Bill of Materials

<<<From Job: E:\JOBS_TRACER\TRACER_PROD_V2_1\vbdc\tracer_prod.prj>>>

Fermi National Accelerator
PPD/ET&T/CDF Upgrade Project

Item	QTY	vendor part number	Description	Cost	REF DESG
1	3	AD9501JP	Dig Prog Delay Gen, JP pkg	20.00	U56-U58
2	1	AMP 1-520459-3	AMP Modular Jack Connector 8 Pos	2.25	J1
3	1	AMP 3-520459-3	AMP Modular Jack Connector 8 Pos	2.25	J2
4	1	AMP 226968-1 DIGI A1126-ND	Twinax Bulkhead	24.58	J6
5	1	AMP 269050-1	AMP Optronic Data Link - RCVR 200Mb/s	76.47	U15
6	1	AMP 352009-1 PLUS SHIELDS .	AMP 5x19 Z-PACK 2mm Female Conn w/gnd sh	25.00	P0
7	1	AMP269049-1	200 Mb/s 1300 nm optical transmitter.	20.00	D6
8	1	AM27S19SAPC	32x8 PROM	1.25	U35
9	1	AM29F010-45JC	No PDB description available	10.45	U11
10	1	AM7968-175JC	Taxi xmtr	20.00	U22
11	1	AM7969-175JC	TAXI RCVR	25.00	U16
12	1	BOT d_strip	Bottom Discharge strip	.01	X2
13	1	C&K P8121 1160-1890	Mom. Push button Panel mnt	2.48	S4
14	3	CAP_CER_SMT_SPARE_1206	SMT CAP SPARE	0.168	C147,C149,C151
15	1	CY7B991-7JC	ROBOCLOCK	21.85	U42
16	5	CY7C470-15JC	Cypress 8K x 9 FIFO	22.00	U17,U28,U38,U44
*					U49
17	5	CY74FCT16500TTSSOP	18-bit Registered Transceivers	5.78	U23,U29,U30,U32
*					U39
18	1	CY74FCT16543CTPAC	No PDB description available		U31
19	5	CY74FCT162244TTSSOP	16-Bit Buffers/Line Drivers	3.95	U18,U27,U37,U43
*					U48
20	1	DS26C32ATN RS-422 recvr National	Diff Line RCVR	3.50	U52
21	1	DS90C031 National	Differential Line Driver	2.23	U9
22	1	DS90C032 National	Differential Line Receiver	2.23	U41
23	3	DS1020	Programmable 8-bit Silicon delay line 1n	22.00	U61-U63
24	2	ERIE 8131-100-651-104M 1415-3140	Bypass Cap .1UF	0.05	C17,C25
25	1	ERIE 8131-100-651-153M 1415-3090	Bypass Cap .015UF	0.07	C1
26	4	ERJ-6ENF19.1 Digi P19.1CBK-ND	1/10W 1% 19.1 ohm	0.061	R40,R43,R51,R54
27	8	ERJ-6ENF51.1 Digi P51.1CBK-ND	1/10W 1% 51.1 ohm	0.061	R41,R42,R44,R45
*					R52,R53,R55,R56
28	1	ERJ-8ENF1.00K Digi P1.00KFBK-ND	1/8W 1% 1.0K ohm	0.0542	R37
29	3	ERJ-8ENF8.0K Digi P8.0KFBK	1/8W 1% 1.0K ohm	0.0542	R78-R80
30	7	ERJ-8ENF66.5 Digi P66.5FBK-ND	1/8W 1% 66.5 ohm	0.0542	R26,R32,R35,R39
*					R46,R65,R68
31	2	ERJ-8ENF82.5 Digi P82.5FBK-ND	1/8W 1% 82.5 ohm	0.0542	R70,R71
32	2	ERJ-8ENF100 Digi P100FBK-ND	1/8W 1% 100 ohm	0.0542	R48,R72
33	2	ERJ-8ENF121 Digi P121FBK-ND	1/8W 1% 121 ohm	0.0542	R73,R74
34	2	ERJ-8ENF158 Digi P158FBK-ND	1/8W 1% 158 ohm	0.0542	R29,R30
35	2	ERJ-8ENF169 Digi P169FBK-ND	1/8W 1% 169 ohm	0.0542	R17,R25
36	2	ERJ-8ENF249 Digi P249FBK-ND	1/8W 1% 249 ohm	0.0542	R23,R24

