

IROD Bill of Materials

Part Type	Ord	Qty	GPU Qty	Full Qty	Inv Qty	Ord Qty	Seach	\$total	Part # or Order #	Source	Description	Package	Reference Designators
T__ADS1252U	+	1	25	25	5	50	8.82000	441.00	ADS1252U	digi-key	burr-brown delta-sigma ADC	SOIC8	PWU30
T__CDC_POS	+	607	15175	15175	5000	15000	0.01700	255.00	PCC1845TR	digi-key	capacitor, .22 uF	SCDC	A0CDC1-A0CDC12, A1CDC1-A1CDC12, A2CDC1-A2CDC12, A3CDC1-A3CDC12, A4CDC1-A4CDC12, A5CDC1-A5CDC12, B0CDC1-B0CDC12, B1CDC1-B1CDC12, B2CDC1-B2CDC12, B3CDC1-B3CDC12, B4CDC1-B4CDC12, B5CDC1-B5CDC12, BKCDC1-BKCDC14, CGCDC1-CGCDC115, DCCDC1-DCCDC16, DXCDC1-DXCDC59, HOCDC1-HOCDC36, ICCDC1-ICDCDC120, JTCDC1-JTCDC22, PWCDC1-PWCDC23, VMDCDC1-VMDCDC58
T__C220NF	+	9	225	330	555	-	-	-	same as CDC_POS	digi-key	capacitor	SRC805	CGC1-CGC9
T__DS2401P	3	1	25	330	355	500	0.91200	456.00	DS2401P	digi-key	serial number	TSOC6	HOU9
T__PT7711C	+	2	50	50	6	50	47.18000	2359.00	PT7711C	digi-key	DC-DC converter	PTSMT1430C	PWU9, PWU10
T__TDC_POS	+	88	2200	1980	3000	3000	0.41100	1233.00	P11290TR	digi-key	tantalum decoupling cap	STDC	ATDC1-ATDC3, A0TDC1-A0TDC3, A1TDC1-A1TDC3, A2TDC1-A2TDC3, A3TDC1-A3TDC3, A4TDC1-A4TDC3, A5TDC1-A5TDC3, BTDC1-BTDC3, B0TDC1-B0TDC3, B1TDC1-B1TDC3, B2TDC1-B2TDC3, B3TDC1-B3TDC3, B4TDC1-B4TDC3, B5TDC1-B5TDC3, BKTDC1, BKTDC2, CGTDC1-CGTDC5, DCTDC1, DCTDC2, DXTDC1-DXTDC7, HOTDC1-HOTDC6, ICTDC1-ICTDC14, JTTDC1-JTTDC3, PWTDC1, VMTDC1-VMTDC6
T__TPS2034D	+	16	400	400	150	750	1.36500	1023.75	296-2569-5	digi-key	2.0A power distribution switch	SOIC8	PWU33-PWU53; but do not install: PWU36, PWU40, PWU42, PWU47, PWU51
T__XOSC_SMT_25M	+	2	50	50	50	100	1.37860	137.86	CTX276LVCT	digi-key	oscillator, 25 MHz	SMT_OSC4	CGX4, CGX5
T__XOSC_SMT_40M	+	1	25	25	50	50	1.98300	99.15	CTX280LVCT	digi-key	oscillator, 40 MHz	SMT_OSC4	CGX6
T__CDC319	+	7	175	175	100	250	1.90192	475.48	CDC319	digi-key	clock driver	SSOP28	CGU27-CGU30, JIU3-JIU5
T__XC95144XL_100	+	3	75	75	10	100	13.49950	1349.95	XC95144XL-5TQ100C	digi-key	PLD	TQFP100	CGU1, CGU2, HOU3
T__XC95144XL_144	+	2	50	50	10	60	16.85000	1011.00	XC95144XL-5TQ144C	digi-key	PLD	TQFP144	VMU10, VMU13
T__FS6377_01	+	9	225	225	100	250	3.32500	831.25	FS6377-01	All American	frequency synthesizer	SOIC16	CGU3-CGU11
T__CY7C056V	+	1	25	25	6	60	63.06000	3783.60	CY7C056V-15AC	arrow	dual-port RAM	TQFP144	VMU12
T__AM29LV033C	+	2	50	50	10	120	7.00000	840.00	AM29LV033C-70EI	avnet	flash memory	TSOP40	VMU14, VMU15
