



%FTDSQJPO

5I F (#" 4&%3 04'11" 1UBOTDFJWFSJT EFTJHOFE QPS (#" 4&&UJ FSCFUJ SPVHI QVUVQUP N PVFSTJCHVFN PEF GCFS 4 . ' XJU . 10 DPOCFDUPST 5I JTUBOTDFJWFSJT DPN QMBOUXJU M&&1 DL \*8&& DV 04'1 . 4" 5I F CVJWJJEJHUBMEJBHOPTJDT N POWPSCH %% BWPXTBDDFTTUP SFBMJN F PCFSBUJCH QBSBN FUFST \*UJTVJUBOJ QPS (#&UJ FSCFUJ%BUB\$FOUFS#SFBLPVU Y (%3 PS Y (%3" CQMBUJPO

1SPEVDU4QFDJGDBUJ POT

\* " CTPWUF . BYJN VN 3BUJCHT

1 BSN FUS	4ZN CPM	. JO	. BY	6 OJ
4UPSBHF 5FN QFSBU/SF	5 <sub>4</sub>			•\$
4VQQM 7 PNBHF	7 <sub>\$</sub>			7
3FNBWJF) VN JEJZ / PO DPOEFOTJCH	3)			
%BUB*QVU7 PNBHF %JGFSFOJBM	M <sub>1</sub> 7 <sub>1</sub> M			7
\$PO\$PMOQVU7 PNBHF	7.		7 <sub>\$</sub>	7
\$PO\$PM VUQV\$VSSFOU	* <sub>0</sub>			N"

\*\* 3FDPN N FOEFE 0 QFSBUJCH&QWSPON FOU

1 BSN FUS	4ZN CPM	. JO	5ZQJBM	. BY	6 OJ	/ PUFT
0 QFSBUJCH\$BTF 5FN QFSBU/SF	5 <sub>013</sub>				•\$	
1PXFSAVQQM 7 PNBHF	7 <sub>\$</sub>				7	
*OTUBCUBOFPVT1 FBL \$VSSFOUBU) PU1IWH	*\$ <sub>\$@1</sub>			5#%	N"	
4VTUBJOFE 1 FBL \$VSSFOUBU) PU1IWH	*\$ <sub>\$@1</sub>			5#%	N"	
. BYJN VN 1PXFSAJTBUBUJPO	1 <sub>%</sub>				8	

1BSBN FUS	4ZN CPM	. JD	5ZQDBM	. BY	6QU	/ PUFT
. BY.N VN 1PXF%JTTQBUP - PX 1PXF . PEF	1%1				8	
4JHOBWCH4QFFE QFS- BOF	%3-				( #E	
\$POLSPMOQU7PMBHF) JH	7,	7ss		7ss	7	
\$POLSPMOQU7PMBHF - PX	7.			7ss	7	
5XP8 JF 4FSBMOUFSBDF \$NPL 3BU					L) [	
1PXF4VQQM/ PJTF L) [ . ) [ Q Q					N7QQ	
0 QFSBUJCH%JTUBCDF					N	

\*\*\* 0 QJDBM\$ I BSBDFSTJDT

1BSBN FUS	4ZN CPM	. JD	5ZQDBM	. BY	6QU	/ PUFT
5SBOTN JUF						
8 BVWVCHU	D				ON	
4JEF. PEF 4VQCSFTTPO3BUP	4. 43				E#	
" WSBHF - BVOD 1PXF FBD - BOF	" 01.				E#N	
0 VUFS0 QJDBM PEVNBUP " N QMVEF 0. " PVUFS FBD - BOF	5. "				E#N	
- BVOD QPXFSD0. " PVUFSNJOVT5%&\$2 FBD - BOF QPSFYJODUPOBUP E# QPSFYJODUPOBUP E#	5. " 5%&\$2				E#N	
5SBOTN JUF SBOE %JQFSTPO&ZF \$NPTVSF QPS1" . 5%&\$2 FBD - BOF	5%&\$2				E#	
5%&\$2 o WPH \$FR FBD - BOF	\$FR				E#	
" WSBHF - BVOD 1PXFSPG0 ' ' 5SBOTN JUF FBD - BOF	5. "				E#N	