37	2	ERJ-8ENF267 Digi P267FBK-ND	1/8W 1% 267 ohm	0.0542	R28,R34

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38	2	ERJ-8ENF394 Digi P394FBK-ND	1/8W 1% 394 ohm	0.0542	R49,R50
39	80	Ground Via	Ground-Via	.00	VG1-VG7,VG18,VG19
*					VG20-VG85,VG89
*					VG90-VG93
40	3	HARTING-male	VME64 Card Connector	25.00	P1-P3
41	1	HIROSE TM5RJ1-66 DIG H9083-ND	Modular Jack 6pos 6contact	2.30	J3
42	1	HP HFBR-2412	Fiber Optic RCVR	18.15	U26
43	4	HP HLMP-1301 1445-0475	Red LED	0.24	D1,D3-D5
44	1	HP HLMP-1401 1445-0495	Yellow LED	0.24	D2
45	1	IDT 74FCT244DTP	8 bit Tri-state buffer	3.40	U50
46	17	KEMET T340B106K015AS	10UF 15V Bullet	.80	C56,C57,C59,C61
*					C104,C132,C137
*					C157,C161,C167
*					C181-C183,C206
*					C208,C211,C212
47	3	KEMET T354H336K016AS	33UF 16V RADIAL Dip	.85	C18,C26,C53
48	2	LITTLEFUSE 251010 Newark 20F604	10 AMP PCB Fuse	0.74	F1,F2
49	1	MACH 110-12JC	AMD PLD 44 Pin PLCC	7.00	U25
50	2	MC10E116	QUINT differentail Line Receiver	10.00	U40,U76
51	1	MC10H350	PECL Receiver	10.00	U51
52	2	MOTOROLA 1N5908	Transient Suppressor 6.0V	1.24	D7,D8
53	3	PALCE22V10H-7PC	Programmable Logic Device	5.00	U10,U34,U47
54	15	PAN ECS-H1CC106R DIG PCT3106	SMT CAP 10.0UF	0.9765	C2,C5,C6,C11,C13
*					C14,C15,C24,C28
*					C30,C31,C36,C37
*					C41,C52
55	1	PAN ECS-H1CY105R DIG PCT3105	SMT CAP 1.0UF	0.3955	C48
56	11	PAN ECU-V1H103KBG DIG PCC103BN	SMT CAP 0.01UF	0.168	C7,C9,C29,C32,C39
*					C46,C90,C101,C102
*					C119,C205
57	5	PAN ECU-V1H103KBM DIG PCC103BCT	SMT CAP 0.01UF	0.168	C19,C50,C51,C92
*					C93
58	152	PAN ECU-V1H104KBW DIG PCC104B	SMT CAP 0.1UF	0.5914	C3,C4,C12,C16,C21
*					C23,C27,C33,C34
*					C35,C38,C42,C43
*					C44,C45,C49,C54
*					C55,C58,C60,C62
*					C63-C89,C91,C94
*					C95-C100,C103
*					C105-C118,C120
*					C121-C131,C133

