MOD DUOX - BOTTOM BOARD BOM
REV REV 1.2

DATE	**COMPANY**	**COMMENT 1**	**COMMENT 2**
2020-05-15	MOD Devices GmbH	DuoX Audio processing board	https://github.com/moddevices/mod-hw-duoX

COMMENT 3	**COMMENT 4**	**TOTAL PARTS**
Inp Power: 12V 700mA	USB outp Power: 1.5A	331 (Unique 91)

Ref	Qty	Value	Footprint	MPN
[C] - Capacitors				
C1 C3	2	2200uF	Capacitor_THT:CP_Radial_D10.0mm_P5.00mm	16PX2200MEFC10X20
C2 C4 C9 C10 C11 C13 C34 C38 C69	9	10uF 16V	Capacitor_SMD:C_0805_2012Metric	CL21A106KOFNNNE
C5 C6 C8 C16 C19 C26 C27 C29 C31 C33 C35 C59 C60 C63 C66 C67 C68 C76 C81	19	10uF	Capacitor_SMD:C_0603_1608Metric	CL10A106MQ8NNNC
C7 C15 C77	3	1uF	Capacitor_SMD:C_0603_1608Metric	CL10B105KP8NNNC
C12 C14 C17 C18 C20 C21 C22 C24 C25 C28 C30 C32 C36 C37 C39 C51 C52 C61 C64 C65 C70 C71 C75 C80 C82 C83	26	100nF	Capacitor_SMD:C_0603_1608Metric	GCM188R71C104KA37D
C23	1	47uF	Capacitor_SMD:CP_Elec_5x5.4	EDK476M016A9DAA
C53	1	22uF 16V	Capacitor_SMD:C_0805_2012Metric	GRM21BC81C226ME44L
C54	1	2uF 16V	Capacitor_SMD:C_0805_2012Metric	GRM21BC81C226ME44L
C73 C74	2	33nF	Capacitor_SMD:C_0603_1608Metric	C0603C333K4RACTU
C84	1	10nF	Capacitor_SMD:C_0603_1608Metric	CL10B103KA8NNNC
C85	1	22pF	Capacitor_SMD:C_0603_1608Metric	C0603C220K4GACTU
[CA] - Precision Capacitors				
CA1 CA2	2	2.2nF	Capacitor_SMD:C_0603_1608Metric	GRM1885C1H222JA01D
CA3 CA5 CA7 CA9 CA13 CA14 CA15 CA16	8	100pF	Capacitor_SMD:C_0603_1608Metric	C0603C101J3GACTU
CA4 CA8	2	1uF	Capacitor_SMD:C_1210_3225Metric	FCA1210C105M-G2
CA6 CA10 CA11 CA12 CA19 CA20 CA23 CA24 CA25 CA26	10	10uF	Capacitor_SMD:CP_Elec_4x5.7	EEE-HB1C100R
CA17 CA18 CA21 CA22	4	100uF	Capacitor_SMD:CP_Elec_6.3x7.7	UWX1C101MCL1GB
[D] - Diodes				
D1 D2	2	MBR230	Diode_SMD:D_SOD-123F	MBR230LSFT1G
D3 D4 D5 D6 D14 D15	6	BAT54S	Package_TO_SOT_SMD:SOT-23	BAT54SFILM
D7 D8 D11 D12 D16 D17 D18 D19	8	1N4148	Diode_SMD:D_SOD-323	1N4148WX-TP
D9 D10	2	PRTR5V0U2X	Package_TO_SOT_SMD:SOT-143	PRTR5V0U2X 215
D13 D20	2	1N4148WS-Diode	Diode_SMD:D_SOD-323	
[F] - Fuse				
F1	1	Fuse 2A	footprints:Fuse_2920_0ZCF_Bel	0ZCF0200FF2C
[FID] -				
FID1 FID2 FID3	3	FIDUCIAL	footprints:fiducial_in-circuit	
[H] - Mounting Holes				
H1 H2 H3 H4 H5	5	HOLE	footprints:Hole_3.5mm	
H6 H7	2	Standoff	footprints:9774027151R	9774030951R
[IMG] -				
IMG1	1	Logo	footprints:mod-logo	

