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S age Te e a e Ra ge	T	C	-40	+85
Rela i e H idi	RH	%	5	85
P e S l V l age	Vcc	V	-0.5	+3.6
O e a i g Ca e Te e a e Ra ge	Tc	C	-5	75
Recei e Da age Th e h ld Pe La e	P_{dag}	dB	+5.5	

O e a i g Ca e Te e a e Ra ge	Tc	C	0		70
P e S l V l age	Vcc	V	3.2	3.3	3.4
Da a a e		Gb/		103.125	112

I	High V l age	1.2VIH	V	0.84	1.5
I	L V l age	1.2VIL	V	-0.3	0.36
I O	Leakage C e High V l age	1.2IIN	A	-100	+100

OMA f Each La e L A e		dB

13	GLB_ALRM	Gl bal Ala	I	3.3V LVCMOS	Ok	Ala	
18	MDIO	Ma age e Da a I O Bi-Di ec i al Da a					

	Dela Ti e					OR f A cia ed MDIO ala & a egi e .Plea e ee MDIO d c e f f he de ail
	Ma age e I e face Cl ck Pe i d	_ d	25 0			MDC i 4MH a e
	H MDIO _ e H MDIO _h ld	_ e _h ld	10 10			

O i al T a i e a d Recei e M i Cl ck Cha ac e i ic

		Mi	T	Ma	U i	N e
I eda ce	Zd	80	100	120	Ω	
F e e c					MH	1/8 f Ne k la e a e
O Diffe e ial V l age	V_{DIFF}	400		1200	V	Peak Peak Diffe e ial
Cl ck D C cle		40		60	%	

CFP Regi e All ca i

S a i g			
Add e i He	E di g Add e i He	Acce T e	All ca ed

CFP NVR1

He Add	Si e	Acce T e	Bi	Regi e Na e	C e (HEX)	LSB U i
Ba e ID I f a i						
8000	1	RO	7 0	M d le Ide ifie	12	N/A
8001	1	RO	7 0	E e ded Ide ifie	E4	N/A
8002	1	RO	7 0	C ec T e C de	07	N/A
8003	1	RO	7 0	E he e A lica i C de	01	N/A
8004	1	RO	7 0	Fibe Cha el A lica i C de	00	N/A
8005	1	RO	7 0	C e Li k A lica i C de	00	N/A
8006	1	RO	7 0	SONET/SDH A lica i C de	00	N/A
8007	1	RO	7 0	OTN A lica i C de	08	N/A
8008	1	RO	7 0	Addi i al Ca able Ra e S ed	18	N/A
8009	1	RO	7 0	N be f La e S ed	44	N/A
800A	1	RO	7 0	Media P e ie	11	N/A
800B	1	RO	7 0			

				N be		
8069	1	RO	7 0	CFP MSA Ma age e I e face S ecifica i Re i i N be		
806A	2	RO	7 0	M d le Ha d a e Ve i N be		
806C	2	RO	7 0	M d le Fi a e Ve i N be		
806E	1					

809A	2	RO	7 0	A ilia 1 M i High Wa i g Th e h ld		
809C	2	RO	7 0	A ilia 1 M i L Wa i g Th e h ld		
809E	2	RO	7 0	A ilia 1 M i L Ala Th e h ld		
80A0	2	RO	7 0	A ilia 2 M i High Ala Th e h ld		
80A2	2	RO	7 0	A ilia 2 M i High Wa i g Th e h ld		
80A4	2	RO	7 0	A ilia 2 M i L Wa i g Th e h ld		
80A6	2	RO	7 0	A ilia 2 M i L Ala Th e h ld		
80A8	2					

				0 15		

He Add	Si e	Acce T e	Bi	Regi e Na e	C e (HEX)	LSB U i
Ba e ID I f a i						
8180	1	RO	7 0	CFP NVR3 Check		
8181	127	RO	7 1	Re e ed		

He Add	Si e	Acce T e	Bi	Regi e Na e	C e (HEX)	LSB U i
M d le C a d/Se Regi e						
A000	2	RO	15 0	Re e ed		
A002	2	RO	15 0	Re e ed		
A004	1	RO				
			8 6	Re e ed		
			4	Re e ed		
			3 2	C a d S a		
		RW	15 9	Re e ed		
			5	U e Re e a d Sa e C a d		
			1 0	E e ded C a d		
A005	1	RO				
			15 8	Re e ed		
		RW	7 0	F c i Selec C de		
A006	1	RO				
			15 8	Re e ed		
		RW	7 0	F c i Selec C de		