*					C134-C136,C138

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Item	QTY	vendor part number	Description	Cost	REF DESG
*					C139-C146,C148
*					C150,C152,C153
*					C154-C156,C158
*					C159,C160,C162
*					C163-C166,C168
*					C169-C180,C184
*					C185-C204,C207
*					C209,C210,C213
*					C214,C215,C245
59	6	PAN ECU-V1H561JCX DIG PCC561CGCT	SMT CAP 560pF	0.125	C8,C10,C20,C22
*					C40,C47
60	40	PN32	test point		GP1-GP18,TP18
*					TP23,TP24,TP31
*					TP32,TP33,TP40
*					TP44-TP58
61	5	RC05-270 1487-0290	270 ohm 1/8W 5%	0.19	R1,R3,R4,R6,R7
62	1	RC05-820K 1487-0497	1/8W 820Kohm 5%	0.18	R5
63	3	RC05-1000 1487-0325	1000 ohm	0.18	R14-R16
64	1	RC07-1.5M 1487-1125	1/4W, 5PCT, THRU	0.14	R76
65	2	RC07-1M 1487-1105	1/4W, 5PCT, THRU	0.19	R2,R77
66	1	RC07-5.6 Digi 5.6QBK-ND	1/4W, 5PCT, THRU	0.06	R75
67	5	RC07-4700 1487-0825	1/4W, 5PCT, THRU	0.08	R10-R13,R36
68	1	RN55C-13K	1/8W 1PCT Thru	0.04	R19
69	3	RN55C-27K	1/8W 1PCT Thru	0.04	R20-R22
70	2	RN55C-84.5	1/8W 1PCT Thru 249 Ohm	.04	R62,R63
71	1	RN55C-100K	1/8W 1PCT Thru	0.04	R18
72	1	RN55C-249 1487-4365	1/8W 1PCT Thru 249 Ohm	.04	R61
73	13	SN74ABTE16245SSOP	16 Bit Incident Transceiver	5.60	U1,U7,U8,U21,U33
*					U45,U46,U54,U59
*					U60,U65,U66,U75
74	1	SN74ABTE16246SSOP	11 Bit Incident Transceiver	7.50	U14
75	3	Samtec TSW-12-07-L-D 2pin sip	2 pin jumper - mates with SNT-100-BK-G $	0.16	S1-S3
76	8	Spare-IC 24DIP3	Spare 24 pin DIP	0.00	U67-U74
77	16	TEST_PIN	.025 x .025 square post.	.01	TP2-TP6,TP14,TP19
*					TP20,TP25,TP30
*					TP34-TP37,TP42
*					TP43
78	1	TIBPAL16L8-5C	Programmable Logic Device	5.00	U13
79	1	TOP d_strip	Top Discharge strip	.01	X1
80	28	VCC Via	VCC-Via	.00	VP1-VP25,VP59
*					VP60,VP61

81	1	XC3130A-1PQ100C	Xilinx XC3130A Logic Cell Array	35.00	U4

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Item	QTY	vendor part number	Description	Cost	REF DESG
82	1	XC4005EPQ100-3	Xilinx FPGA	60.00	U19
83	1	XC4013E-3PQ240C	Xilinx FPGA	250.00	U6
84	1	XC17128-PD8C	XILINX PROM	13.00	U20
85	2	XC17256-PD8C	XILINX PROM	13.00	U3,U12
86	2	mc10h351l	Quad TTL to PECL translator.	10.00	U36,U55
87	15	res_spare1206	1/8W 1% 1.0K ohm	0.00	R8,R9,R27,R31,R33
*					R38,R47,R57,R58
*					R59,R60,R64,R66
*					R67,R69
88	1	1N5817	Scottky Diode	.80	D9
89	1	3 pin jump 3SIP60 TSW-12-07-L-D	3 pin jumper	0.30	U24
90	1	10x-2-102	10 pin 1K SIP, pin 1 common	1.50	RP1
91	1	74F04N	hex inverter	0.53	U53
92	2	74F38N	Open collector nand	0.53	U5,U64
93	1	74LS14N 1455-8014	schmitt trigger inverter	0.31	U77
94	1	74LS123N 1455-8123	Multivibrator	0.35	U2
95	4	2503-5020-UG 3M 20pin Rt Ang HDR	3M 20 pin right angle header		J7-J10
96	6	2743021446 PSC ELECTRONICS	SMT FERRITE BEAD 10UH	1.30	L1-L6

Total Parts Used: 573

Total Parts Cost: 1313.17