T__DS1775R	+	3	75	330	405	500	1.30000	650.00	DS1775R	insight	temperature sensor	SOT23_5	ICU8-ICU10
T__IDT72V3690	+	2	50	50	6	60	51.78000	3106.80	IDT72V3690L10PF	insight	FIFO	TQFP128	DXU4, VMU11
T__XC2S150_PQ208	+	10	250	250	10	264	24.85000	6560.40	XC2S150-6PQ208C	insight	FPGA	PQFP208	DXU1-DXU3, ICU1-ICU7
T__XC2S200_PQ208	+	1	25	25	23	24	30.20000	724.80	XC2S200-6PQ208C	insight	FPGA	PQFP208	DCU1
T__XC95288XL_144	+	1	25	25	4	30	29.55000	886.50	XC95288XL-7TQ144C	insight	PLD	TQFP144	VMU9
T__MP725_02	+	4	100	100	100	250	3.22000	805.00	MP725-0.020-5.0%	caddock	current sense resistor, .02 ohm	DPAK_MP725	PWR27, PWR28, PWR34, PWR35
T__SN65LVDS34D	+	5	125	125	200	200	2.54800	0.00	296-9744-5	digi-key	SN65LVDS34D LVDS receiver	SOIC8	CGU45-CGU48, ICU11
T__74F07	+	2	50	50	90	90	-	-	74F07	digi-key	open collector buffer	SOIC14	VMU6, VMU7
T__AD1580	+	12	300	300	500	500	1.68800	0.00	AD1580BRT	future	voltage reference	SOT23	PWU5, PWU7, PWU11, PWU13, PWU15, PWU17, PWU19, PWU21, PWU23, PWU26-PWU28
T__AD8517ART	+	9	225	225	500	500	0.75000	0.00	MC33503SNT1	newark	low-voltage rail-to-rail op amp	SOT23_5	PWU6, PWU8, PWU12, PWU14, PWU16, PWU18, PWU20, PWU22, PWU24
T__C10PF	+	11	275	330	1000	1000	0.03000	0.00	PCC100CNCT	digi-key	capacitor, 10 pF	SRC805	CGC10-CGC12, CGC14-CGC21
T__C33PF	+	1	25	25	500	500	0.04000	0.00	PCC330CGCT	digi-key	capacitor, 33 pF	SRC805	CGC13
T__C594D337X0010R2T	+	14	350	350	600	600	1.79000	0.00	594D337X0010R2T	TTI	tant cap, 330 uF, 10V	SPRAGUE_TDC_R	PWC1-PWC14
T__CDC2510	+	8	200	200	320	320	2.42000	0.00	296-6686-1	digi-key	PLL clock driver	TSSOP24	CGU31, CGU33, CGU34, CGU37-CGU40, CGU49
T__CDC2516	+	3	75	75	120	120	3.53700	0.00	296-6687-1	digi-key	PLL clock driver	SSOP48	CGU32, CGU35, CGU36
T__EXB2HV222JV	+	7	175	175	1000	1000	0.09675	0.00	Y1222CT	digi-key	isolated resistor pack	CHIPRES8X_5	VMRP1-VMRP7
T__EXB2HV270JV	+	16	400	400	1000	1000	0.09675	0.00	Y1270CT	digi-key	isolated resistor pack	CHIPRES8X_5	CGRP1-CGRP8, HORP1, HORP2, JTRP1-JTRP6
T__FERRITE120	+	26	650	650	4000	4000	0.03520	0.00	240-1041-2	digi-key	ferrite bead	SRC805	CGL1-CGL26
T__GPU_CONN	+	13	325	325	500	500	24.31500	0.00	84500-102	FCI	DSP module connector (plug)	GPUCONN	A0GP1, A1GP1, A2GP1, A3GP1, A4GP1, A5GP1, B0GP1, B1GP1, B2GP1, B3GP1, B4GP1, B5GP1, HOGP1
T__MAX396CAI	+	1	25	25	45	45	9.68000	0.00	MAX396CAI	maxim	16-input analog mux	SSOP28	PWU29
T__MBRS130LT3	+	13	325	325	750	750	0.17000	0.00	MBR130LT3	newark	Schottky diode	SMB	PWD1-PWD13
