34060885-OPC

Huawei® 34060885 Compatible TAA 10GBs XGS-PON OLT Transceiver with Burst Mode (SMF, 1577nmTx/1270nmRx, SC, N2, DOM)

Features

- Hot Pluggable SFP+
- 3.3V DC Power Supply
- 4 Lambda
- SC receptacle optical connector
- 2x10 SFP+ Electrical Interface
- ITU-T G.9807.1 Class N2 compliant
- Commercial Temperature 0 to 70 Celsius
- RoHS compliant and Lead Free

Applications:

- XGS-PON OLT

Product Description

This Huawei® 34060885 compatible SFP+ transceiver provides 1G/10GBase-N2/C+ throughput up to 20km over single-mode fiber (SMF) using a wavelength of 1577nmTx/1270nmRx and 1490nmTx/1310nmRx via a SC connector. It is guaranteed to be 100% compatible with the equivalent Huawei® transceiver. This easy to install, hot swappable transceiver has been programmed, uniquely serialized and data-traffic and application tested to ensure that it will initialize and perform identically. Digital optical monitoring (DOM) support is also present to allow access to real-time operating parameters. This transceiver is Trade Agreements Act (TAA) compliant. We stand behind the quality of our products and proudly offer a limited lifetime warranty.

OptioConnect's transceivers are RoHS compliant and lead-free.

TAA refers to the Trade Agreements Act (19 U.S.C. & 2501-2581), which is intended to foster fair and open internaltional trade. TAA requires that the U.S. Government may acquire only "U.S.-made or designated country end products.")

Rev. 062625

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Notes
Maximum Supply Voltage	Vcc3	0	3.6	V	
Storage Temperature	Tstg	-40	85	°C	
Operating Temperature	Tc	0	70	°C	
Operating Relative Humidity	RH	5	85	%	

Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Supply Voltage	Vcc3	3.14	3.3	3.47	V	
Supply Current	Icc3			750	mA	
Module Power Dissipation	P_{DISS}			2.5	W	
Transmitter						
Data Input Differential Swing	VIN	120		850	mVp-p	
Input Differential Impedance	ZIN	80	100	120	Ω	
Tx_Disable (Asserted)	VDH	2.0		3.3	V	
Tx_Disable (Negated)	VDL	0		0.8	V	
Tx_Fault Output Voltage - High		2.4		3.3	V	
Tx_Fault Output Voltage - Low		0		0.4	V	
Receiver						
Differential Output Differential Swing	VRXDIFF	400		800	mVp-p	
Signal Detected Voltage - High	Vsd_h	2		3.3	V	
Signal Detected Voltage - Low	Vsd_l	0		0.4	V	

Optical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Transmitter (9.953G)						
Data Rate	BR		9.953		Gbps	
Center Wavelength	λC	1575	1577	1580	nm	
Spectral Width (-20dB)	Δλ			1	nm	
SMSR		30			dB	
Optical Power Output	POUT	4		7	dBm	
Extinction Ratio	ER	8.2			dB	
Eye Mask Margin	EM	Compliance ITU.T G.9807.1 Requirement				
Optical Output Power with Tx Off	Poff			-39	dBm	
$RIN_{12}OMA$				-128	dB/Hz	
Receiver (9.953/2.488G)						
Input Operating Wavelength	λRX	1260	1270	1280	nm	
Receiver Sensitivity (BER 10^{-3})	@9.953			-28	dBm	
Receiver Sensitivity (BER 10^{-4})	@2.488			-29.5	dBm	
Receiver Overload (BER 10^{-12})	@9.953	-5			dBm	
Receiver Overload (BER 10^{-12})	@2.488	-7			dBm	
Maximum Input Power		-3			dBm	
Receiver Reflectance	RRX			-12	dB	
Receiver Tolerance to Reflected Optical Power				10	dB	
Signal Detected De-Assert Level	Psdd	-40			dBm	
Signal Detected Assert Level	Psda			-29	dBm	
SD Hysteresis	SD_Hys		0.5		dB	

