

Transceiver Reference Guide

Viscore Technologies Inc.

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Photonics for Transforming Networks
[Http://www.viscore.com](http://www.viscore.com)

Viscore offers a wide family of transceivers, suited for Telecom, Datacom and Enterprise environments. Our carrier-class solutions and Asian supply chain allows us to offer high reliability at competitive prices. Our product line covers 100M to 10G bit rates and in a variety of MSA packaging. Viscore transceivers support DDMI, RoHS compatibility, industrial temperature (-40 to +85), low voltage, and all connectors, e.g. LC/FC/SC/ST.



SFP & SFP+ (Small Form Factor Pluggable)

Industry standard for up to 4Gb/s in Datacom (FE/GbE & 1x/2x/4x Fibre Channel) and Telecom (OC-3/STM-1, OC-12/STM-4 and OC-48/STM-16). SFP+ is an industry standard version of SFP for 10Gb/s Datacom.



GBIC (Gigabit Interface Converter)

Industry standard for up to 2.5Gb/s, widely deployed, mainly for legacy system in Datacom (GbE & 1x/2x Fibre Channel) and Telecom (OC-3/STM-1, OC-12/STM-4 and OC-48/STM-16). Features include 3.3V & 5V operating voltage, long wavelength, short wavelength & WDM optical links.



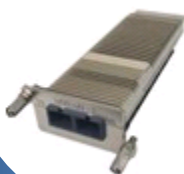
XFP

Industry standard for 10Gb/s, used in 10G Ethernet, 10G Fiber Channel, SONET OC-192, and SDH STM-64. XFPs are available in long wavelength, short wavelength & WDM optical links, and have a serial electrical interface.



X2

Industry standard for 10Gb/s, 10G Ethernet and 10G Fiber Channel applications. X2 features include 1.2V, 3.3V and 5V operating voltage, and have a XAUI electrical interface (4x3.125Gb/s).



XENPAK

Industry standard for 10Gb/s, 10G Ethernet fiber optical transponder. XENPAK features include 1.2V, 3.3V and 5V operating voltage, and have a XAUI electrical interface (4x3.125Gb/s).

OC-3 / STM-1 / Fast Ethernet, SFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3202(D)	155Mb/s	2km	1310nm	FP	MM	-15~-8 dBm	<-30 dBm
VT-S3220(D)	155Mb/s	15km	1310nm	FP	SM	-15~-8 dBm	<-28 dBm
VT-S3240(D)	155Mb/s	40km	1310nm	FP	SM	-5~0 dBm	<-34 dBm
VT-S3280(D)	155Mb/s	80km	1550nm	DFB	SM	-5~0 dBm	<-34 dBm

Suffix D refers to DDML function

OC-3 / STM-1 / Fast & Gigabit Ethernet / 1xFC, Bi-Di Transceiver

Part Number	Data Rate	Package	Distance	Wavelength Tx/Rx	Source	Output Power	Sensitivity
VT-S5220-35	155Mb/s	SFP-LC	20km	1310/1550nm	FP	-13~-6 dBm	<-28 dBm
VT-S5220-53	155Mb/s	SFP-LC	20km	1550/1310nm	FP	-13~-6 dBm	<-28 dBm
VT-G7415-35	1.25Gb/s	GBIC-SC	15km	1310/1550nm	FP	-9~-3 dBm	<-22 dBm
VT-G7415-53	1.25Gb/s	GBIC-SC	15km	1550/1310nm	DFB	-9~-3 dBm	<-22 dBm
VT-G7440-35	1.25Gb/s	GBIC-SC	40km	1310/1550nm	DFB	-2~+3 dBm	<-23 dBm
VT-G7440-53	1.25Gb/s	GBIC-SC	40km	1550/1310nm	DFB	-2~+3 dBm	<-23 dBm
VT-S5415-35	1.25Gb/s	SFP-LC	15km	1310/1550nm	FP	-9~-3 dBm	<-22 dBm
VT-S5415-53	1.25Gb/s	SFP-LC	15km	1550/1310nm	DFB	-9~-3 dBm	<-22 dBm
VT-S5415D-34	1.25Gb/s	SFP-LC	15km	1310/1490nm	FP	-9~-3 dBm	<-22 dBm
VT-S5415D-43	1.25Gb/s	SFP-LC	15km	1490/1310nm	DFB	-9~-3 dBm	<-22 dBm
VT-S5440D-34	1.25Gb/s	SFP-LC	40km	1310/1490nm	DFB	-2~+3 dBm	<-23 dBm
VT-S5440D-43	1.25Gb/s	SFP-LC	40km	1490/1310nm	DFB	-2~+3 dBm	<-23 dBm
VT-S5470D-45	1.25Gb/s	SFP-LC	70km	1490/1550nm	DFB	-2~0 dBm	<-23 dBm
VT-S5470D-54	1.25Gb/s	SFP-LC	70km	1550/1490nm	DFB	-2~0 dBm	<-23 dBm
VT-S540CD-45	1.25Gb/s	SFP-LC	120km	1490/1550nm	DFB	-2~0 dBm	<-32 dBm
VT-S540CD-54	1.25Gb/s	SFP-LC	120km	1550/1490nm	DFB	-2~0 dBm	<-32 dBm