1BSN FJFS	4ZN CPM	. JO	5ZQJBN	. BY	6OUJ	/ PUFT
&YUJOUJPO3BUJ	83				E#	
5SBOTN JIJFS5SBOTJWPO5JNF	5S				QT	
3*/ 0. "	3*/				E# ) [	
0 QJDBN\$FU/SO- PTT5PMSBODF	03-				E#	
5SBOTN JIJFS3FOTJUBODF	5 <sub>3</sub>				E#	

3FDFJWFS

8 BWFVICHU	D <sub>3</sub>				CN	
%BN BHF 5I SFTI PNE FBD - BOF	" 0 1%				E#N	
" WFSBHF 3FDFJWF 1PXF S FBD - BOF	" 0 1 <sub>3</sub>				E#N	
3FDFJWF 1PXF S 0. " PVUFS FBD - BOF	0. " 3				E#N	
3FDFJWFS3FOTJUBODF	33				E#	
3FDFJWFS4FOTJWJMJZ 0. " PVUFS FBD - BOF	40. "			. BY 4&\$2	E#N	
4USFTTFE 3FDFJWFS4FOTJWJMJZ 0. " PVUFS FBD - BOF	434				E#N	

\$POEJJPOTPG4USFTTFE 3FDFJWFS4FOTJWJMJZ 5FTU

4USFTTFE &ZF \$WTVS F CPS1" . 4&\$2 - BOF 6 OEFS5FTU	4&\$2				E#	
4&\$2 o WPH \$FR - BOF 6 OEFS5FTU	\$FR				E#	

/ PUFT

" WFSBHF NACD QPXF S FBD BOF N JO JT JOPSN BUJW BOE OPUJ F QSDJQBMOEJDBUPSPGTJHOBMLU\$FCHU  
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 3FDFJWFSTFOTJWJMJZ 0. " PVUFS FBD BOF N BY JT JOPSN BUJW BOE JTEFGOFE CPSB 5SBOTN JIJFSXJU BWF PG  
 4&\$2 VQUP E#  
 . FBTVFE XJU DPOPSN BODF UFTUTJHOBMLU51 CPSU F #&3 Y

\*7 &MIDUSDBM\$! BSBDFSTUJDT

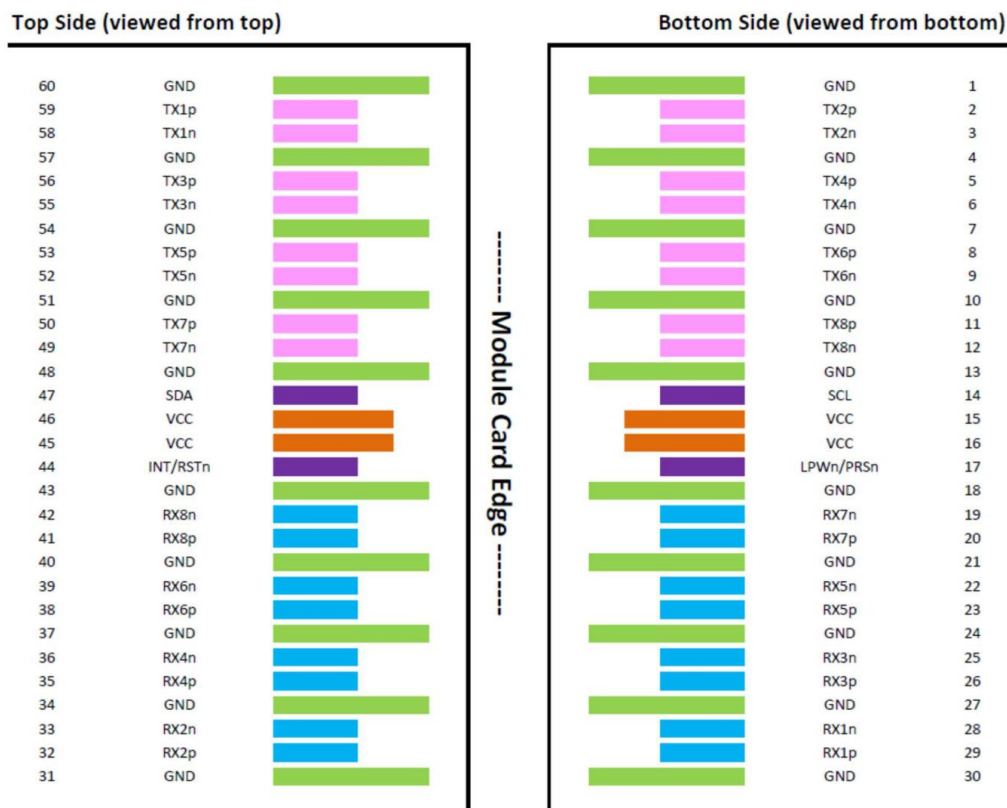
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3FDFJWFS . PEVW 0 VLQVU51					
" \$ \$PN N PON PEF 0 VLQVU7PMBHF 3. 4					N7
%JGFSFOJBMQFBL UP QFBL 0 VLQVU7PMBHF 4I PSJ. PEF - PCH. PEF					N7
&ZF) FJH U	&)				N7
7FSJDBM&ZF \$NVTVSF	7&\$				E#
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&GFJWVF 3FU/30- PTT	&3-				E#
%JGFSFOJBM\$FSN JOBUPO. JIN BUD					
5SBOTJWPO5.N F					QT
%% \$ \$PN N PON PEF 7PMBHF 5PMTSBOCF					7
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" \$ \$PN N PON PEF 3. 47PMBHF 5PMTSBOCF 51 B					N7
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%JGFSFOJBM\$FSN JOBUPO. JIN BUD					
4JHVF FOEFE 7PMBHF 5PMTSBOCF 3BOHF					7
%% \$ \$PN N PON PEF 7PMBHF 5PMTSBOCF					7

