

# tinout

— Optical NETWORK Expert —

7 years of  
Innovation  
2007~2014 7 years

Professional Development and Manufacturing Platform



## About TINOUT

TINOUT was established in 2007 as a global leading supplier for fiber optical components with perfect technique&production, abundant technology development capability fo photonics products and network items.

OC-3 STM-1 SDH FE at up to 155 Mbit/s;

OC-12 STM-4 SDH at up to 622 Mbit/s;

GBE FC at up to 1.25 Gbit/s;

OC-48 STM-16 SDH GBE FC at up to 2.5 Gbit/s;

GBE FC at up to 4.25 Gbit/s;

10GbE OC-192|STM-64 at 10Gbit/s;

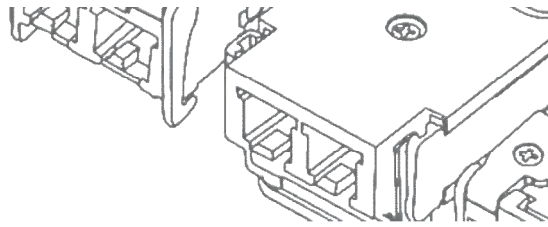
40GbE, STM- 256|OC-768 and

OTU3 tri-rate serial signal transport

TINOUT established a full set of advanced system for products development, innovation manufacturing and sales.TINOUT mainly offers Optical transceivers, 10G SFP+|XFP series and 2.5Gb/s-10Gb/s SFP, WDM SFP, GBIC, 100Gb|40Gb CFP transceiver modules. And our products could be perfect compatible with most popular brand such as Cisco, HP, Extreme,Foundry,Nortel,Siemens,H3C, Huawei, Alcatel, Netgear, D-link, Linksys...

# Product

## Next-Generation Network TINOUT Solutions



Form	Data Rate	Part Number	Reach	Wavelength	LD	PD	Pout (min)	Sensitivity (max)	Link Budget	Operating Case Temperature	
EFM	Duplex Transceivers	1.25Gb/s (GbE)	PF3631-3I	10km	1310nm	FP	PIN	-9dBm	-20dBm	11dB	-40~85°C
			PF3632-3I	20km	1310nm	FP	PIN	-7dBm	-22dBm	15dB	-40~85°C
			PF363D4-3I	40km	1310nm	DFB	PIN	-5dBm	-22dBm	17dB	-40~85°C
			PF365D8-3I	80km	1550nm	DFB	PIN	0dBm	-24dBm	24dB	-40~85°C
	Bi-directional Transceivers	1.25 Gb/s (GbE)	PB4631-3I/PB465D1-3I	10km	1310nm/1550nm	FP/DFB	PIN	-9dBm	-20dBm	11dB	-40~85°C
			PB4632-3I/PB465D2-3I	20km	1310nm/1550nm	FP/DFB	PIN	-7dBm	-22dBm	15dB	-40~85°C
			PB463D4-3I/PB465D4-3I	40km	1310nm/1550nm	DFB	PIN	-3dBm	-25dBm	22dB	-40~85°C
			PB464D8-3I/PB465D8-3I	80km	1490nm/15550m	DFB	PIN	-1dBm	-26dBm	25dB	-40~85°C
CFM	Duplex Transceivers	1.25Gb/s (GbE)	PG5631	10km	1310nm	FP	PIN	-9dBm	-20dBm	11dB	-40~85°C
			PG5632	20km	1310nm	FP	PIN	-7dBm	-22dBm	15dB	-40~85°C
			PG563D4	40km	1310nm	DFB	PIN	-5dBm	-22dBm	17dB	-40~85°C
			PG565D8	80km	1550nm	DFB	PIN	0dBm	-24dBm	24dB	-40~85°C
	Bi-directional Transceivers	1.25 Gb/s (GbE)	PTP4631/PTP465D1	10km	1310nm/1550nm	FP/DFB	PIN	-9dBm	-20dBm	11dB	-40~85°C
			PTP4632/PTP465D2	20km	1310nm/1550nm	FP/DFB	PIN	-7dBm	-22dBm	15dB	-40~85°C
			PTP4634/PTP465D4	40km	1310nm/1550nm	DFB	PIN	-3dBm	-25dBm	22dB	-40~85°C
			PTP4638/PTP465D8	80km	1490nm/1590nm	DFB	PIN	-1dBm	-26dBm	25dB	-40~85°C

\* x denotes temperature option: S=standard temp(0 to 70°C or -5 to 75°C)

E=extended temp(-5 to 85°C) I=industrial temp(-40 to 85°C)