[J] -

J1	1	Power Jack	Connector_BarrelJack:BarrelJack_Horizontal	Adafruit Industries LLC 3643
J2	1	HMI_POWER	footprints:B2B-XH-A	B2B-XH-A(LF)(SN)
J3	1	CB Adapter	footprints:DF12(3.0)-40DP-0.5V(86)	DF12(3.0)-40DP-0.5V(86)
J4	1	CB Adapter	footprints:DF12(3.0)-60DP-0.5V(86)	DF12(3.0)-60DP-0.5V(86)
J5	1	HMI_DATA	footprints:Pin_Header_Straight_2x10_Shrouded	302-S201
J6	1	SERIAL_DEBUG	Connector_PinHeader_2.54mm:PinHeader_1x03_P2.54mm_Vertical	DO NOT PLACE
J7 J8 J9 J10 J16 J17	6	NYS215	footprints:NMJ6HCD2	NYS215
J11	1	USB_B	Connector_USB:USB_B_OST_USB-B1HSxx_Horizontal	61729-1011BLF
J12	1	USB_A	footprints:USB_A_Vertical	73725-0110BLF
J13 J14	2	DIN_5	footprints:SDS-50J	SDS-50J
J15	1	RJHSE-5381	Connector_RJ:RJ45_Amphenol_RJHSE538X	RJHSE-5381
J18	1	MJ-3536N	footprints:MJ-3536N	MJ-3536N

[JMP] -

JMP1	1	0R	footprints:Jumper_SMD_THT	

[K] -

K1 K2	2	G6S-2	footprints:Relay_DPDT_Omron_G6S-2F	EE2-12NU-L

[L] - Inductors

L1	1	1mH	Inductor_SMD:L_Bourns_SRR1260	SRR1260-102K

[Q] - Transistors

Q1 Q2 Q3 Q4 Q9 Q12 Q13 Q16	8	2N7002	Package_TO_SOT_SMD:SOT-23	2N7002P 215
Q5 Q6	2	BSS84	Package_TO_SOT_SMD:SOT-23	BSS84-7-F
Q8 Q10 Q11 Q14 Q15 Q17	6	J110	Package_TO_SOT_SMD:SOT-23	PMBFJ110 215

[R] - Resistors

R1 R2 R3 R4 R6 R7 R8 R16 R17 R24 R25 R30 R31 R35 R36 R39 R40 R48 R49 R50 R51 R52 R79 R80 R82 R84 R85 R86 R87	29	10K	Resistor_SMD:R_0603_1608Metric	RR0816P-103-D
R5 R58 R59 R62	4	100K	Resistor_SMD:R_0603_1608Metric	RMCF0603JT100K
R9 R10 R11 R12 R13 R14 R15 R26 R27 R37 R38	11	22R	Resistor_SMD:R_0603_1608Metric	RMCF0603JT22R0
R18 R57 R60 R61 R69 R70	6	1M	Resistor_SMD:R_0603_1608Metric	RT0603BRD071ML
R19	1	22R	Resistor_SMD:R_0603_1608Metric	DO NOT PLACE
R20 R21 R22 R23 R65 R66 R67 R68	8	2K7	Resistor_SMD:R_0603_1608Metric	RMCF0603JT2K70
R29	1	5K6	Resistor_SMD:R_0603_1608Metric	ERA-3AEB5621V
R32 R33 R34 R41 R42	5	220R	Resistor_SMD:R_0603_1608Metric	ESR03EZPJ221
R43 R44 R45 R46	4	56R	Resistor_SMD:R_0603_1608Metric	RMCF0603JT56R0
R47	1	100R	Resistor_SMD:R_0603_1608Metric	RR0816P-101-D
R55	1	243R	Resistor_SMD:R_0603_1608Metric	RC0603FR-07243RL
R56	1	107R	Resistor_SMD:R_0603_1608Metric	RC0603FR-07107RL
R71 R72	2	56K	Resistor_SMD:R_0603_1608Metric	RMCF0603FT56K0
R81	1	10R	Resistor_SMD:R_0603_1608Metric	CRGCQ0603J10R