OC-12 / STM-4, SFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3320D	622Mb/s	20km	1310nm	FP	SM	-15~-8 dBm	<-28 dBm
VT-S3340D	622Mb/s	40km	1310nm	FP	SM	-3~+2 dBm	<-28 dBm
VT-S3380D	622Mb/s	80km	1550nm	DFB	SM	-3~+2 dBm	<-28 dBm

Suffix D refers to DDML function

Gigabit Ethernet / 1xFC, SFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3401(G)	1.25Gb/s	100m	-	Copper	RJ45	-	-
VT-S3405(D)	1.25Gb/s	550m	850nm	VCSEL	MM	-9.5~-4 dBm	<-17 dBm
VT-S3415(D)	1.25Gb/s	15km	1310nm	FP	SM	-9~-3 dBm	<-22 dBm
VT-S3440DI	1.25Gb/s	40km	1310nm	DFB	SM	-2~+3 dBm	<-23 dBm
VT-S3470D	1.25Gb/s	70km	1550nm	DFB	SM	0~+5 dBm	<-23 dBm
VT-S340AD	1.25Gb/s	100km	1550nm	DFB	SM	0~+5 dBm	<-27 dBm

Suffix D refers to DDML function

Suffix G refers supporting 10/100/1000Mbps. No suffix indicated 1000Mbps only

OC-48 / STM-16 / 2xFC, SFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3603D	2.5Gb/s	300m	850nm	VCSEL	MM	-9.5~-4 dBm	<-17 dBm
VT-S3602D	2.5Gb/s	2km	1310nm	FP	SM	-10~-3 dBm	<-18 dBm
VT-S3615D	2.5Gb/s	15km	1310nm	DFB	SM	-5~0 dBm	<-18 dBm
VT-S3640D	2.5Gb/s	40km	1550nm	DFB	SM	-2~+3 dBm	<-18 dBm
VT-S3680D	2.5Gb/s	80km	1550nm	DFB	SM	-2~+3 dBm	<-28 dBm

Suffix D refers to DDML function

GBIC Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-G6401	1.25Gb/s	100m	-	Copper	RJ45	-	-
VT-G6405(P)	1.25Gb/s	550m	850nm	VCSEL	MM	-9.5~-4 dBm	<-17 dBm
VT-G6415(P)	1.25Gb/s	15km	1310nm	FP	SM	-9~-3 dBm	<-22 dBm
VT-G6440	1.25Gb/s	40km	1310nm	DFB	SM	-2~+3 dBm	<-23 dBm
VT-G6470	1.25Gb/s	70km	1550nm	DFB	SM	0~+5 dBm	<-23 dBm
VT-G640A	1.25Gb/s	100km	1550nm	DFB	SM	0~+5 dBm	<-27 dBm