\* OAM (Operation, Administration, Maintenance) model

-EFM: Ethernet in First Miles; complies with IEEE 802.3ah

-CFM: Connectivity Fault Management: complies with IEEE 802.1aa & ITU-T Y.1731

## SFP+

	Data Rate	Part Number	Reach	Wavelength	LD	PD	Standard	Operating Case Temperature
CWDM	10 Gb/s	<a href="#">PLS-10G-CXXXX-LR</a>	10km	1270nm~1610nm	DFB	PIN	10GBASE-LR(LW) (10GbE)	0~70°C
		<a href="#">PLS-10G-CXXXX-ER</a>	40km	1270nm~1450nm	DFB	APD	10GBASE-ER(EW) (10GbE) <sup>1</sup>	-40~85°C
		<a href="#">PLS-10G-CXXXX-ER1</a>	40km	1470nm~1610nm	EML	PIN	S64.2b/IR-2 / 10GBASE-ER(EW) (10GbE)	-40~85°C
		<a href="#">PLS-10G-CXXXX-ZR</a>	80km	1470nm~1610nm	EML	APD	L64.2a/LR-2 / 10GBASE-ZR(ZW) (10GbE)	-40~85°C
DWDM	10 Gb/s	<a href="#">PLS-10G-DXXXX-ER</a>	40km	C Band	EML	PIN	S64.2b/IR-2 / 10GBASE-ER(EW) (10GbE)	-40~85°C
		<a href="#">PLS-10G-DXXXX0ZR</a>	80km	C Band	EML	APD	L64.2a/LR-2 / 10GBASE-ZR(ZW) (10GbE)	-40~85°C
Gray Optics	10 Gb/s	<a href="#">PLS-10G-SR</a>	300m	850nm	VCSEL	PIN	10GBASE-SR(SW) (10GbE) / 1200-MX-SN-I (10GFC)	-40~85°C
		<a href="#">PLS-10G-LR</a>	10km	1310nm	DFB	PIN	10GBASE-LR(LW) (10GbE)	-40~85°C
		<a href="#">PLS-10G-ER</a>	40km	1550nm	EML	PIN	S64.2b/IR-2 / 10GBASE-ER(EW) (10GbE)	-40~85°C
		<a href="#">PLS-10G-ZR</a>	80km	1550nm	EML	APD	L64.2a/LR-2 / 10GBASE-ZR(ZW) (10GbE)	-40~85°C

## XFP

	Data Rate	Part Number	Reach	Wavelength	LD	PD	Standard	Operating Case Temperature
CWDM	10 Gb/s	<a href="#">PLX-10G-CXXXX-ER</a>	40km	1270nm~1450nm	DFB	APD	10GBASE-ER(EW) (10GbE) <sup>1</sup>	-40~85°C
		<a href="#">PLX-10G-CXXXX-ER1</a>	40km	1470nm~1610nm	EML	PIN	S64.2b/IR-2 / 10GBASE-ER(EW) (10GbE)	-40~85°C
		<a href="#">PLX-10G-CXXXX-ZR</a>	80km	1470nm~1610nm	EML	APD	L64.2a/LR-2 / 10GBASE-ZR(ZW) (10GbE)	-40~85°C
DWDM	10 Gb/s	<a href="#">PLX-10G-DXXXX-ER</a>	40km	C Band	EML	PIN	S64.2b/IR-2 / 10GBASE-ER(EW) (10GbE)	-40~85°C
		<a href="#">PLX-10G-DXXXX-ZR</a>	80km	C Band	EML	APD	L64.2a/LR-2 / 10GBASE-ZR(ZW) (10GbE)	-40~85°C
Gray Optics	10 Gb/s	<a href="#">PLX-10G-SR</a>	300m	850nm	VCSEL	PIN	10GBASE-SR(SW) (10GbE) 1200-MX-SN-I (10GFC)	-40~85°C
		<a href="#">PLX-10G-LR</a>	10km	1310nm	DFB	PIN	10GBASE-LR(LW) (10GbE) 1200-SM-LL-L (10GFC)	-40~85°C
		<a href="#">PLX-10G-ER</a>	40km	1550nm	EML	PIN	S64.2b/IR-2 10GBASE-ER(EW) (10GbE)	-40~85°C
	10Gb/s with CDR	<a href="#">PLX-10G-ZR</a>	80km	1550nm	EML	APD	L64.2a/LR-2 10GBASE-ZR(ZW) (10GbE)	-40~85°C

\*1 = Compatible

\* XX denotes CWDM and DWDM wavelength grid, for example 1270nm "27" 1330nm "33"

## 10 Gigabit Xenpak

	Data Rate	Part Number	Reach	Wavelength	LD	PD	Pout (min)	Sensitivity (max)	Link Budget	Operating Case Temperature
Xenpak	10Gb/s	<a href="#">PLK-10G-SR</a>	300m	850nm	VCSEL	PIN	-5.2	-11.1	11dB	0-70°C
	10Gb/s	<a href="#">PLK-10G-LR</a>	10km	1310nm	DFB	PIN	-8.2	-12.6	15dB	0-70°C
	10Gb/s	<a href="#">PLK-10G-ER</a>	40km	1550nm	EML	PIN	-1	-16	17dB	0-70°C
	10Gb/s	<a href="#">PLK-10G-ZR</a>	80km	1550nm	EML	APD	0	-23	24dB	0-70°C

