Component list		Bill of Materials for Project [419-0051-0201_Chameleon96.PrjPcb] (No PCB Document Selected)								
Source Data From:	419-0051-0201_Chameleon96.Pr Pcb		4		_					
Project:	419-0051-0201_Chameleon96.PrjPcb	_	novte	26	h					
	None	_	11016							
							_			
Report Date: Print Date:	2/20/2019 20-Feb-19	4:33 AM 5:06:34 AM								
Comment	Description	FootPrint	PART	TYPE	Marking	MFG	RoHS	TEMP	Designator	Quantity
4.7uF	CAP CER 4.7UF 6.3V X5R 0402	0402_C	GRM155R60J475M647D	SMT		MuRata	Yes	-55°C to +85°C	C1, C43, C44, C58, C65, C72, C74, C79, C89, C107, C112, C116, C122, C132, C138, C148, C151, C161, C173, C182, C185, C186, C188, C197, C196, C200, C203, C204,	32
0.1uF	OAP CIR 6 ILF6 3V XSR 0201	0201_C	'GPM0336C1E180JA01J	SMT		MuRata	Yes	-55°C to +85°C	THE CHIEF CH	134
18pF 22uF	18pF ±5% 25V Ceramic Capacitor COG, NP0 0201 (0603 Metric) CAP CER 22LF 10V XSR 0805	0201_C 0805_C	GRM0335C1E180JA01J CAP CER 22UF 10V X5R 0805	SMT		MuRata MuRata	Yes	-55°C to +85°C	C6, C7, C20, C28, C38 C9, C11, C24, C25, C26, C27, C31, C32, C92, C104	5
22uF 1uF	CAP CER 1UF 4V XSR 0201	0201_C	CC0201MRX5R4BB105	SMT		Yageo	Yes		C12, C13, C16, C19, C40, C49, C52	7
22uF/25V	Capasitor 0805 footprint	0805_C							C18, C33	2
4.7uF/25V 0.1uF/25V	4.7µF±10% 25V Ceramic Capacitor XSR 0603 (1608 Metric) 0.1µF±10% 25V Ceramic Capacitor XSR 0201 (0603 Metric)	0603_C 0201 C	C1608X5R1E475K080AC	SMT		TDK	Yes	'-55°C to +85°C -55°C to +85°C	C21, C34 C23, C39	2
10uF	CAP CER 10UF 10V X5R 0805	0805_C	'GRM21BR61A106KE19L	SMT		MuRata	Yes	-55°C to +85°C	C35, C36, C42, C63, C68, C69, C70, C71, C76	9
10uF	CAP CER 10LF 6.3V X5R 0603	0603 C	CL10A106MQ8NNNL	SMT		Samsung		-55°C to +85°C	C121	1
2.2pF 100pF	CAP CBR 2:2PF 25V COGNP0 0201 Capasitor 0201 footprint	0201_C 0201_C	GRM0335C1E2R2BA01D GRM0335C1E101JA01D	SMT		MuRata Murata	Yes	-55°C to +85°C -55°C to +125°C		3
SK23-LTP	Diode Schottky 30V 2A Surface Mount DO-214AA (SMB)	SMB	SK23-LTP	SMT	S3	McroCommerical	Yes		DI	- 1
P4234CZ6		SC-74 (SOT457)	P4234CZ6,125	SMT		NVP		-40°C to +85°C	D2, D4, D13, D14	4
RGB-LED LED-GREEN	Red, Green, Blue (RGB) 624nm Red, 525nm Green, 470nm Blue LED Indication - Discrete 2V Red, 3.5V Green, 3.5V Blue 2-SMD, No Lead LED GREEN CLEAR 0603 SMD	LED_RGB_1206 0603 LED	LTST-S310F2KT LTST-C190GKT	SMT		Lite-On Lite-On	Yes	-55°C to +85°C	DS DS DS DS DS	1 4
LED-YELLOW	LED GREEN CLEAR 0603 SMD LED YELLOW CLEAR 0603 SMD	0603_LED 0603_LED	LTST-C190GKT LTST-C190YKT	SMT		Lite-On Lite-On		-55°C to +85°C	D9 D9	1
LED-BLUE	LED BLUE CLEAR 0603 SMD	0603_LED	LTST-C190TBKT	SMT		Lite-On	Yes	-55°C to +85°C	D10	- 1
PDS1240CTL DIODE	Diode Array 1 Pair Common Cathode Schottiy 40V 6A Surface Mount PowerDI™ 5	0402 D	PDS1240CTL-13	SMT	63	Didge Inc	Yes	-65°C to +150°C	D11 D12, D15, D16, D17	1
DIODE Ferrite	FERRITE BEAD 120 OHM 0402 1LN	0402_D 0402_R	CDSQR4148 *MMZ1005S121CT000	SMT	63	Comchip		+125°C -55°C to +85°C	D12, D15, D16, D17 FB1, FB2, FB3, FB4, FB5	5
1.65MM Power Jack		PJ-041H				CUI Inc	Yes		J1	1