&MDSDBM1QFDGDBUPO- PX 4QFFE \$POUSPMBCE 4FOTF 4JHOBT \$PN QMBCUXJU 24' 1 %%) 8 3FW

1BSBN FJFS	4ZN CPM	. JD	. BY	6OJ
. PEVW 0 VUQVU4\$- BCE 4%"	7 <sub>0</sub>			7
. PEVW *OQVU4\$- BCE 4%"	7 <sub>2</sub>		7 <sub>\$</sub>	7
	7 <sub>3</sub>	7 <sub>\$</sub>	7 <sub>\$</sub>	7
*OJ PEF 3FTFU BCE . PE4FM	7 <sub>2</sub>			7
	7 <sub>3</sub>		7 <sub>\$</sub>	7
*OJ	7 <sub>0</sub>			7
	7 <sub>0</sub>	7 <sub>\$</sub>	7 <sub>\$</sub>	7

7 1JO%FTDSQJPO



' JHSF o 1JPUVEFGQJLPOTPG 4' 1 N PEVW JQVU PVUQVU

1JO	4ZN CPM	%FTDSQJPO	- PHD	1JO	4ZN CPM	%FTDSQJPO	- PHD
	( / %	( \$PVE			( / %	( \$PVE	
59 Q	5SBOTN JIIFS%&BUB/ PO*O&FSJFE		\$ . - *	39 Q	3FDJ&FS%&BUB/ PO*O&FSJFE		\$ . - 0
59 O	5SBOTN JIIFS%&BUB*O&FSJFE		\$ . - *	39 O	3FDJ&FS%&BUB*O&FSJFE		\$ . - 0
	( / %	( \$PVE			( / %	( \$PVE	
59 Q	5SBOTN JIIFS%&BUB/ PO*O&FSJFE		\$ . - *	39 Q	3FDJ&FS%&BUB/ PO*O&FSJFE		\$ . - 0
59 O	5SBOTN JIIFS%&BUB*O&FSJFE		\$ . - *	39 O	3FDJ&FS%&BUB*O&FSJFE		\$ . - 0
	( / %	( \$PVE			( / %	( \$PVE	
59 Q	5SBOTN JIIFS%&BUB/ PO*O&FSJFE		\$ . - *	39 Q	3FDJ&FS%&BUB/ PO*O&FSJFE		\$ . - 0
59 O	5SBOTN JIIFS%&BUB*O&FSJFE		\$ . - *	39 O	3FDJ&FS%&BUB*O&FSJFE		\$ . - 0
	( / %	( \$PVE			( / %	( \$PVE	
59 Q	5SBOTN JIIFS%&BUB/ PO*O&FSJFE		\$ . - *	39 Q	3FDJ&FS%&BUB/ PO*O&FSJFE		\$ . - 0
59 O	5SBOTN JIIFS%&BUB*O&FSJFE		\$ . - *	39 O	3FDJ&FS%&BUB*O&FSJFE		\$ . - 0
	( / %	( \$PVE			( / %	( \$PVE	
4\$-	XJF 4FS&MO&S&D \$M&L		-7\$. 04 *0	7/ 5 3450	. PEV&M *O&FS&QJ. PEV&M 3FTFU		. VM&I - FV&A
7\$\$	7 1PXFS			7\$\$	7 1PXFS		
7\$\$	7 1PXFS			7\$\$	7 1PXFS		
-18 O 134 O	-PX 1PXFS. PEV&M 1&FT&C&L . VM&I - FV&A			4%'	XJF 4FS&MO&S&D %&BUB		-7\$. 04 *0
	( / %	( \$PVE			( / %	( \$PVE	