# 10 Gigabit X2

	Data Rate	Part Number	Reach	Wavelength	LD	PD	Pout (min)	Sensitivity (max)	Link Budget	Operating Case Temperature
X2	10Gb/s	<a href="#">PX2-10G-SR</a>	300m	850nm	VCSEL	PIN	-5.2	-11.1	11dB	0-70°C
	10Gb/s	<a href="#">PX2-10G-LR</a>	10km	1310nm	DFB	PIN	-8.2	-12.6	15dB	0-70°C
	10Gb/s	<a href="#">PX2-10G-ER</a>	40km	1550nm	EML	PIN	-1	-16	17dB	0-70°C
	10Gb/s	<a href="#">PX2-10G-ZR</a>	80km	1550nm	EML	APD	0	-23	24dB	0-70°C

## Bi-directional Transceivers

	Form	Data Rate	Part Number	Reach	Wavelength	LD	PD	Pout (min)	Sensitivity (max)	Link Budget	Operating Case Temperature
Dual Wave- length	SFP+	10 Gb/s	<a href="#">PLS-10G-27/33-10</a>	10km	1270nm /1330nm	DFB	PIN	-5dBm	-14.4dBm	9.4dB	-40~85°C
			<a href="#">PLS-10G-27/33-20</a>	20km	1270nm /1330nm	DFB	PIN	1dBm	-14dBm	15dB	-40~85°C
			<a href="#">PLS-10G-27/33-40</a>	40km	1270nm /1330nm	DFB	PIN	1dBm	-15dBm	16dB	-40~85°C
			<a href="#">PLS-10G-27/33-40A</a>	40km	1270nm /1330nm	DFB	APD	1dBm	-18dBm	19dB	-40~85°C
	XFP	10 Gb/s	<a href="#">PLX-10G-27/33-10</a>	10km	1270nm /1330nm	DFB	PIN	-5dBm	-14.4dBm	9.4dB	-40~85°C
			<a href="#">PLX-10G-27/33-20</a>	20km	1270nm /1330nm	DFB	PIN	1dBm	-14dBm	15dB	-40~85°C
			<a href="#">PLX-10G-27/33-40</a>	40km	1270nm /1330nm	DFB	PIN	2dBm	-14dBm	16dB	-40~85°C
			<a href="#">PLX-10G-27/33-40A</a>	40km	1270nm /1330nm	DFB	APD	1dBm	-18dBm	19dB	-40~85°C
	SFP+	6 Gb/s	<a href="#">PLS-6G-27/33-10</a>	10km	1270nm /1330nm	DFB	PIN	-5dBm	-13dBm	8dB	0~70°C
			<a href="#">PLS-6G-27/33-20</a>	20km	1270nm /1330nm	DFB	PIN	-3dBm	-16dBm	13dB	-40~85°C
			<a href="#">PLS-6G-27/33-40</a>	40km	1270nm /1330nm	DFB	PIN	1dBm	-15dBm	16dB	-40~85°C
			<a href="#">PLS-6G-27/33-40A</a>	40km	1270nm /1330nm	DFB	APD	1dBm	-18dBm	19dB	-40~85°C
		2.5 Gb/s (STM-16/ OC-48)	<a href="#">PB863D1/PB865D1</a>	15km	1310nm/1490nm/1550nm	DFB	PIN	-5dBm	-19dBm	14dB	-40~85°C
			<a href="#">PB864D4/PB865D4</a>	40km	1490nm/1590nm	DFB	PIN	-5dBm	-19dBm	14dB	-40~85°C
			<a href="#">PB864D8/PB865D8</a>	80km	1490nm/1590nm	DFB	APD	-2dBm	-28dBm	26dB	-40~85°C
			<a href="#">PB4631/PB465D1</a>	10km	1310nm/1550nm	FP/DFB	PIN	-9dBm	-20dBm	11dB	-40~85°C
1.25 Gb/s (GbE)		<a href="#">PB4632/PB465D2</a>	20km	1310nm/1550nm	FP/DFB	PIN	-7dBm	-22dBm	15dB	-40~85°C	
		<a href="#">PB463D4/PB465D4</a>	40km	1310nm/1550nm	DFB	PIN	-3dBm	-25dBm	22dB	-40~85°C	
		<a href="#">PB4648/PB465D8</a>	80km	1490nm/1550nm	DFB	PIN	-1dBm	-25dBm	24dB	-40~85°C	

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