CONB									J2	1
20X2 MicroUSB AB		BH20X2_ZMM_SOCKET - 96BOARDSs - SMT MCROUSB AB 475890001	475890001	SMT		Molex	Yes		J3 J4, J13	1 2
30X2		61082_061409LF	473333331	O.B.I.		mou.x	103		J8	1
McroSD		MicroSD - MSPN09-08-D					Yes		J9	1
USB A RA Horizontal		USB_A_RA_H HDM 10029449-X01	87520-0010BLF 10029449-001RLF			FCI	Yes		J10, J11 J12	2
HDM CHOKE		CHOKE ACM2012 0805	ACM2012-900-2P-T001			TDK	Yes	-40°C to +85°C	L1, L4, L5, L6	4
2.2uH		ND_4X4X2.1_XFL4020	XFL4020-222MEB	MST		Collcraft	Yes	-40°C to +125°C	L2, L3	2
TIM-L-WB 0ohm	Besider	TIMI-L-WB OPT RES 0402	450-0125				-		MI OPI	1
SI2307CDS-T1-E3	P.CHANNEL	SOT23-MOSFET	SI2307CDS-T1-E3	SMT	N7	Vishay	Yes		Q1	1
BP_NPN 2K		SOT23-NPN-PNP	PDTD113ZK	SMT	*7V	NOP	Yes	-65°C to +150C°	02, 03	2
2K 12K	Resistor 0201 footprint Resistor 0201 footprint	0201_R 0201 R	ERJ-1GEF2001C ERJ-1GEF1002C	SMT		Panasonic Panasonic	Yes		R1, R2, R13, R14, R20 R3, R4, R97	5
0	Resistor 0201 footprint	0201 R	ERU-1GEF1002C	SMT		Panasonic Panasonic	Yes		RS. R6. R7. R9. R12. R33. R34. R41. R42. R43. R44. R45. R46. R55. R63. R75. R76.	18
0.02	Besister 1205 features	1206 R	CSR1206EK201.0	SMT		Stanknole	Yes	-55°C to +155°C	R77 R8, R26, R39	3
0.02 18.2K	Resistor 0402 footprint	0402_R	CONTROL PACED	O.B.I		Симпром	163	100 010 1100 0	R10, R31	2
10K	Resistor 0201 footprint	0201_R	ERU-1GEF1002C	SMT		Panasonic	Yes		R11, R21, R32, R38, R48, R49, R57, R60, R64, R65, R67, R68, R79, R89, R90, R105, R108, R109, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126	. 32
									R108, R109, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, 0197, D198, D198, R15, R22, R23, R36, R37, R50, R51, R52, R53, R56, R80, R81, R99, R100, R106,	
1.2K	Resistor 0201 footprint	0201_R	BRJ-1GEF1201C	SMT		Panasonic	Yes		R15, R22, R23, R36, R37, R50, R51, R52, R53, R56, R80, R81, R99, R100, R106, R107, R129	17
5.62K 412K	Resistor 0402 footprint Resistor 0402 footprint	0402_R 0402_R							R16 R17	1
1M	Resistor 0402 footprint	0402_R							R18, R25, R27, R28	4
348K	Resistor 0402 footprint	0402_R							R19	1
187K	Resistor 0402 footprint Resistor 0201 footprint	0402_R 0201 R	RMCF0201FT100R	SMT		Stackpole	Yes	-55°C t0 +125°C	R24, R30 R29, R54, R58, R61, R73, R83, R84, R85, R86, R87, R88, R91, R92, R93, R94, R95,	17
20 12K	Resistor 0402 footprint Resistor 0402 footprint	0402_R 0402_R	RC0402FR-0720RL	SMT		Yageo	Yes	-55°C to +155°C	R35, R47, R70, R71	4
TBD	Resistor 0402 footprint	0402_R							R59, R62	2
240	Resistor 0201 footprint	0201_R	ERJ-1GEF2400C	SMT		Panasonic	Yes		R66, R69, R101, R102, R103, R104, R110, R111, R112, R113, R114, R115	12
49.9 100K	Resistor 0402 footprint Resistor 0201 footprint	0402_R 0201 R		SMT		Panasonio	Yes		R72, R74 R82	2
100K	Resistor 0402 footprint	0402_R							R98	1
Switch_TACK	Switch, 2 contacts	KMR2	KMR241NG ULC LFS	SMT		C&K	Yes	-40°C to +85°C	SW1, SW2	2
SW DIP-2 5CSEBA6U19C8N	Dip Switch SPST 2 Position Surface Mount Side (Standard) Actuator 25rrA 24VDC Oyclone V SE Family FPGA, 1.07 to 1.13 V Supply, 66 I/O Pns, 6 PtLs, 484-Pn LBGA, Speed Grade 7, Commercial Grade, RoHS Compilant	218-02 DIP SW BGA484C80P22X22 1900X1900X190	218-2LPSTR	SMT		CTS	Yes RoHS		SW3	1 1
