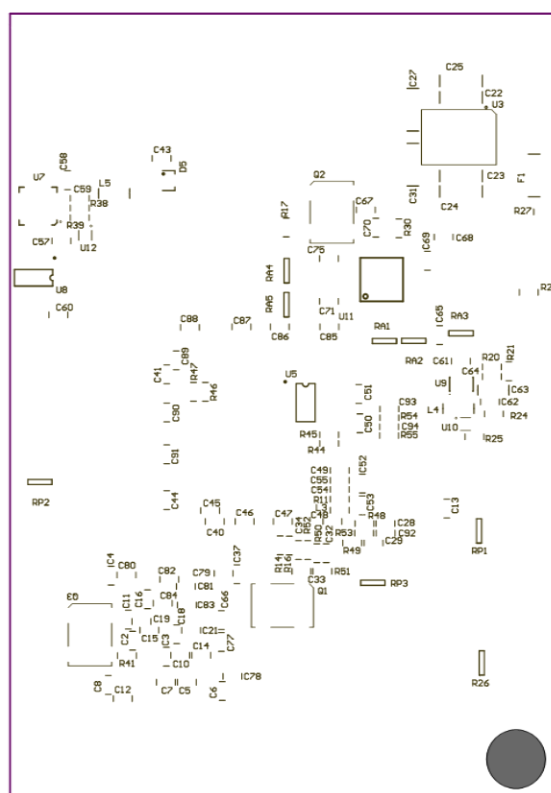
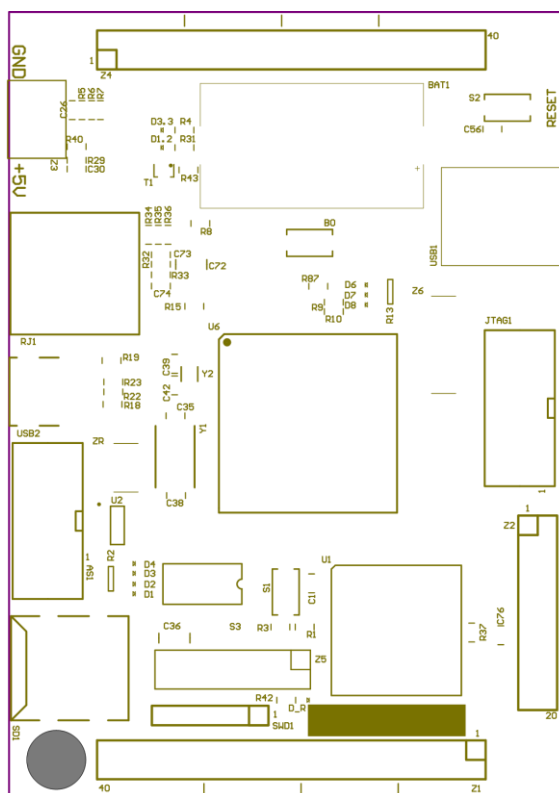


Załącznik nr 3

1. Rysunki poglądowe:



2. BOM

Designator	Comment	Description	Q-ty	Manufakturny	Manufakturny_PN
AS1, JTAG1	Box Header, Dual Row, 2.54mm	Connector	2	AMPHENOL	T821-1-10-S1
B0, SW0, RESET	SPST-NO	TACT SWITCH	3	DIPTRONIC	DTSM31N
BAT1	SMT Battery Holder	Battery Holder	1	KEystone	504
C1, C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C20, C21, C37, C44, C45, C46, C47, C48, C49, C50, C51, C53, C55, C56, C57, C59, C60, C61, C62, C65, C66, C67, C68, C69, C70, C71, C73, C74, C75, C76, C77, C78, C79, C80, C81, C82, C83, C84, C85, C86, C87, C88, C89, C90, C91	CAP; CERM; 0603;100nF;10%;10V	Capacitor	64	VISHAY	VJ0603Y104KXXC W1BC
C22, C23, C24, C25	CAP; CERM;1206;47uF;20%;10V	Capacitor	4	MURATA	CL31A476MPHNN NE
C26, C30	CAP; CERM; 0603;1.8nF;10%;10V	Capacitor	2	MURATA	GRM1885C1H182J A01D
C27, C31	CAP; CERM; 1206;100uF;20%;6.3V 100uF/6.3V	Capacitor	2	MURATA	GRM31CR60J107 ME39L