T__MCR12DSNT4	+	13	325	325	750	750	0.39000	0.00	MCR12DSNT4	newark	SCR	DPAK	PWQ1-PWQ13
T__OPA237NA	+	2	50	50	250	250	0.73500	0.00	OPA237NATR	digi-key	op amp	SOT23_5	PWU31, PWU32
T__R0	+	6	150	150	1000	1000	-	-	R0	-	resistor	SRC805	FPR16, PWR24, PWR26, PWR29, PWR31, VMR8; (do not install: PWR22, PWR23, PWR25, PWR30, PWR32, PWR33, VMR4-VMR7)
T__R10K	+	6	150	150	1000	1000	-	-	R10K	-	resistor	SRC805	CGR25, ICR22-ICR24, PWR70, PWR71
T__R110	+	17	425	425	1000	1000	0.01682	0.00	P110ACT	digi-key	resistor	SRC805	CGR16-CGR19, FPR5-FPR15, PWR64, VMR12
T__R1K	+	33	825	825	5000	5000	-	-	R1K	-	resistor	SRC805	A0R6, A1R6, A2R6, A3R6, A4R6, A5R6, B0R6, B1R6, B2R6, B3R6, B4R6, B5R6, CGR28, HOR6, PWR1-PWR5, PWR7-PWR11, PWR39, PWR43, PWR47, PWR51, PWR55, PWR59, PWR63, PWR66, PWR72
T__R1M_HW	+	4	100	100	1000	1000	0.08730	0.00	P1.0MWCT	digi-key	resistor, .5W	SRC2010	FPR1-FPR4

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T__R30	+	30	750	1320	2070	5000				R30		resistor	SRC805	CGR1-CGR15, CGR20-CGR24, HOR8-HOR12, ICR25, ICR26, JTR1, JTR2, PWR6
T__R360	+	25	625		625	5000				R360		resistor	SRC805	DXR4, DXR5, PWR73-PWR92, VMR1-VMR3; (do not install: DCR2-DCR5, DXR6-DXR15)
T__R357P1	+	20	500		500 * *	0	5000	0.00780	39.00	P357CTR	digi-key	resistor, 1%	SRC805	A0R4, A1R4, A2R4, A3R4, A4R4, A5R4, B0R4, B1R4, B2R4, B3R4, B4R4, B5R4, HOR4, ICR2, ICR5, ICR8, ICR11, ICR14, ICR17, ICR20
T__R221P1	+	20	500		500 * *	0	5000	0.00780	39.00	P221CTR	digi-key	resistor, 1%	SRC805	A0R5, A1R5, A2R5, A3R5, A4R5, A5R5, B0R5, B1R5, B2R5, B3R5, B4R5, B5R5, HOR5, ICR3, ICR6, ICR9, ICR12, ICR15, ICR18, ICR21
T__R4_7K	+	84	2100	990	3090	5000				R4_7K		resistor	SRC805	A0R1-A0R3, A1R1-A1R3, A2R1-A2R3, A3R1-A3R3, A4R1-A4R3, A5R1-A5R3, B0R1-B0R3, B1R1-B1R3, B2R1-B2R3, B3R1-B3R3, B4R1-B4R3, B5R1-B5R3, CGR26, CGR27, DCR1, DXR1-DXR3, DXR16-DXR18, HOR1-HOR3, HOR7, ICR1, ICR4, ICR7, ICR10, ICR13, ICR16, ICR19, ICR27, JTR3-JTR13, PWR12, PWR17, PWR36, PWR40, PWR44, PWR48, PWR52, PWR56, PWR60, PWR65, PWR67-PWR69, VMR9-VMR11
T__R3_09KP1	+	3	75		75	1000		0.01900	0.00	P3.09KCCT	digi-key	resistor, 1%	SRC805	PWR38, PWR58, PWR62
T__R3_83KP1	+	1	25		25	1000		0.01900	0.00	P3.83KCCT	digi-key	resistor, 1%	SRC805	PWR21
T__R5_23KP1	+	2	50		50	1000		0.01900	0.00	P5.23KCCT	digi-key	resistor, 1%	SRC805	PWR42, PWR46
T__R8_45KP1	+	1	25		25	1000		0.01900	0.00	P8.45KCCT	digi-key	resistor, 1%	SRC805	PWR54, PWR16