Digital Diagnostic Functions

Parameter	Range	Unit	Accuracy	Notes
Temperature	-40℃ to 85℃	℃	±3	LSB equal to 1/256C
Supply Voltage（3.3V）	3.14V to 3.47V	V	±3%	LSB equal to 100uV
Tx Bias Current	0mA to 150mA	mA	±10%	LSB equal to 4uA
Tx Optical Power	4dBm to 7dBm	dBm	±2	LSB equal to 0.2uW
Rx Power	-30dBm to -6dBm	dBm	±3	LSB equal to 0.1uW

Upstream Timing

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
Burst Receiver Settling Time	T_SETTLE			100	ns	
Burst Signal Detect Assert	T_SDA		25	100	ns	
Burst Signal Detect De-Assert	T_SDD		100		ns	1
Guard Time	Tg	51.4			ns	
Reset Pulse Width	Tw	25			ns	
Reset Time Overlapping Preamble	T_overlap	0			ns	2
Setup Time of Rate Level for Following Burst	T_setup	5			ns	

Notes:

1. Auto reset function is applied. Signal detect de-assert time is about 100ns forced by auto reset and will short to about 20ns with external Reset pulse.
2. Reset pulse is required to be partially inside the preamble.

## Upstream Timing Diagram
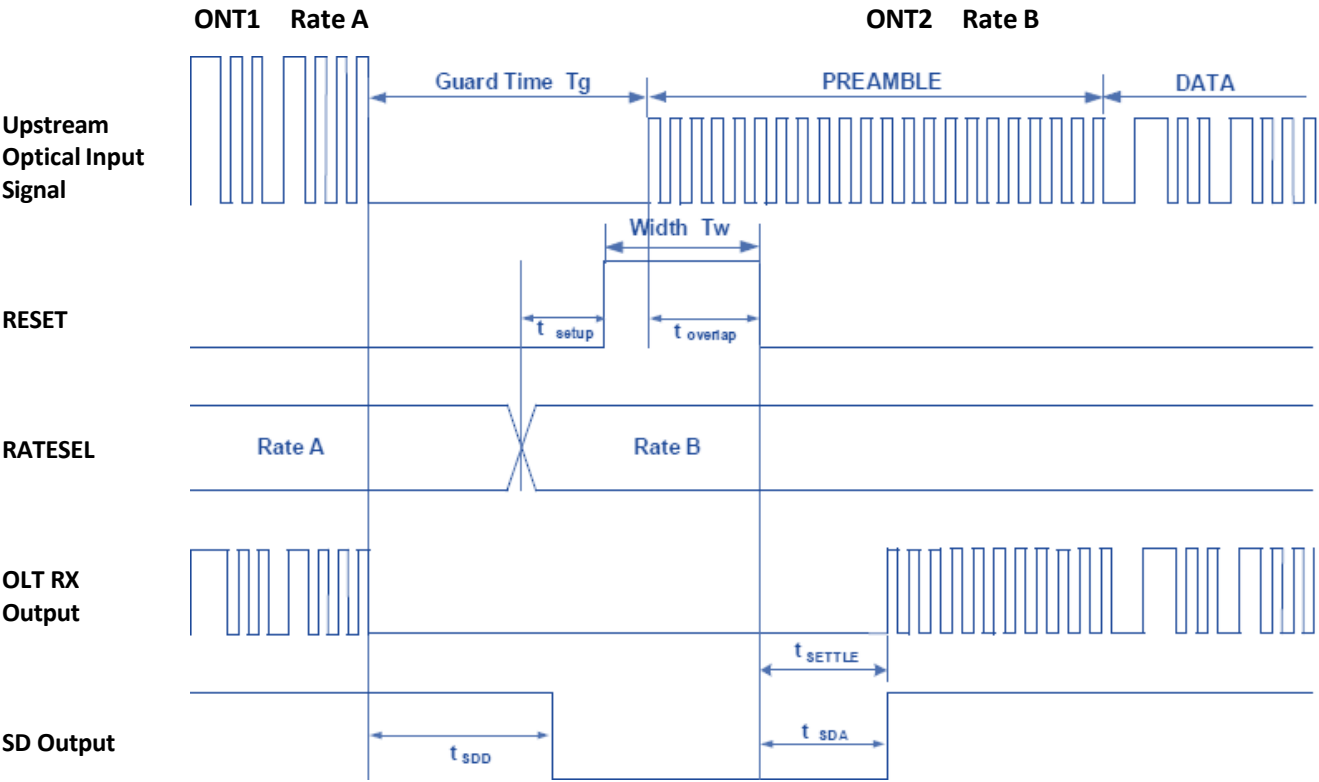
Digital RSSI Sample/Hold Timing

Parameter	Symbol	Min.	Typ.	Max.	Unit	Notes
I²C Read Time	T_p	500			μs	
Optical Input Signal Width	T_{ont}	300			ns	
RSSI Monitor Range	P_{mon}	-30		-7	dBm	
RSSI Precision	P_{rssi}	-3	+/-2	3	dB	
RSSI Trigger Delay	T_{tri} (TRI Delay)	0	300		ns	
RSSI Trigger Width	T_{I2C} (TRI Width)	500		$T_{ont}-T_{tri}$	ns	

Note: $T_{tri}+T_{i2c}<T_{ont}$.