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C28, C29, C32, C33, C34, C92, C93, C94	CAP; CERM; 0603;1nF;20%;10V	Capacitor	8	VISHAY	VJ0603Y102KXBC W1BC
C35, C38, C39, C42	CAP; CERM; 0603;12pF;10%;10V	Capacitor	4	MURATA	GRM1885C1H120J A01D
C36, C63, C72	CAP; CERM; 1206;10uF;10%;6.3V	Capacitor	3	SAMSUNG	CL21B106KPQNN NG
C40, C41	CAP; CERM; 0603;2.2uF;10%;10V	Capacitor	2	MURATA	GRM188R71A225 KE15D
C43, C52, C54, C58	CAP; CERM; 0603;1uF;10%;10V	Capacitor	4	SAMSUNG	CL10B105KA8NN NC
C64	CAP; CERM; 0603;10pF;10%;10V	Capacitor	1	VISHAY	VJ0603A100JXAC W1BC
D1, D1.2, D2, D3, D3.3, D4, D6, D7, D8	OPTO;LED;0603, GREEN	LED Diode	9	OPTOSUPPL Y	OSG80603C1E
D5	Schottky diodes, SOT23	Schottky diode	1	ST MICROELEC TRONICS	BAT54CFILM
D_R	OPTO;LED;0603, RED	LED Diode	1	OPTOSUPPL Y	OSR50603C1E
F1	Miniature Fuse, 1206,5A	Fuse	1	SIBA	154000.5
L3	Ferrite Bead, 0603,500mA	Ferrite beads	1	MURATA	BLM18PG600SN1 D
L4, L5	Ferrite Bead, 0805,3A	Ferrite beads	2	MURATA	BLM21PG600SN1 D
Q1, Q3	CLOCK;Oscillator,20MHz,3.3V	Oscillator	2	EUROQUAR TZ	20.000MHZ XO91050UITA
Q2	CLOCK;Oscillator25MHz,3.3V	Oscillator	1	ILSI	ISM81-3753BH-25.0000
R1, R37	RES;CHIP;0603;33R;1%;0.1W	Resistor	2	VISHAY	CRCW060333R0FK TABC
R2, R13	RES;CHIP;1206;4x1k;5%;63mW	Resistor Array 4	2	YAGEO	YC164-JR-071KL
R3, R5, R29	RES;CHIP;0603;100k;5%;0.1W	Resistor	3	VISHAY	CRCW0603100KFK TABC
R4, R27, R28, R31, R42, R48, R49, R50, R51, R52, R53, R54, R55	RES;CHIP;0603;1k;5%;0.1W	Resistor	13	VISHAY	CRCW06031K00FK TABC
R6	RES;CHIP;0603;30k;5%;0.1W	Resistor	1	VISHAY	CRCW060330K0FK TABC
R7	RES;CHIP;0603;2.4k;1%;0.1W	Resistor	1	YAGEO	RC0603JR-072K4L
R8	RES;CHIP;0603;1.5k;1%;0.1W	Resistor	1	VISHAY	CRCW06031K50FK TABC
R9, R10, R17, R41	RES;CHIP;0603;10k;1%;0.1W	Resistor	4	VISHAY	CRCW060310K0FK TABC
R11	RES;CHIP;0603;47R;1%;0.1W	Resistor	1	VISHAY	CRCW060347R0FK TABC
R14, R87	NM	Resistor	2	NA	NA
R15, R30, R32, R33	RES;CHIP;0603;2.2k;1%;0.1W	Resistor	4	VISHAY	CRCW06032K20JN TABC
R16, R25	RES;CHIP;0603;0R;1%;0.1W	Resistor	2	VISHAY	CRCW06030000Z0 TABC
R18, R19, R20, R24	RES;CHIP;0603;47k;1%;0.1W	Resistor	4	VISHAY	CRCW060347K0FK TABC
R21	RES;CHIP;0603;68k;1%;0.1W	Resistor	1	VISHAY	CRCW060368K0FK TABC
R22, R23, R38, R39	RES;CHIP;0603;22R;1%;0.1W	Resistor	4	VISHAY	CRCW060322R0FK TABC
R26	RES;CHIP;1206;4x4.7k;5%;63m W	Resistor Array 4	1	YAGEO	YC164-JR-074K7L