T__R10_2KP1	+	13	325		325	1000	5000	0.00780	39.00	P10.2KCTR	digi-key	resistor, 1%	SRC805	PWR13-PWR15, PWR18-PWR20, PWR37, PWR41, PWR45, PWR49, PWR53, PWR57, PWR61
T__R29_4KP1	+	1	25		25	1000		0.01900	0.00	P29.4KCCT	digi-key	resistor, 1%	SRC805	PWR50
T__REG103UA_5	+	1	25		25	100		2.66000	0.00	REG103UA-5	digi-key	voltage regulator	SOIC8	PWU25
T__SN65LVDS1	3	4	100		100	200		0.00	0.00	SN65LVDS1	insight	LVDS driver	SOT23_5	CGU41-CGU44
T__SN74ABTE16245	+	6	150		150	250		3.90000	0.00	296-9756-5	digi-key	ABTE transceiver, DL package	SSOP_DL48	VMU1-VMU5, VMU8
T__SN74CBTLV1G125DBV	+	14	350		350	750		0.25200	0.00	296-9109-1	digi-key	FET switch	SOT23_5	A0U1, A1U1, A2U1, A3U1, A4U1, A5U1, B0U1, B1U1, B2U1, B3U1, B4U1, B5U1, HOU1, HOU2
T__SN74CBTLV3253	+	14	350	330	680	2500				SN74CBTLV3253		FET mux	DBQ16	CGU12-CGU23, JTU6, JTU7
T__SN74LVTH162245	+	7	175		175	300		1.72900	0.00	296-8670-5	digi-key	LVTH transceiver, DL package	SSOP_DL48	HOU4-HOU8, JTU1, JTU2
T__TPS3305_33D	+	4	100		100	150		1.14000	0.00	296-2619-5	digi-key	dual supervisor	SOIC8	PWU1-PWU4
T__W170_01	+	3	75		75	150		1.98000	0.00	W170_01	arrow	frequency multiplier	SOIC8	CGU24-CGU26
thru-hole:														
T__DIPSW5	+	4	100		100 * *	21	120	1.62000	194.40	A5105	digi-key	dip switch	DIP10	FPSW1-FPSW4
T__VME64_P...	+	2	50		50 * *	40	20	14.68000	293.60	0201 160 1101	kensington	VME backplane connector	DIN160P_RT	BKP1, BKP2
T__DUAL_LED_RT_GRN	+	3	75		75	150		0.64000	0.00	67-1283	digi-key	dual LED, green	DUAL_LED_RT_100	FPD1-FPD3
T__DUAL_LED_RT_RED	+	2	50		50	100		0.64000	0.00	67-1282	digi-key	dual LED, red	DUAL_LED_RT_100	FPD4, FPD5
T__EMU_HEADER	+	1	25		25	100				EMU_HEADER		7x2 rt angle header	HEADER7X2RT_100MIL	FPH1
T__TTC_HEADER	+	1	25		25	100		1.08260	0.00	AHR16G	digi-key	8x2 rt angle header	HEADER8X2RT_100MIL	FPH3
T__HEADER10X2CS	+	1	25		25	50		1.60000	0.00	MHB20K	digi-key	10x2 close shroud header	HEADER10X2CS_100MIL	PWH1
T__JTAG_HEADER	+	1	25		25	30				JTAG_HEADER		5x2 rt angle header	HEADER5X2RT_100MIL	FPH2
press-fit:														
T__ROD_J0P0	+	1	25		25	65		5.31000	0.00	352171-1	TTI, Amp	VME backplane connector	CONN_2MM_6X19	BKP0
T__ROD_J5P5	+	1	25		25	72		6.09000	0.00	352152-1	TTI, Amp	VME backplane connector	CONN_2MM_6X22	BKP5
T__ROD_J6P6	+	1	25		25	60		6.87000	0.00	352069-1	TTI, Amp	VME backplane connector	CONN_2MM_6X25	BKP6
hand assembled:														
T__LATCH_SWITCH	4	1	25		25 - -				0.00	LATCH_SWITCH		front panel latch switch	LATCH_SW	PWSW1
do not install:														
