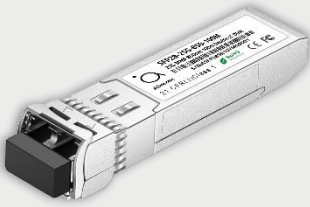


25G SFP28 850nm SR Transceiver

Up to 100M, DDM, Hot Pluggable

SFP28-25G-850-100M-MP



25G SFP28 transceiver

850nm

Up to 100M

VCSEL laser and PIN photo detector

LC Connector

DDM Function

Hot Pluggable

0°C~+70°C

Overview

The AirLive SFP28-25G-850-100M-MP transceiver adopts LC duplex connectors, reaching a link distance of up to 100m over OM4 MMF and 70m over OM3. The SFP28 transceiver module supports running on the same 1G/10G network cabling Infrastructure, giving 2.5 times increase in speed at least, and the built-in DDM function monitors the real-time operating status. The module is fully compliant with the SFF-8024, SFF-8431, SFF-8432 and SFF-8472 standards. Featuring low power consumption and high speed. With these features, this easy to install, hot swappable transceiver is suitable to be used in various applications, such as for use in inter- and intra-connect data centers, high-performance computing networks, enterprise core and distribution layer applications.

Features

- Hot-pluggable SFP28 form factor
- Supports 25.78125Gb/s bit rate
- Maximum link length of 70m on OM3 MMF and 100m on OM4 MMF
- 850nm VCSEL laser and PIN photo detector
- Internal CDR on both Transmitter and Receiver channel
- Single 3.3V power supply
- Low power dissipation: < 1.0W
- Operating environment temperature of 0°C to 70°C
- Compliant with SFF-8024, SFF-843, SFF-8432
- Compliant to IEEE802.3by
- Compliant to SFF-8472

Application

- Fiber Channel Infrastructure
- ATM Switches and Routers
- SDH/SONET Switch Infrastructure

Application Environment examples

- Datacenter
- Bank
- AirPort
- Hotel
- Expressway
- Petrochemical Industry
- Metro
- Factory

Main Specifications

Model	Type	Rate* (Gbps)	Po (dBm)	TX (nm)	Sen* (dBm)	Reach (m)	DDM
SFP28-25G-850-100M-MP	SFP28	25.78125	-8.4~2.4	850	<-10.3	100	Yes

*Note:

1. Measured with a PRBS 2³¹-1 test pattern, @25.78125Gb/s, BER<5E-5.
2. OM3 Cable length =<70m or OM4 Cable length =<100m.

Transmitter Operating Characteristic Optical

Transmitter					
Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Wavelength Range	λ_C	840	850	860	nm
Launched Power (avg.)	P_{out}	-8.4	-	2.4	dBm
Optical Power OMA]	P_{OMA}	-6.4	-	3	dBm
Peak Power per Lane	PP_x		-	4.0	dBm
Spectral Width (RMS)	$\Delta\lambda$			0.6	nm
Extinction Ratio	ER	2			dB
Transmitter and Dispersion Penalty	TDP			4.3	dB
Optical Output Power after TX Disable	P_{DIS}			-30	dBm
Relative Intensity Noise	RIN			-128	dB/Hz
Optical Return Loss Tolerance	ORL			12	dB

Receiver Operating Characteristic Optical

Receiver					
Parameter	Symbol	Min.	Typical	Max.	Unit
Wavelength Range	λ_C	840	850	860	nm
Average Receiver Power	P_{max}	-10.3	-	2.4	dBm
Receiver Sensitivity (Average power)	P_{sen}			-10.3	dBm (Note:1/2)
LOS De-Assert	LOS_D			-12	dBm
LOS Assert	LOS_A	-30			dBm
LOS Hysteresis		0.5			dB
Receiver Reflectance	R_r			-12	dB

Note:

1. Measured with a PRBS 2³¹-1 test pattern, @25.78125Gb/s, BER<5E-5.
2. Minimum value is informative, equals min Tx OMA with infinite ER and max channel insertion loss.

Digital Diagnostic Monitoring Information

DDM offers more information about the fiber connection and makes it easier to find any faults or bad connections.