		RW	11	S f PRG_CNTL2 C l		
		RW	10	S f PRG_CNTL1 C l		
		RW	9	S f GLB_ALRM Te		
		RO	8 6	Re e ed		
		RO	5	TX_DIS Pi S a e		
		RO	4	MOD_LOPWR Pi S a e		
		RO	3	PRG_CNTL3 Pi S a e		
		RO	2	PRG_CNTL2 Pi S a e		
		RO	1	PRG_CNTL1 Pi S a e		
		RO	0	Re e ed		
A011	1					
		RO	15	Re e ed		
		RW	14	TX PRBS Ge e a E able		
		RW	13	TX PRBS Pa e 1		
		RW	12	TX PRBS Pa e 0		
		RW	11	TX De- ke E able		
		RW	10	TX FIFO Re e		
		RW	9	TX FIFO A Re e		
		RW	8	TX Re e		
		RW	7 5	TX MCLK C l		
		RO	4	Re e ed		
		RW	3 1	TX Ra e Selec (10G la e a e)		

RW

				S a		
			6	La e 6 Ala a d Wa i g S a		
			5	La e 5 Ala a d Wa i g S a		
			4	La e 4 Ala a d Wa i g S a		
			3	La e 3 Ala a d Wa i g S a		
			2	La e 2 Ala a d Wa i g S a		

				S a 9 La e 9 Fa l a d S a S a		

			1	M d SOA Bia L Wa i g		
			0	M d SOA Bia L Ala		
A020	1	RO				
			15 8	Re e ed		
			7	M d A 1 High Ala		
			6	M d A 1 High Wa i g		

		RO	0	Re e ed		
A02B	1	RO		M d le Ala a d Wa i g 1 E able		
			15 12	Re e ed		
			11	M d Te Hi Ala E able		
			10	M d Te Hi Wa E able		
			9	M d Te L Wa i g E able		
			8	M d Te L Ala E able		
			7	M d Vcc High Ala E able		
			6	M d Vcc High Wa i g E able		
			5	M d Vcc L Wa i g E able		
			4	M d Vcc L Ala E able		
			3	M d SOA Bia High Ala E able		
			2	M d SOA Bia High Wa i g E able		
			1	M d SOA Bia L Wa i g E able		
			0	M d SOA Bia L Ala E able		
A02C	1					
		RO	15 8			

Ne k La e VR1		
He Add	Si e	

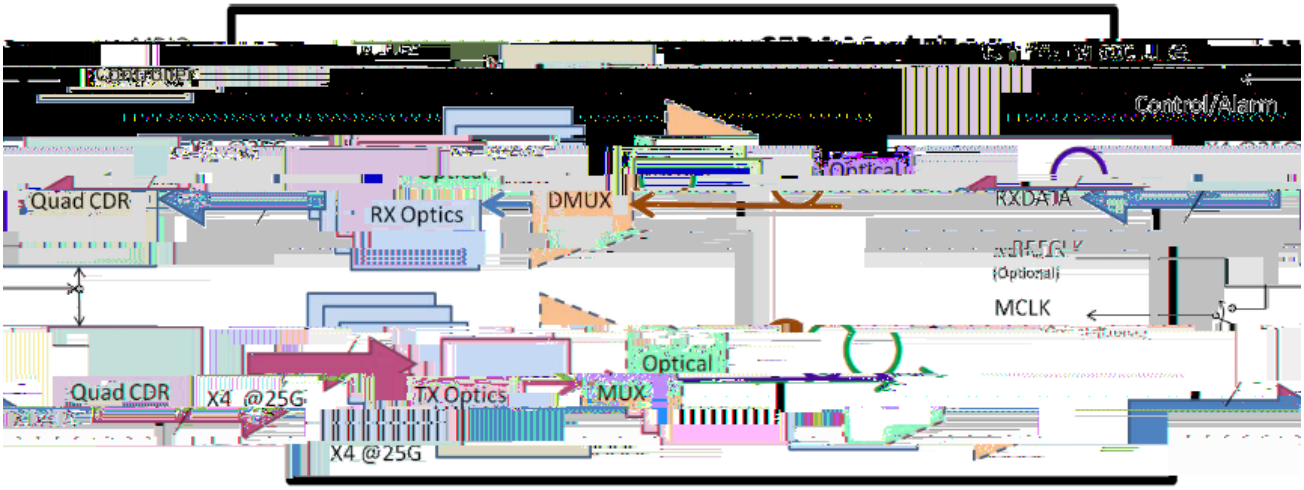
		RW	14	La e Wa ele g h U l cked Fa l E able		
		RW	13	La e APD P e S l Fa l E able		
		RO	12 8	Re e ed		
		RW	7	La e TX_LOSF E able		
		RW	6	La e TX_LOL E able		
		RO	5	Re e ed		
		RW	4	La e RX_LOS E able		
		RW	3	La e RX_LOL E able		
		RW	2	La e RX FIFO S a E able		
		RO	1 0	Re e ed		
A260	32	RO		Re e ed		