Note: GBIC Transceiver Standard Products are designed with +5V Power Supply

Suffix P refers to plastic casing

4.25Gb/s, 1x/2x/4xFC, SFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3705D	4.25Gb/s	550m	850nm	VCSEL	MM	-9~-2.5 dBm	<-15dBm
VT-S3704D	4.25Gb/s	4km	1310nm	FP	SM	-9~-3 dBm	<-18dBm
VT-S3710D	4.25Gb/s	10km	1310nm	DFB	SM	-9~-1dBm	<-18dBm
VT-S3730D	4.25Gb/s	30km	1550nm	DFB	SM	0~+5 dBm	<-18dBm

Suffix D refers to DDML function

10Gb/s XFP Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-X8903	10Gb/s	300m	850nm	VCSEL	MM	-7.3~-1 dBm	<-11.1 dBm
VT-X8910	10Gb/s	10km	1310nm	DFB	SM	-6~+0 dBm	<-12.6 dBm
VT-X8940	10Gb/s	40km	1550nm	EML	SM	-4.7~+4 dBm	<-15.8 dBm
VT-X8980	10Gb/s	80km	1550nm	EML	SM	0~+4 dBm	<-23.0 dBm

10Gb/s SFP+ Transceiver

Part Number	Data Rate	Distance	Wavelength	Source	Fiber	Output Power	Sensitivity
VT-S3903D	10Gb/s	300m	850nm	VCSEL	MM	-6.5~-1 dBm	-11.1dBm
VT-S3910D	10Gb/s	10km	1310nm	DFB	SM	-6~0 dBm	-14.4dBm
VT-S3940D	10Gb/s	40km	1550nm	EML	SM	-2~+4 dBm	-15.8dBm
VT-S3980D	10Gb/s	80km	1550nm	EML	SM	0~+5 dBm	<-23.0 dBm

Suffix D refers to DDML function

XENPAK / X2 Transceiver

Part Number	Data Rate	Distance	Package	Wavelength	Source	Output Power	Sensitivity
VT-E0903	10Gb/s	300m	XENPAK	850nm	VCSEL	-5~+0.5 dBm	<-9.9 dBm
VT-E0910	10Gb/s	10km	XENPAK	1310nm	DFB	-5~-0 dBm	<-14.5 dBm
VT-E0940	10Gb/s	40km	XENPAK	1310nm	EML	-1~+3 dBm	<-16.0 dBm
VT-E0980	10Gb/s	80km	XENPAK	1550nm	EML	0~+4 dBm	<-24.0 dBm
VT-X9903	10Gb/s	300m	X2	850nm	VCSEL	-5~+0.5 dBm	<-9.9 dBm
VT-X9910	10Gb/s	10km	X2	1310nm	DFB	-5~-0 dBm	<-14.5 dBm
VT-X9940	10Gb/s	40km	X2	1310nm	EML	-1~+3 dBm	<-16.0 dBm
VT-X9980	10Gb/s	80km	X2	1550nm	EML	0~+4 dBm	<-24.0 dBm
VT-X9940-XX	10Gb/s	40km	X2	CWDM	EML	-1~+4 dBm	<-14 dBm
VT-X9980-XX	10Gb/s	80km	X2	CWDM	EML	0~+4 dBm	<-24 dBm
VT-X9940-XXXX	10Gb/s	40km	X2	DWDM	EML	-1~+3 dBm	<-14 dBm
VT-X9980-XXXX	10Gb/s	80km	X2	DWDM	EML	0~+4 dBm	<-24 dBm