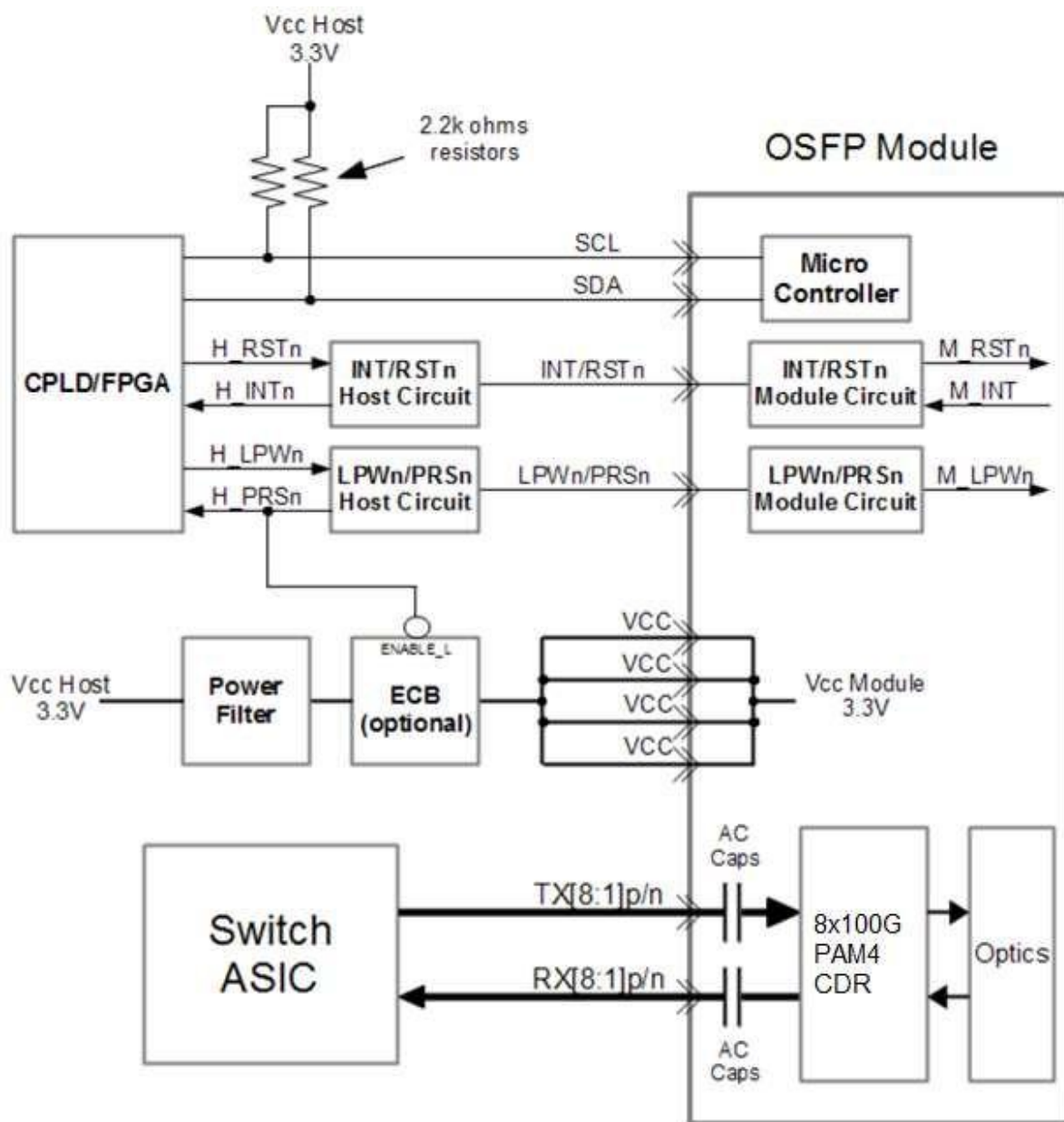
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	39 O	3FDJWFS%BLB*OVFSJE	\$. - 0		59 O	5SBOTN JIJS%BLB*OVFSJE	\$. - *
	39 Q	3FDJWFS%BLB/ PO*OVFSJE	\$. - 0		59 Q	5SBOTN JIJS%BLB/ PO*OVFSJE	\$. - *
	( / %	( SPVCE			( / %	( SPVCE	
	39 O	3FDJWFS%BLB*OVFSJE	\$. - 0		59 O	5SBOTN JIJS%BLB*OVFSJE	\$. - *
	39 Q	3FDJWFS%BLB/ PO*OVFSJE	\$. - 0		59 Q	5SBOTN JIJS%BLB/ PO*OVFSJE	\$. - *
	( / %	( SPVCE			( / %	( SPVCE	
	39 O	3FDJWFS%BLB*OVFSJE	\$. - 0		59 O	5SBOTN JIJS%BLB*OVFSJE	\$. - *
	39 Q	3FDJWFS%BLB/ PO*OVFSJE	\$. - 0		59 Q	5SBOTN JIJS%BLB/ PO*OVFSJE	\$. - *
	( / %	( SPVCE			( / %	( SPVCE	
	39 O	3FDJWFS%BLB*OVFSJE	\$. - 0		59 O	5SBOTN JIJS%BLB*OVFSJE	\$. - *
	39 Q	3FDJWFS%BLB/ PO*OVFSJE	\$. - 0		59 Q	5SBOTN JIJS%BLB/ PO*OVFSJE	\$. - *
	( / %	( SPVCE			( / %	( SPVCE	
	39 O	3FDJWFS%BLB*OVFSJE	\$. - 0		59 O	5SBOTN JIJS%BLB*OVFSJE	\$. - *
	39 Q	3FDJWFS%BLB/ PO*OVFSJE	\$. - 0		59 Q	5SBOTN JIJS%BLB/ PO*OVFSJE	\$. - *
	( / %	( SPVCE			( / %	( SPVCE	