CY7068013A-BGA	EZ-USB FXZLP USB Microcontroller	VFBGA56 (5.0mmX5.0mm 0.5mm)	CY7C68013A-56BAXC	SMT		CYPRESS	Yes	0° to +70°	U2	1
DDR3_X16_BGA96		BGA96C80P16X9_1400X900X120							U3	1
BU20TD2 LT8609	Linear Voltage Regulator IC Positive Fixed 1 Output 2.5V 300mA SSOND04X1010 4ZV, ZA/3A Peak Synchronous Step-Down Regulator	SSON004X1010 MSOP10 - MSE	BU25UA3WNVX-TL LTRENSFMSFMSFRFFFFF	SMT	G LTGRW	ROHM Linear	Yes	-40°C to +125°C -40°C to +125°	U4 U5, U9	1 2
EN5339QI	3A PowerSoC Sunc Buck DC-DC Convertor with integrated inductor	EN5399	EN5339QI	SMT	_ CANT	Altera			U6 U6	1
EP53A8HQI	1A PowerSoC Sunc Back Regulator with Intg. Indc.	EP53A8	EP53A8HQI	SMT		Altera	Yes	-40°C to +85°C		2
USB2513B-AEZC TC7USB40MU	IC USB 2.0 4PORT HUB CTLR 36-QFN USB SWITCH SPOT DUAL	QFN36_6X6 UQFN10 1.4X1.8	USB2513B-AEZC TC7USB40MU,LF	SMT		Microchip (SMCS) TOSHBA		0" to +70"C -40"C to +85"C	UB U10	1
FXLP34P5X	Sigle Bit Uni-Directional Translator	SC70-5 DCK	FXLP34P5X		P5X	Fairchild	Yes	-40°C to +85°C		2
BU18UA3	Linear Voltage Regulator IC Positive Fixed 1 Output 1.8V 300mA SSON004X1010	SSON004X1010	BU18UA3WNVX-TL	SMT	G	ROHM	Yes	-40°C to +125°C	U12	1
NCP303LSN13T1 USB3300	Voltage Detector Series with Programmable Delay	SOT23-5	NCP903LSN13T1	SMT	SDA	On Semi		-40°C to +125°C		2
USB3300 EPM570M100C5	H-Speed USB Host, Device or OTG PHY MAX II 3.3/2.5V CPLD, 76 IOs, 570 Logic Bements, 100-Pin Micro Fineline BGA, Commercial Temperature, Speed Grade 5	QFN32 MBGA100	USB3300-EZK			SMCS		-40°C to +85°C	U16	1
EP53A8LQI	1A PowerSoC Sunc Back Regulator with Intg. Indo.	EP53A8	EP53A8LQI	SMT		Altera	Yes	-40°C to +85°C	U18	- 1
	800mA PowerSoC Sunc Back Regulator with Intg. Indc.	EP53A8	EP5388QI	SMT		Altera	Yes	-40°C to +85°C	U20	- 1
					HS					3
P4791CZ12	HDM ESD protection, level shifter and backdrive protection	HXSON12	F4791CZ12,132	SMT	-	NXP	Yes	-40°C to +85°C	U23	1
24MHz	24MHz ±20ppm Crystal 8pF 200 Ohms 4-SMD, No Lead	OSC_SMT_1.6X1.2	416F24022KR	SMT		стх	Yes	-40" to +85"C	Y1	1
										1
	and a recommendation of the state of the sta	Notes					103			450
EFM570M100CS EPS3A8LCI EPS388CI TDA19988 AP2151_DFN IP4791C212	MAX.13.2.29 CRU. 75 Db., 57 Db.; Delice Binners, 100-Ph Noto Problet BIGA, Commercial Temperature, Speed Grade 5 M. Per er SGC, Black Republier or His Pap. doc. 5000n Pare er BGC, Black Black Republier or His Rig. Bdc. 1004 14 Executive His PGC PGC CECT Looped COMPART SERVICE STATES AND	MBDA100 BPSAMS BPSAMS BPSAMS DPMMS_SEMPOKOXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	EPS3A8LQI EPS388QI TDA19988BHNC1,557 AP2151FMG-7 P4791C212,132	SMT SMT SMT		Altera Altera NICP Diode Inc. NICP	Yes Yes Yes Yes Yes Yes Yes Yes Yes	-40°C to +85°C -40°C to +85°C -20°C to +85°C -40°C to +85°C -40°C to +85°C	U15 U18 U20 U20 U21 U21 U22 U24, U25 U23 Y1 Y2	

Attum Limited Confidential 2/20/2019 Page 1