CWDM Transceiver

Part Number	Data Rate	Package	Power Budget	Output Power	Sensitivity	Application
VT-G6470-XX	1.25Gb/s	GBIC	32dB	0~+5 dBm	<-32 dBm	GBE / FC
VT-G640A-XX	1.25Gb/s	GBIC	23dB	0~+5 dBm	<-23 dBm	GBE / FC
VT-S3280D-XX	155Mb/s	SFP	29dB	-5~0 dBm	<-34 dBm	OC-3/STM-1/FE
VT-S3380D-XX	622Mb/s	SFP	25dB	-3~+2 dBm	<-28 dBm	OC-12/STM-4
VT-S3440D-XX	1.25Gb/s	SFP	18dB	-5~+0 dBm	<-23 dBm	GBE / FC
VT-S3470D-XX	1.25Gb/s	SFP	23dB	0~+5 dBm	<-23 dBm	GBE / FC
VT-S340AD-XX	1.25Gb/s	SFP	32dB	0~+5 dBm	<-32 dBm	GBE / FC
VT-S3640D-XX	2.5Gb/s	SFP	28dB	0~+5 dBm	<-28 dBm	OC-48/STM-16
VT-S3680D-XX	2.5Gb/s	SFP	18dB	0~+5 dBm	<-18 dBm	OC-48/STM-16
VT-X8940-XX	10Gb/s	XFP	14dB	-1~+4 dBm	<-15 dBm	OC-48/STM-16
VT-X8980-XX	10Gb/s	XFP	22dB	-1~+4 dBm	<-23dBm	OC-48/STM-16

CWDM Transceivers are available for 1270 to 1610nm Wavelength, XX in P/N corresponds to the Wavelength
 27=1270nm, 29=1290nm, 31=1310nm, 33=1330nm, 35=1350nm, 37=1370nm, 39=1390nm, 41=1410nm, 43=1430nm, 45=1450nm,
 47=1470nm, 49=1490nm, 51=1510nm, 53=1530nm, 55=1550nm, 57=1570nm. 59=1590nm, 61=1610nm

DWDM XFP Transceiver

Part Number	Data Rate	Distance	Power Budget	Output Power	Sensitivity	Application
VT-X8940-XXXX	10Gb/s	40km	15 dB	-1~+3 dBm	<-16 dBm	10G DWDM
VT-X8980-XXXX	10Gb/s	80km	23 dB	0~+5 dBm	<-23 dBm	10G DWDM

For Wavelength information, please contact Viscore

With the advent of HD-SDI and 3G-SDI, the needs for higher bandwidth video transport technologies have emerged. In response to this need, Viscore has introduced a line of video transceivers, with high reliability and competitive prices. Unlike the traditional coax-based systems (100m range at high data rate), optical solutions can transmit up to 30km without having to regenerate. In addition, due to the unique characteristics of raw video signals, such as the video pathological pattern, existing optical transceivers are unable to meet the challenges of the new video market.



Video SFP

Viscore's Video transceiver modules are designed to support the video pathological pattern. These Video SFPs can operate from 50Mb/s to 3Gb/s and support standards such as SD-SDI, HD-SDI and 3G-SDI. Various input/output configurations are available.

Part Number	Data Rate	Distance	Configuration	Output Power	Sensitivity	Application
VT-SCA30D	1.5Gb/s	30km	Single Transmitter	-5~-2 dBm	-	SD-SDI, HD-SDI
VT-SDA30D	1.5Gb/s	30km	Single Receiver	-	<-20 dBm	SD-SDI, HD-SDI
VT-SEA30D	1.5Gb/s	30km	Transceiver	-5~-2 dBm	<-20 dBm	SD-SDI, HD-SDI
VT-SFA30D	1.5Gb/s	30km	Dual Transmitter	-5~-2 dBm	-	SD-SDI, HD-SDI
VT-SGA30D	1.5Gb/s	30km	Dual Receiver	-	<-20 dBm	SD-SDI, HD-SDI
VT-SEB30D	3.0Gb/s	30km	Transceiver	-10~-6 dBm	<-18 dBm	SD-SDI, HD-SDI, 3G-SDI
VT-SCB30D	3.0Gb/s	30km	Single Transmitter	-10~-6 dBm	-	SD-SDI, HD-SDI, 3G-SDI
VT-SDB30D	3.0Gb/s	30km	Single Receiver	-	<-18 dBm	SD-SDI, HD-SDI, 3G-SDI
VT-SFB30D	3.0Gb/s	30km	Dual Transmitter	-10~-6 dBm	-	SD-SDI, HD-SDI, 3G-SDI
VT-SGB30D	3.0Gb/s	30km	Dual Receiver	-	<-18 dBm	SD-SDI, HD-SDI, 3G-SDI

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