7\* %HUBM%BHOPTUD' VODJIPOT

1BSBN FUS	3BOHF	" DV/SBZ	6OU	\$BMCSBUPO
5FN QFSBU/SF	-	±	•\$	*OFSOBM
7PMBHF	-.7\$\$		7	*OFSOBM
5Y#JBT\$VSSFOU FBD - BOF	-		N"	*OFSOBM
5Y0 VUQUJ1PXFS FBD - BOF	-	±	E#	*OFSOBM
3Y3FDJWF 1PXFS FBD - BOF	-	±	E#	*OFSOBM

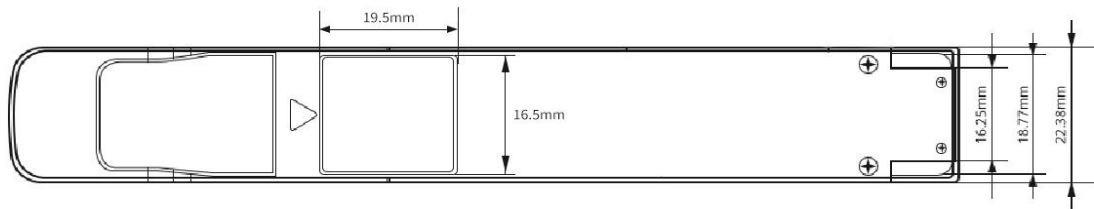
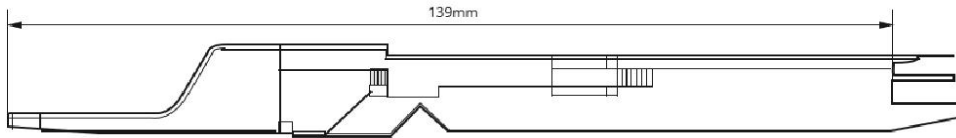
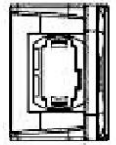
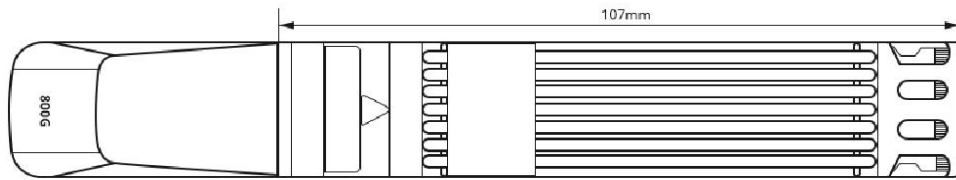
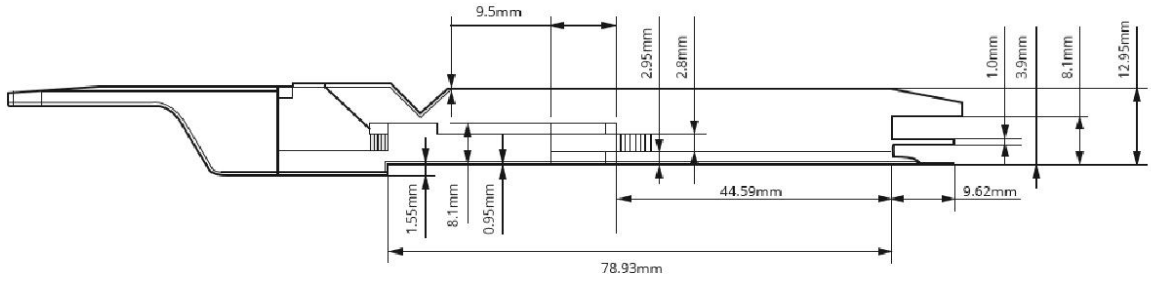


7\*\* 3FDPN N FOEFE 04' 1) PTU#PBSE 4D FN BJD