Digital RSSI Sample/Hold Timing Diagram
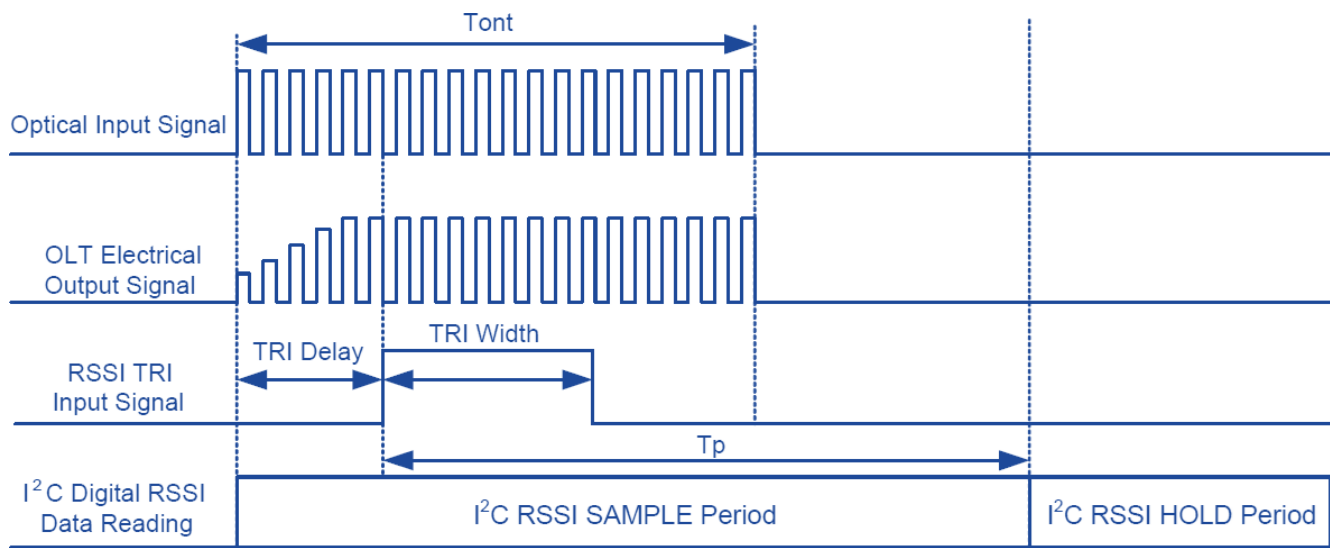

Pin-Out Definitions
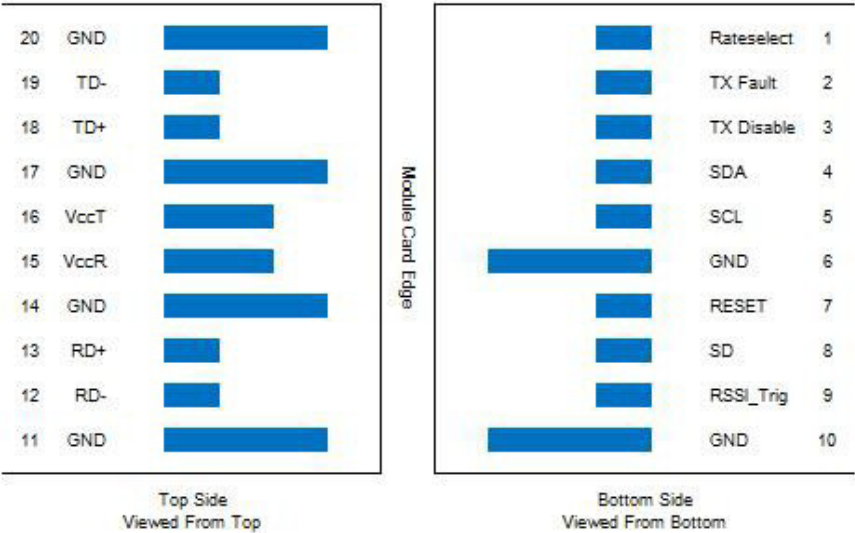
Pin Descriptions

Pin	Logic	Symbol	Description	Note
1	LVTTL	Rate_Select	Rate Select.	1
2	LVTTL	Tx_Fault	High Voltage: Tx Laser Fault or Safety. Low Voltage: Normal Operation.	
3	LVTTL	Tx_Disable	Active "high" to disable laser.	
4		SDA	2-Wire Serial Interface SDA.	
5		SCL	2-Wire Serial Interface SCL.	
6		GND	Module Ground.	
7		Reset	Reset for TIA/LIA.	
8	LVTTL	SD	"Logic 1" indicates normal operation.	
9	LVTTL	RSSI_Trig	RSSI Trigger.	
10		GND	Module Ground.	
11		GND	Module Ground.	
12	LVCML	RD-	2.5/10G LVCML output with DC coupling.	
13	LVCML	RD+	2.5/10G LVCML output with DC coupling.	
14		GND	Module Ground.	
15		VccR	+3.3V Power Supply.	
16		VccT	+3.3V Power Supply.	
17		GND	Module Ground.	
18	LVCML	TD+	10G LVCML input with AC coupling.	
19	LVCML	TD-	10G LVCML input with AC coupling.	
20		GND	Module Ground.	

Notes:

1. Rate Select is high-speed when Pin 1 value is "high" and low-speed when Pin 1 value is "low."

Transceiver Block Diagram
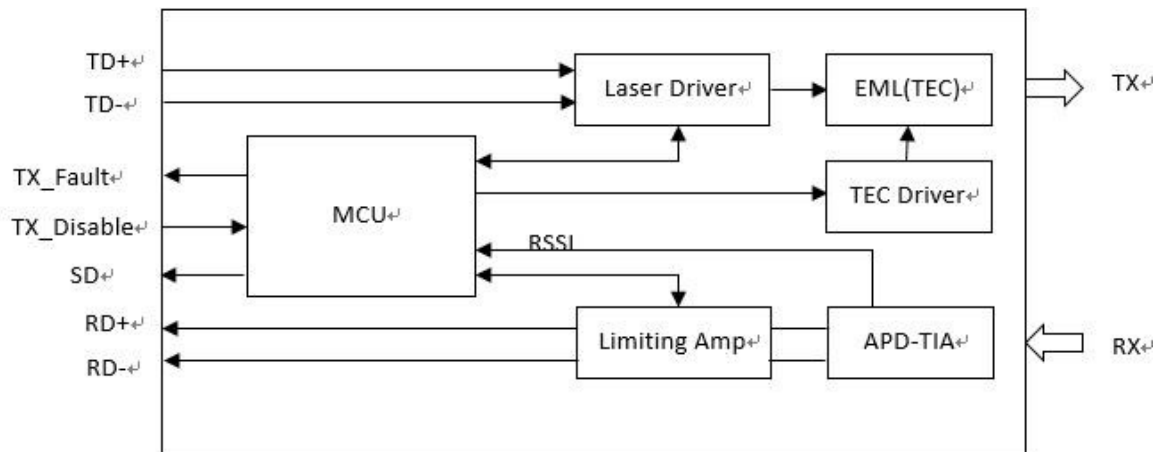
Transmitter Section

Tx_Disable

Tx_Disable is an input pin that is used to shut down the XGSPON transmitter optical output at the same time. It is pulled up within the module with a 4.7kΩ to 10kΩ resistor. Its states are: low (0 – 0.8V) - transmitter on; (>0.8, < 2.0V) - undefined; high (2.0 – VCC) - transmitter disabled; open - transmitter disabled. The Tx_Disable signal is "high" (LVTTL "logic 1") to turn off the laser output. The laser will turn on when Tx_Disable is "low" (LVTTL "logic 0").

XGSPON TD+/-

XGSPON_TD+/- are the differential XGSPON transmitter inputs. They are AC-coupled, differential lines with 100Ω differential termination inside the module. It allows a differential input swing of 120-850mV, 9.953Gbps data rate.

Receiver Section

XGSPON_SD

SD (Signal Detect) is an open collector/drain output, which should be pulled up with a 4.7kΩ to 10kΩ resistor to a voltage between 2.4V and Vcc+0.3V. When "low," this output indicates the received optical power is below the worst-case receiver sensitivity (as defined by the standard in use). "High" indicates normal operation. In the "low" state, the output will be pulled to < 0.4V.