[RA] - Precision Resistors

RA1 RA8	2	47R 1%	Resistor_SMD:R_0603_1608Metric	RT0603DRE0747RL
RA2 RA9 RA41 RA42	4	1M 1%	Resistor_SMD:R_0603_1608Metric	RT0603BRD071ML
RA3 RA10	2	5K62 1%	Resistor_SMD:R_0603_1608Metric	ERA-3AEB5621V
RA4 RA11	2	21K 1%	Resistor_SMD:R_0603_1608Metric	RR0816P-2102-D-32C
RA5 RA6 RA12 RA13	4	4K99 1%	Resistor_SMD:R_0603_1608Metric	ERA-3AEB4991V
RA7 RA14	2	100R 1%	Resistor_SMD:R_0603_1608Metric	RR0816P-101-D
RA15 RA16 RA17 RA18 RA19 RA20 RA21 RA22 RA31 RA32 RA35 RA36 RA39 RA40 RA43 RA44 RA45 RA46 RA47 RA48 RA51 RA52	22	10K 1%	Resistor_SMD:R_0603_1608Metric	RR0816P-103-D
RA23 RA25	2	22K 1%	Resistor_SMD:R_0603_1608Metric	RR0816P-223-D

RA24 RA26 RA28 RA30	4	33R	Resistor_SMD:R_0603_1608Metric	RT0603DRE0733RL
RA27 RA29	2	66.5R 1%	Resistor_SMD:R_0603_1608Metric	RR0816Q-66R5-D-80R
RA33 RA34	2	75K 1%	Resistor_SMD:R_0603_1608Metric	RR0816P-753-D
RA49 RA50	2	499k 1%	Resistor_SMD:R_0603_1608Metric	ERJ-3EKF4993V
RA53 RA54	2	1K 1%	Resistor_SMD:R_0603_1608Metric	CR0603-FX-3012ELF

[TP] -

TP1 TP2 TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP14 TP15 TP16 TP18 TP19 TP20 TP21 TP22	19	TestPoint	TestPoint:TestPoint_Pad_D1.0mm	

[TR] -

TR1	1	Transformer_1P_1S_SO8	footprints:PE-65812NL	PE-65812NL

[U] - Semiconductors

U1	1	MURATA 5V	footprints:OKI-78SR_Vertical	OKI-78SR-5/1.5-W36-C
U2 U4	2	LD1117S50TR_SOT223	Package_TO_SOT_SMD:SOT-223-3_TabPin2	LD1117S50TR
U3 U5	2	AP2120N-3.3	Package_TO_SOT_SMD:SOT-23	AP2120N-3.3TRG1
U6	1	CS4265	Package_DFN_QFN:QFN-32-1EP_5x5mm_P0.5mm_EP3.1x3.1mm	CS4265-CNZ
U7	1	AT24CS08	Package_TO_SOT_SMD:SOT-23-5	AT24CS08-STUM-T
U8	1	LM4562	Package_SO:SOIC-8_3.9x4.9mm_P1.27mm	LM4562MAX/NOPB
U9 U13	2	DG9426E	Package_SO:TSSOP-16_4.4x5mm_P0.65mm	DG9426EDQ-T1-GE3
U10	1	LM358	Package_SO:TSSOP-8_3x3mm_P0.65mm	LM358DGKR
U11 U12	2	OPA1678	Package_SO:SOIC-8_3.9x4.9mm_P1.27mm	OPA1678IDR
U14	1	LM4811	Package_SO:MSOP-10_3x3mm_P0.5mm	LM4811MM/NOPB
U16	1	RT9742	Package_TO_SOT_SMD:TSOT-23-5	RT9742MNGJ5
U17	1	6N136S	Package_DIP:SMDIP-8_W9.53mm	6N136S
U18	1	ISL83086E	Package_SO:SOIC-14_3.9x8.7mm_P1.27mm	ISL83086EIBZ
U20	1	ADC122S021	Package_SO:VSSOP-8_3.0x3.0mm_P0.65mm	ADC122S021CIMM/NOPB
U21	1	MIC2076A	Package_SO:SOIC-8_3.9x4.9mm_P1.27mm	MIC2076A-1YM
U22	1	74LVC3G17	Package_SO:VSSOP-8_2.3x2mm_P0.5mm	SN74LVC3G17DCUR
U24	1	MCP4922-EP	Package_SO:SOIC-14_3.9x8.7mm_P1.27mm	MCP4922T-E/SL

[X] - Crystals

X1	1	24.576MHz	Oscillator:Oscillator_SMD_Abracon_ASV-4Pin_7.0x5.1mm	ASV-24.576MHZ-EJ-T