

SV-AOC-400GOSFPT6T6-XXM

Starview OSFP 400Gbps Active Optical Cable module



Features

- OSFP MSA compliant
- 8 parallel full-duplex channels
- Compliant to IEEE802.3bs
- Up to 100m OM3 MMF transmission
- Operating case temperature: 0 to 70oC
- 8x53.125Gb/s electrical interface (400GAUI-8)
- Data Rate 53.125Gbps (PAM4) per channel.
- Maximum power consumption 12W
- RoHS compliant

Applications

- 400G Ethernet
- Infiniband EDR

Part number	Description
SV-AOC-400GOSFPT6T6-1M	Starview OSFP 400Gbps Active Optical Cable module, distance up to 1m
SV-AOC-400GOSFPT6T6-3M	Starview OSFP 400Gbps Active Optical Cable module, distance up to 3m
SV-AOC-400GOSFPT6T6-5M	Starview OSFP 400Gbps Active Optical Cable module, distance up to 5m
SV-AOC-400GOSFPT6T6-7M	Starview OSFP 400Gbps Active Optical Cable module, distance up to 7m
SV-AOC-400GOSFPT6T6-10M	Starview OSFP 400Gbps Active Optical Cable module, distance up to 10m

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Units	Notes
Storage Temperature	T _S	-40	85	degC	
Operating Case Temperature	T _{OP}	0	70	degC	
Power Supply Voltage	V _{CC}	-0.5	3.6	V	
Relative Humidity (non-condensation)	RH	0	85	%	

Recommended Operating Conditions and Power Supply Requirements

Parameter	Symbol	Min	Typical	Max	Units	Notes
Operating Case Temperature	T _{OP}	0		70	degC	
Power Supply Voltage	V _{CC}	3.135	3.3	3.465	V	
Data Rate, each Lane			26.5625		GBd	PAM4
Data Rate Accuracy		-100		100	ppm	
Pre-FEC Bit Error Ratio				2.4x10 ⁻⁴		
Post-FEC Bit Error Ratio				1x10 ⁻¹²		1
Link Distance with OM3	D	0.5		100	m	2

Notes:

1. FEC provided by host system.
2. FEC required on host system to support maximum distance.

Electrical Characteristics

Parameter	Test Point	Min	Typical	Max	Units	Notes
Power Consumption				12	W	
Supply Current	I _{CC}			3.63	A	
Transmitter (each Lane)						
Signaling Rate, each Lane	TP1		26.5625 ± 100 ppm		GBd	
Differential pk-pk Input Voltage	TP1a	900			mVpp	1
Tolerance						
Differential Termination Mismatch	TP1			10	%	
Differential Input Return Loss	TP1	IEEE 802.3-2015 Equation (83E- 5)			dB	

Differential to Common Mode Input Return Loss	TP1	IEEE 802.3-2015 Equation (83E- 6)		dB	
Module Stressed Input Test	TP1a	See IEEE 802.3bs 120E.3.4.1			2
Single-ended Voltage Tolerance Range (Min)	TP1a	-0.4 to 3.3		V	
DC Common Mode Input Voltage	TP1	-350	2850	mV	3
Receiver (each Lane)					
Signaling Rate, each lane	TP4	26.5625 ± 100 ppm		GBd	
Differential Peak-to-Peak Output Voltage	TP4		900	mVpp	
AC Common Mode Output Voltage, RMS	TP4		17.5	mV	
Differential Termination Mismatch	TP4		10	%	
Differential Output Return Loss	TP4	IEEE 802.3-2015 Equation (83E- 2)			
Common to Differential Mode Conversion Return Loss	TP4	IEEE 802.3-2015 Equation (83E- 3)			
Transition Time, 20% to 80%	TP4	9.5		ps	
Near-end Eye Symmetry Mask Width (ESMW)	TP4		0.265	UI	
Near-end Eye Height, Differential	TP4	70		mV	
Far-end Eye Symmetry Mask Width (ESMW)	TP4		0.2	UI	
Far-end Eye Height, Differential	TP4	30		mV	
Far-end Pre-cursor ISI Ratio	TP4	-4.5	2.5	%	
Common Mode Output Voltage (Vcm)	TP4	-350	2850	mV	3

Notes:

1. With the exception to IEEE 802.3bs 120E.3.1.2 that the pattern is PRBS31Q or scrambled idle.
2. Meets BER specified in IEEE 802.3bs 120E.1.1.
3. DC common mode voltage generated by the host. Specification includes effects of ground offset voltage.