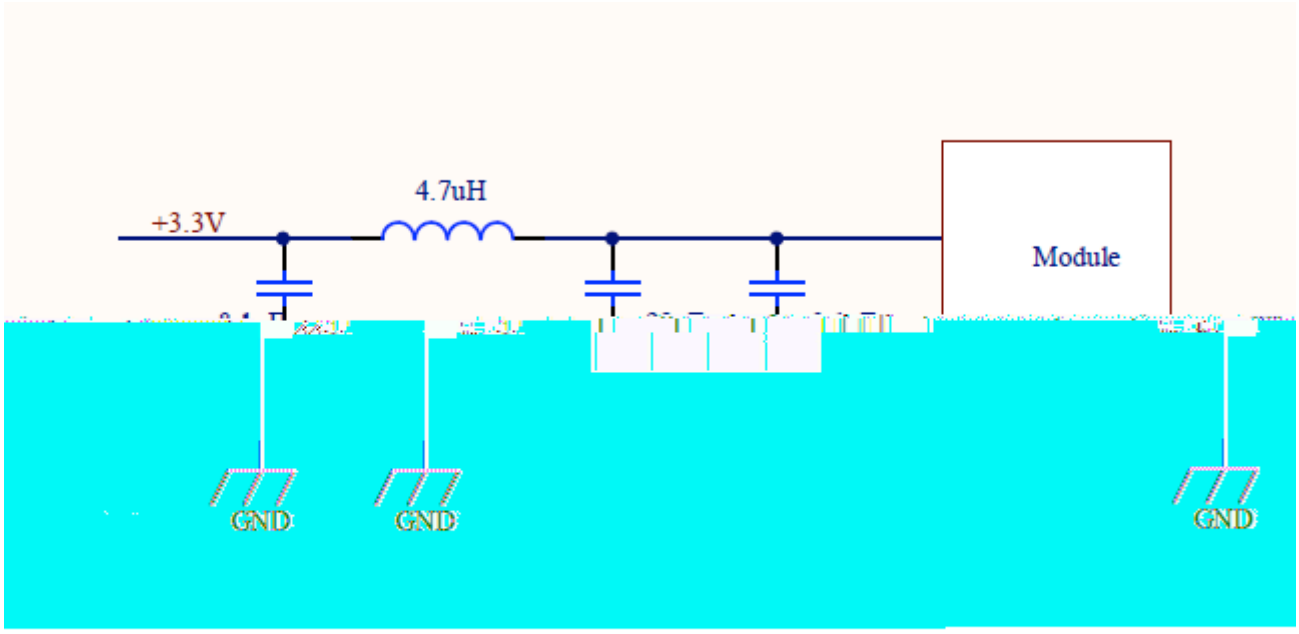
A410	16					
		RO	15 2			

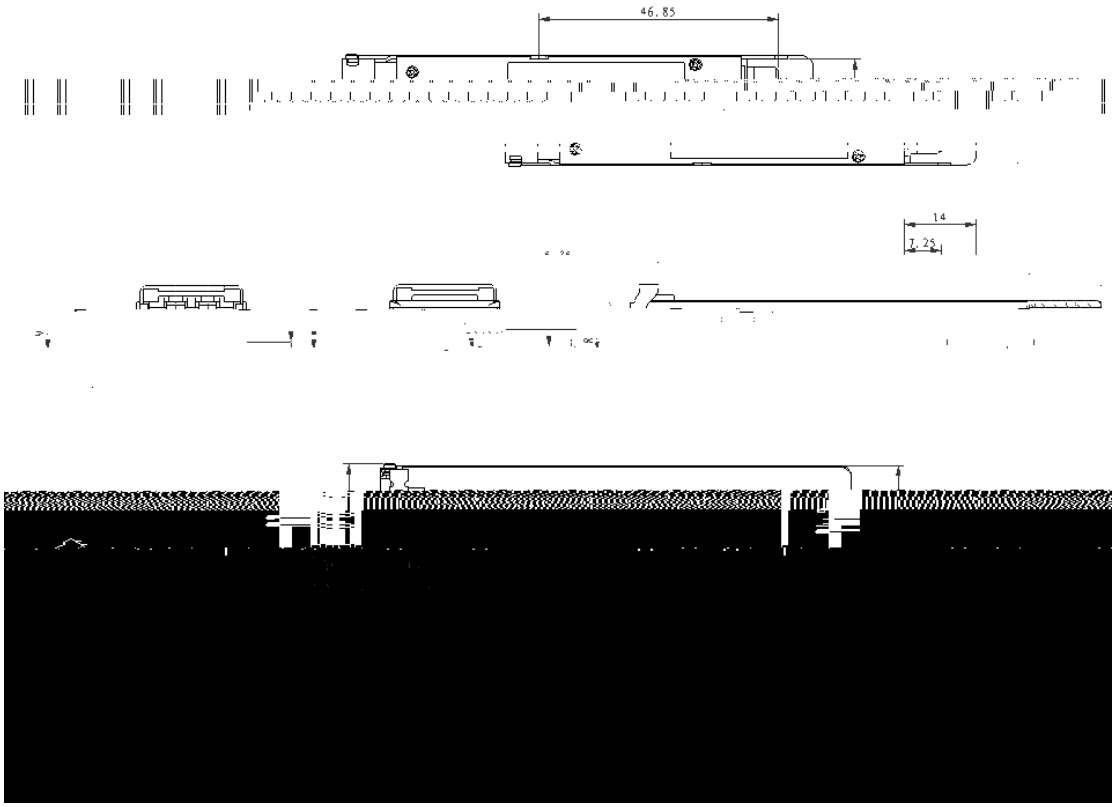
52	TX2	5	3.3V	52	TX1
51	TX2	6	3.3V	51	TX1
50	GND	7	3.3V_GND	50	GND
49					

8	3.3V_GND			3.3V M d le S l V l age Re G d,ca be e a a e ied ge he i h Sig al
9	VND_IO_A	I/O		M d le Ve d I/O. D N C ec
10	VND_IO_B	I/O		M d le Ve d I/O. D N C ec
11	TX_DIS(PRG_CNTL1)	I	LVCMOS /PUR	T a i e Di able f all la e , 1 NC= a i e di abled, 0 = a i e e abled (O i all c fig able a P g a able C l1 af e Re e)
12	RX_LOS(PRG_ALRM1)	O	LVCMOS	Recei e L f O ical Sig al, "1": l ical ig al, "0": al c di i (O i all c fig able a P g a able Ala 1 af e Re e)
13	GLB_ALRM	O	LVCMOS	Gl bal Ala . 0": ala c di i i a MDIO Ala egi e , "1": ala c di i , O e D ai , P ll U Re i H