XGSPON RD+/-

These are the XGSPON differential receiver outputs. They are DC coupled 100Ω differential lines which should be terminated with 100Ω (differential) at the user SERDES. The AC coupling is done on the host board. The voltage swing on these lines will be between 400 and 800mV differential output when properly terminated.
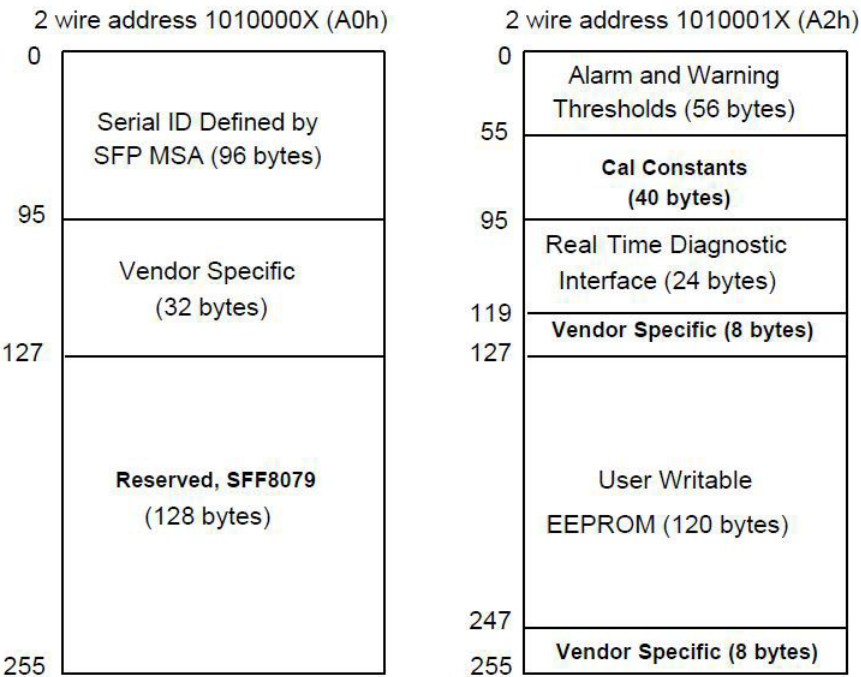
Recommended Interface Circuit
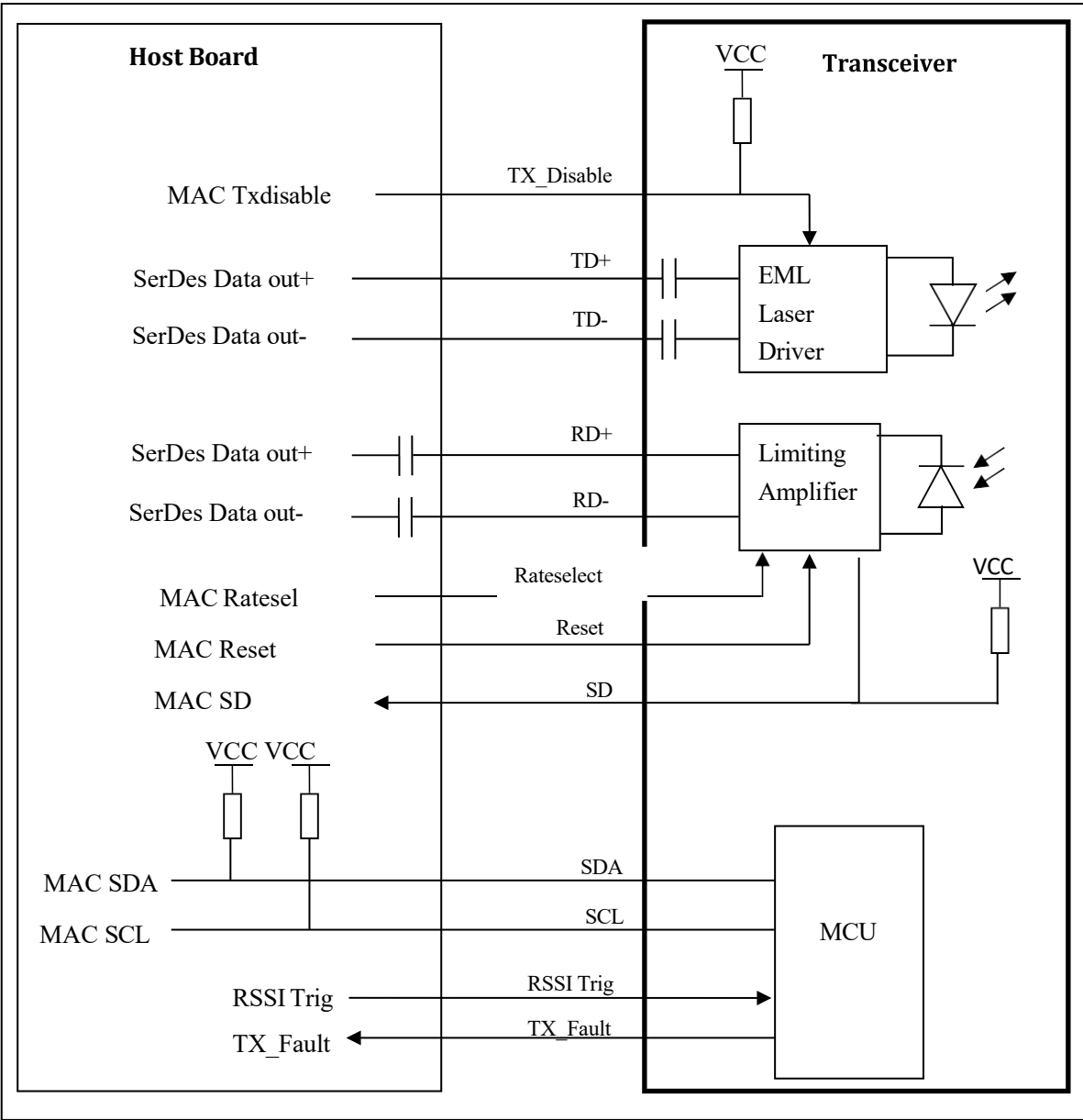
Mechanical Specifications
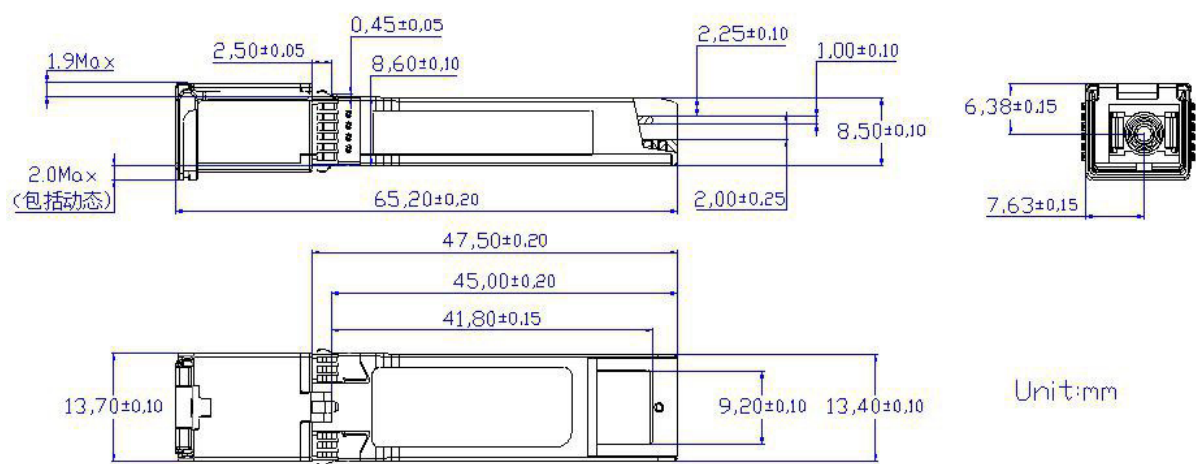
Digital Diagnostic Memory Map