' JVSF o3FDPN N FOEFE 04' 1) PTU#PBSE 4D FN BJD

7\*\*\* . FD BQJBM% BHSBN



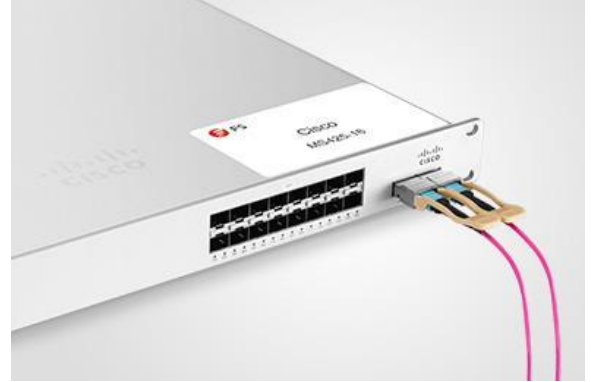
### 5FTU\$FOUFS

\* \$PN QBUJCMUZ5FTUJCH

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\$JTCP \$BUBZTU\$ : \$



\$JTCP . 4



#SPDEF7%0 4



%FM& \$ / FUKPSLCH; 0/



' P\$JF0 UN 4 5

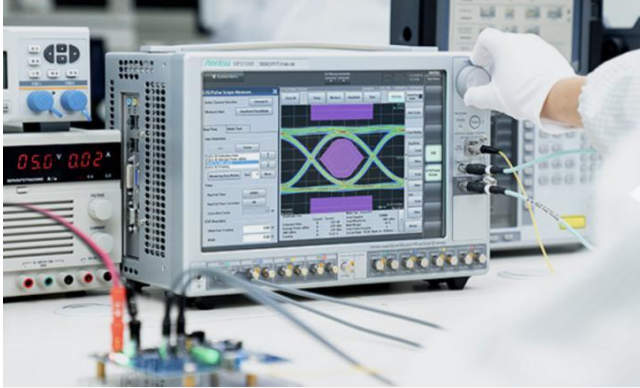


) 6" 8 &4 - ) \* 4

" CPVIF JTGBSLJPGV\$UFTUCFE OFUK PSL FRVJQN FOU' PSN PSF JOGPN BUJPO QVIBTF DMJL UJ F 5FTU#FE 1% \*UX JMWCF VGEBUFE JOSFEMUN F BT XF FYGBOE PVSQPSJPNP

