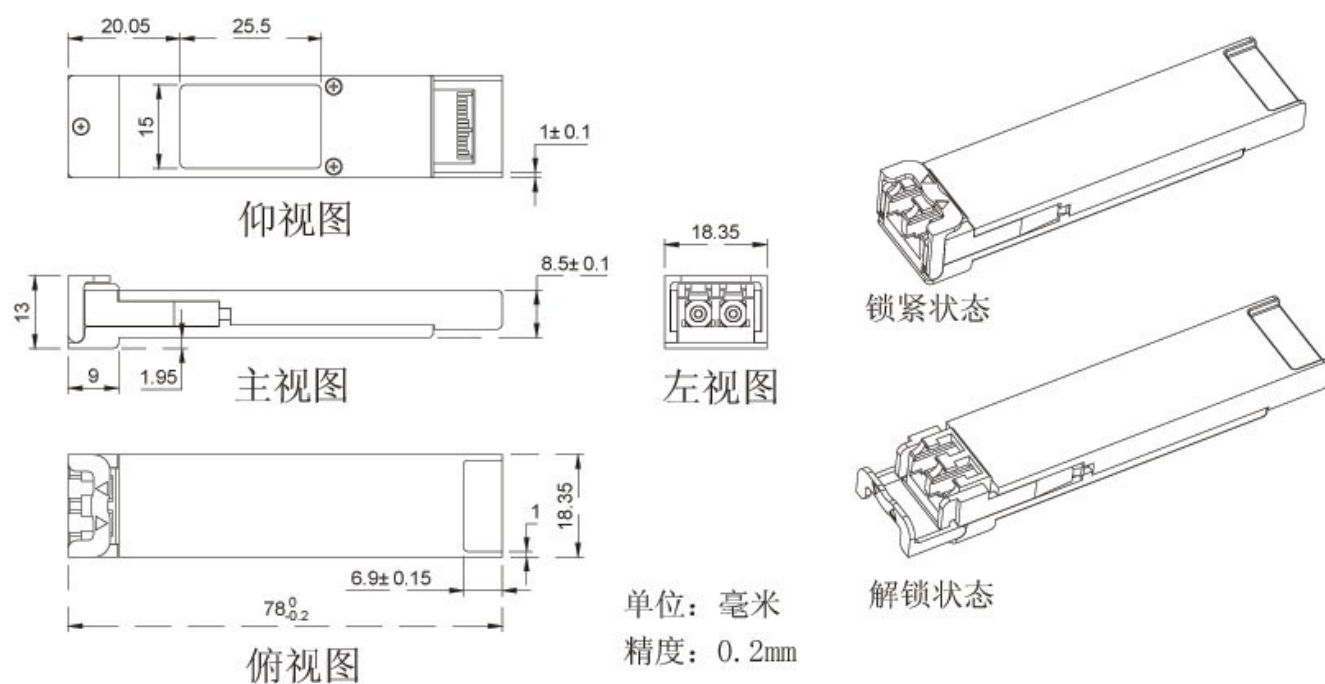
电特性-接收端

$V_{CC_3}=3.13V$ to $3.45V$, $T_{OP}=0^{\circ}C$ to $70^{\circ}C$

参数	符号	最小值	正常值	最大值	单位	备注
Differential data output swing	V_{OUT_PP}	340	650	850	mV	
Data output rise time	T_R			38	ps	20%-80%
Data output fall time	T_F			38	ps	20%-80%
LOS Fault	V_{LOS_F}	$V_{CC}-0.5$		V_{CC_HOST}	V	
LOS Normal	V_{LOS_N}	GND		GND+0.5	V	



模块尺寸



GT6310 光纤模块结构尺寸图



Gissen Technologies
深圳市吉讯科技有限公司

GT6310 光纤模块用户手册



如想获得更多产品相关信息，请访问吉讯科技网站：www.gissen.com
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联系电话：0755-25867936
传真：0755-25867931
电子邮件：service@gissen.com
全国统一客服热线：400-716-8212