T__XOSC_25M	+	2	50		50	10		2.46100	0.00	CTX251	digi-key	oscillator with 3-state output	DIP8	do not install: CGX1, CGX2
T__XOSC_50M	+	1	25		25	8				XOSC_50M		oscillator, 50 MHz	DIP8	do not install: CGX3
T__HEADER2	4	2	50		50 - -						uci	2x1 header strip	HEADER2_100MIL	do not install: JTH1, PWH2
T__VME_PANEL_HOLE	n/a	4	100		100	n/a	n/a	n/a	n/a	n/a	n/a	mounting hole for front panel	VMEPHOLE	do not install: FPM1-FPM4
T__ESD_STRIP_400	n/a	1	25		25	n/a	n/a	n/a	n/a	n/a	n/a	discharge strip	ESD_400MM	do not install: FPS1
T__TPS2034D	+	5	125		125			1.36500	0.00	296-2569-5	digi-key	2.0A power distribution switch	SOIC8	do not install: PWU36, PWU40, PWU42, PWU47, PWU51
T__R0	+	10	250		250					R0		resistor	SRC805	do not install: PWR22, PWR23, PWR25, PWR30, PWR32, PWR33, VMR4-VMR7
T__R360	+	14	350		350					R360		resistor	SRC805	do not install: DCR2-DCR5, DXR6-DXR15
T__C2_2NF	+	7	175		175	1000		0.03000	0.00	PCC222BNCT	digi-key	capacitor, 2.2 nF	SRC805	do not install: PWC15-PWC21
replaced:														
T__SN65LVDS9637B	+	5	125		125 - -	25		7.18400	0.00	296-2357-5	digi-key	LVDS receiver, see SN65LVDS34	SOIC8	CGU45-CGU48, ICU11
T__XOSC_SMT_50M	+	1	25		25 * *	10		7.43800	0.00	CTX283LVCT	digi-key	oscillator, replaced with 40 MHz	SMT_OSC4	CGX6
T__R6_19KP1	+	1	25		25	1000		0.01900	0.00	P6.19KCCT	digi-key	resistor, 1%, replaced with 8.45K	SRC805	PWR16
T__R18_2KP1	+	1	25		25	1000		0.01900	0.00	P18.2KCCT	digi-key	resistor, 1%, replaced with 29.4K	SRC805	PWR50

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T_EXB2HV560JV	+	16	400		400	1000		0.09675	0.00	Y1560CT	digi-key	res. pack, replaced with 27 ohm	CHIPRES8X_5	CGRP1-CGRP8, HORP1, HORP2, JTRP1-JTRP6
T_R360	+	20	500		500					R360		res., replaced with 357 ohm, 1%	SRC805	A0R4, A1R4, A2R4, A3R4, A4R4, A5R4, B0R4, B1R4, B2R4, B3R4, B4R4, B5R4, HOR4, ICR2, ICR5, ICR8, ICR11, ICR14, ICR17, ICR20
T_R360	+	20	500		500					R360		res., replaced with 221 ohm, 1%	SRC805	A0R5, A1R5, A2R5, A3R5, A4R5, A5R5, B0R5, B1R5, B2R5, B3R5, B4R5, B5R5, HOR5, ICR3, ICR6, ICR9, ICR12, ICR15, ICR18, ICR21
T_R1K	+	1	25		25					R1K		resistor, replaced with 360 ohm	SRC805	PWR73
T_R4_7K	+	3	75		75					R4_7K		resistor, replaced with 360 ohm	SRC805	PWR74-PWR76
Grand Total									27634.54					

Vref resistors:

Ivref		120 uA	Vref pin leakage, 12 pins
Rh		357 ohm	
RI		221 ohm	
Rth		137 ohm	
Vref		1.26 V	
Vref drop due to Ivref		0.02 V	
Vref if 1% R's	1.24	-	1.29 V
Vref if 5% R's	1.14	-	1.39 V