## \*\* 1 FSCPSN BODF 5FTUJCH

&BD GCFSPLQJDBMSBOTDFJWFSI BT OFFOGVMZUFTUFE JO' 4" TTVSFE 1SPHSBN FRVJQQFE XJU XPSMNTN PTUBEVIBODFE BOBVMJDBM  
FRVJQN FCUUP FOTVSF U BUPVSLSBOTDFJWFSXPSL GFSDFUWZ POZPVSEFVDF



### 1. TX/RX Signal Quality Testing

Equipped with the all-in-one tester integrated 4ch BERT & sampling oscilloscope, and variable optical attenuator to ensure the input and output signal quality.

- Eye Pattern Measurements: jitter, Mask Margin, etc
- Average Output Power
- OMA
- Extinction Ratio
- Receiver Sensitivity
- BER Curve

### 2. Reliability and Stability Testing

Subject the transceivers to dramatic changes in temperature on the thermal shock chamber to ensure reliability and stability of the transceivers.

- Commercial: 0 °C to 70 °C
- Extended: -5 °C to 85 °C
- Industrial: -40 °C to 85 °C



### 3. Transfer Rate and Protocol Testing

Test the actual transfer data rate and the transmission ability under different protocols with Network Master Pro.

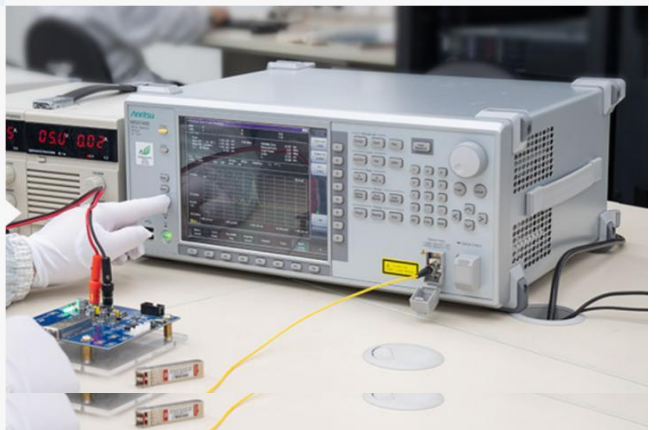
- Ethernet
- Fibre Channel
- SDH/SONET
- CPRI



### 4. Optical Spectrum Evaluation

Evaluate various important parameters with the Optical Spectrum Analyzer to meet the industry standards.

- Center Wavelength, Level
- OSNR
- SMSR
- Spectrum Width



0 SEFS\*OPSN BUPO

1BSJ/ VN CFS	%FTDSQJPO
04' 1 %3 #	( # " 4&%3 04' 11" . CN N %0 . . 51 . 10 4 . ' 0 QJDN\$BOTDFJWS
04' 1 ' 3 "	( # " 4& ' 3 04' 11" . CN LN %0 . -\$ 4 . ' 0 QJDN\$BOTDFJWS
2%% ' 3 \$	( # " 4& ' 3 24' 1 %1" . CN LN %0 . %BN\$44 . ' 0 QJDN\$BOTDFJWS
04' 1 9%3 #	( # " 4&9%3 04' 11" . CN LN %0 . . 51 . 10 4 . ' 0 QJDN\$BOTDFJWS
04' 1 1-3 #	( # " 4&1-3 04' 11" . CN LN %0 . %BN 51 . 10 4 . ' 0 QJDN\$BOTDFJWS
04' 1 %3 #	( # " 4&%3 04' 11" . CN N %0 . . 51 . 10 4 . ' 0 QJDN\$BOTDFJWS



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