Compatible with SFF-8472.

OptioConnect
Innovation for the Future of High-Speed Networking

Who We Are
OptioConnect is reshaping the landscape of communication and high-speed networking through intelligent technology. With a core focus on cutting edge technology, we deliver smarter fiber optic solutions for enterprise networks, data centers, and next-gen telecom infrastructures.

What We Do
At OptioConnect, we fuse advanced engineering with intelligent automation to drive the future of networking. Our AI-integrated solutions are designed to optimize performance and streamline operations with:

- Superior Performance
- Network and traffic optimization
- Intelligent energy management
- Seamless OEM compatibility
- Scalable cost-efficiency

Smarter Networks by Design
Innovation isn't just a goal—it's our process. We embed AI and machine learning across our R&D and product lines, enabling adaptive performance, automated tuning, and faster deployment cycles. The result? Networks that don't just work—they learn, evolve, and outperform.

Our Team
Our engineers, data scientists, and network architects bring decades of experience and a future-focused mindset. We provide hands-on support with intelligent insights that turn complex challenges into simple solutions.

Our Mission
To deliver AI-enhanced connectivity that reduces cost, increases speed, and maximizes efficiency—empowering our partners to operate at the forefront of a rapidly evolving digital world.

Let's Connect
Discover how OptioConnect's intelligent infrastructure solutions can power your network's next leap forward.
www.optioconnect.com | info@optioconnect.com