DDM			
Parameter	Accuracy	Calibration	Note
Temperature	$\pm 3^\circ\text{C}$	Internal	0~70°C
Voltage	$\pm 3\%$	Internal	3.135~3.465V
Bias Current	$\pm 10\%$	Internal	0~15mA (Note1)
TX Power	$\pm 3\text{dB}$	Internal	-8.4~2.4dBm
RX Power	$\pm 3\text{dB}$	Internal	-10.3~2.4dBm

Note:

1. Accuracy of Measured Tx Bias Current is 10% of the actual Bias Current from the laser driver to the laser.

Characteristic Electrical

Electrical Characteristics					
Parameter	Symbol	Min.	Typical	Max.	Unit
Transmitter Differential Input Voltage		95		900	mV
Receiver Differential Output Voltage		300		900	mV
Transmit Fault Voltage	VOH	2.0		VCC	V
	VOL	0		0.8	V
Transmit Disable Voltage	VOH	2.0		VCC	V
	VOL	0		0.8	V
Input Differential Impedance			100		Ω
Transmit Disable Assert Time	TOFF			100	us
LOS	VOH	2.0		VCC	V
	VOL	0		0.8	V

Absolute Maximum Ratings

Absolute Maximum Ratings					
Parameter	Symbol	Min.	Max.	Unit	
Storage Ambient Temperature	TSTG	-40	85	°C	
Storage Humidity	HS	5	90	%	
Operating Humidity	HO	5	85	%	
Power Supply Voltage	VCC	0	+3.6	V	
Receiver Damaged Threshold		+3		dBm	

Recommended Operating Conditions

Recommended Operating Conditions					
Parameter	Symbol	Min.	Typical	Max.	Unit
Operating Case Temperature	Tc	0		70	°C
Power Supply Voltage	VCC	3.135	3.3	3.465	V
Supply Current	ICC			300	mA
Power Consumption	PW			1	W
Data Rate	BR		25.78125	1.5	Gbps

Model	AirLive SFP28-25G-850-100M-MP
<p>Hardware</p> <ul style="list-style-type: none">• Device Interface: SFP28 Form Factor LC MMF Connector• Power Supply Voltage: 3.135V~3.465V Typical Power Supply Voltage: 3.3V• Standard Compliant with SFF-8024, SFF-8431, SFF-8432 Compliant with IEEE802.3by Compliant with SFF-8472 DDM Support• Total Supply Current: 300mA• Data Rate: 25.78125Gbps• Power Consumption Max 1W• Transmitter (Electrical - Optical) Operating Wavelength Range:<ul style="list-style-type: none">- Min.:840nm- Typical: 850nm- Max.: 860nmLaunched Power (avg.): Min. -8.4dBm, Max 2.4dBm Optical Power OMA: Min -6.4dBm, Max 3dBm Extinction Ratio: Min: 2.0dB Optical Return Loss Tolerance : Max. 12dB Transmitter Differential Input Voltage:<ul style="list-style-type: none">- Min. 95 mV- Max. 900 mVReceiver -Optical, Electrical Center Wavelength:<ul style="list-style-type: none">- Min. 840nm- Typical: 850nm- Max. 860nmAverage Receiver Power:<ul style="list-style-type: none">- Min. -10.3dBm- Max. 2.4dBmLos De-Assert: Max. -13dBm Los Assert: Min. -30dBm Los Hysteresis: Min. 0.5dB Differential data output swing:<ul style="list-style-type: none">- Min. 300 mV- Max. 900 mV	<p>Environment</p> <ul style="list-style-type: none">• Operating Case Temperature: 0°C to +70°C• Storage Temperature: -40°C to +85°C• Operating Humidity: 5%~85%• Storage Humidity: 5%~90% <p>Standard package of Module</p> <ul style="list-style-type: none">• Product size: 56.70 x 13.70 x 8.50 mm(L*W*H)• Package size: TBD mm(L*W*H)• Package Weight: N.W: TBD kg; G.W:TBD kg• Package content: 1 x Module <p>Standard carton package</p> <ul style="list-style-type: none">• Quantity: 10 pcs / 1 Blister• Dimensions TBD mm(L*W*H)• Weight TBD kg <p>Ordering Information</p> <ul style="list-style-type: none">• Model: SFP28-25G-850-100M-MP• Name: 25Gbps Fiber SFP28 Transceiver, 850nm, SR LC connector, 100M, Hot-Pluggable



* Specification will be changed without prior notice

* All trademarks, logos and brand names are the property of their respective owners.