14	MOD_LOPWR	I	LVCMOS / PUR	M d le L P e M de. "1" NC: d le i l e (afe) de, "0": e - e abled

30	RX0	O	CML	O Da a
31	RX0	O	CML	I e ed O Da a
32	GND			
33	RX1	O	CML	O Da a
34	RX1	O	CML	I e ed O Da a
35	GND			
36	RX2	O	CML	O Da a
37	RX2	O	CML	I e ed O Da a
38	GND			
39	RX3	O	CML	O Da a
40	RX3	O	CML	I e ed O Da a
41	GND			
42	REFCLK	I	CML	Refe e ce I Cl ck
43	REFCLK	I	CML	Refe e ce I e ed I Cl ck
44	GND			
45	TX0	I	CML	I Da a
46	TX0	I	CML	I e ed I Da a
47	GND			
48	TX1	I	CML	I Da a
49	TX1	I	CML	I e ed I Da a
50	GND			
51	TX2	I	CML	I Da a
52	TX2	I	CML	I e ed I Da a
53	GND			
54	TX3	I	CML	


Control/Alarm
Quad CDR
RX Optics
DMUX
Optical
RXDATA
(Optional)
MCLK
Optical
Quad CDR
X4 @25G
TX Optics
MUX
X4 @25G


4.7uH
+3.3V
Module
GND
GND
GND



Elec	a ic	Di cha ge	MIL-STD
(ESD)	he Elec	ical Pi	

CDRH 21