

Part Number: FET-10G

CISCO COMPATIBLE FET-10G Quick Spec:

Form Factor:	SFP+
TX Wavelength:	850nm
Reach:	300m
Cable Type:	MMF
Rate Category:	10GBase
Interface Type:	SR
DDM:	Yes
Connector Type:	Dual-LC
Temperature:	Commercial
Power Budget:	5.1dB
TX Power Min/Max:	-6.00 to -1.00
RX Power Min/Max:	-11.1 to -1.00



CISCO COMPATIBLE FET-10G Features

- Operating Data Rate up to 10.3Gbps
- Single 3.3V Power Supply and TTL Logic Interface
- Hot Pluggable
- 850nm VCSEL Transmitter
- Reach:
 - OM1 (62.5/125micron) 33m
 - OM2 (50/125micron 400 MHz*km) 82m
 - OM3 (50/125micron 2000 MHz*km) 300m
 - OM4 (50/125micron 4700) 300m
- Operating Case Temperature
 - Standard: 0°C~+70°C
 - Industrial: -40°C~+85°C
- Compliant with MSA
- Compliant with IEEE 802.3ae 10GBASE-SR
- Digital Diagnostic Monitor Interface
- Compliant with SFF-8472
- RoHS 6 Compliant

CISCO COMPATIBLE FET-10G Applications

- 10G Ethernet at 10.3125Gbps

CISCO COMPATIBLE FET-10G Electrical Characteristics (Condition: Ta=TOP)

Parameter	Symbol	Min.	Typ	Max.	Unit	Notes
CML Inputs(Differential)	Vin	150		1200	mV p-p	AC coupled inputs
Supply Current	ICC			300	mA	
Input Impedance (Differential)	Zin	85	100	115	ohm	Rin > 100 kohm @ DC
Tx_Disable Input Voltage – Low	VIL	0		0.8	V	
Tx_Disable Input Voltage – High	VIH	2.0		3.45	V	
Tx_Fault Output Voltage – Low	VOL	0		0.5	V	
Tx_Fault Output Voltage – High	VOH	2.0		Vcc+0.3	V	
CML Outputs (Differential)	Vout	350		700	mV pp	AC coupled outputs
Output Impedance (Differential)	Zout	85	100	115	ohms	
Rx_LOS Output Voltage- Low	VOL	0		0.5	V	
Rx_LOS Output Voltage- High	VOH	2.5			V	

CISCO COMPATIBLE FET-10G Optical Characteristics (Condition: Ta=TOP)

TX					
Parameter	Symbol	Min	Typ	Max	Unit
Data Rate		-	10.3	-	Gb/s
50/125mm MMF			300		m
Centre wavelength	λ_c	840	850	860	nm
Output Spectral Width(RMS)	$\Delta\lambda$	-	-	0.45	nm
Average Output Power	P _{out}	-6	-	-1	dBm
Extinction Ratio	ER	3.0	5.0	-	dB
Output Optical Eye		IEEE 802.3-2005 Compliant			
Transmitter Dispersion Penalty	TDP			3.9	dB
Input Differential Impedance	Zin	90	100	110	Ω
TX Disable	Disable		2.0	Vcc+0.3	V
	Enable		0	0.8	
TX Fault	Fault		2.0	Vcc+0.3	V
	Normal		0	0.8	
TX Disable Assert Time	t _{off}			10	us

RX					
Parameter	Symbol	Min	Typ	Max	Unit
Center Wavelength	λ_c	840	850	860	nm
Receive Sensitivity	P_{in}	-	-	-11.1	dBm
Maximum Input Power	P_{MAX}	-1			dBm
Signal Detect Threshold-Assertion:	SD_{HIGH}	-	-	-12	dBm
Signal Detect Threshold-Deassertion:	SD_{LOW}	-25	-	-	dBm
Output Differential Impedance	P_{in}	90	100	110	Ω
Receiver Overload	P_{max}	0.5			dBm
Optical Return Loss	ORL			-12	dB
LOS	High	2.0		$V_{cc}+0.3$	V
	Low	0		0.8	

Absolute Maximum Ratings ($T_c=25^\circ\text{C}$)

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T_{ST}	-40	+85	$^\circ\text{C}$
Operating Temperature (Standard)	T_{IP}	0	+70	$^\circ\text{C}$
Operating Temperature (Industrial)		-40	+85	
Input Voltage	T_{CC}	0	5	V

Recommend Operation Environment

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	V_{cc}	+3.15	3.3	+3.45	V
Operating Temperature (Standard)	T_{OP}	0	-	+70	$^\circ\text{C}$
Operating Temperature (Industrial)		-40	-	+85	