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R34	RES;CHIP;0603;18R;1%;0.1W	Resistor	1	VISHAY	CRCW060318R0FK TABC
R35	RES;CHIP;0603;150R;1%;0.1W	Resistor	1	VISHAY	CRCW0603150RJN TABC
R36	RES;CHIP;0603;4.7k;1%;0.1W	Resistor	1	VISHAY	CRCW06034K70FK TABC
R40	RES;CHIP;0603;200k;1%;0.1W	Resistor	1	VISHAY	CRCW0603200KFK TABC
R43	RES;CHIP;0603;680R;1%;0.1W	Resistor	1	VISHAY	CRCW0603680RFB TABC
R44, R45	RES;CHIP;0603;2k;1%;0.1W	Resistor	2	VISHAY	CRCW06032K00FK TABC
R46, R47	RES;CHIP;0603;15k;1%;0.1W	Resistor	2	VISHAY	CRCW060315K0FK TABC
RA1, RA2, RA3, RA4, RA5	RES;CHIP;1206;4x51R;5%;63mW	Resistor Array 4	5	ROYAL OHM	4D03WGJ0510T5E
RJ1	10/100 Base-TRJ45, Single port, Top entry,w/LED&Transformer	RJ45 LED&Transformer	1	AMPHENOL	LMJ2138812S0LO T6C
RP1, RP2, RP3	RES;CHIP;1206;4x10k;5%;63mW	Resistor Array 4	3	YAGEO	YC164-JR-0710KL
S3	SW-DIP4,ON-OFF, 2.54mm,11.52x7.62	DIP Switch	1	NINIGI	DS-04
SD1	MICRO SD Card Socket	Connector	1	ATTEND	112C-TBAR-R02
SWD1	Pin Header; Single ROW, 2.54mm	Connector	1	CONNFLY	ZL201-06G
T1	NPN Small Signal Transistor in SOT23, 45V, 100mA	NPN Transistor	1	ON SEMICONDUCTOR	BC847BLT1G
U1	Cyclone II Family, 1.2V FPGA, 182 I/O Pins, 2 PLLs, 256-Pin FBGA, Speed Grade 8, Industrial Grade, Pb-Free	FPGA;256-Pin FBGA	1	INTEL (ALTERA)	EP2C8F256I8N
U2	EPCS4 Series, In-system programmable 3.3V serial configuration device, 8-Pin SOIC, 4-Megabit, Industrial Grade, Pb-Free	Serial Configuration (EPCS)Devices	1	INTEL (ALTERA)	EPCS4SI8N
U3	Dual 3A/Single 6A – Step-Down DC/DC Power Module	Step-Down DC/DC	1	INTERSIL (RENESAS)	ISL8203M
U5	512 Kbit and 256 Kbit serial I <sup>2</sup> C bus EEPROM with three Chip Enable lines	Serial EEPROM	1	ST MICROELECTRONICS	M24256-BWMN6TP
U6	ARM Cortex-M4 32b MCU+FPU, 210DMIPS, up to 1MB Flash/192+4KB RAM, USB OTG HS/FS, Ethernet, 17 TIMs, 3 ADCs, 15 comm. interfaces & camera	Processor ARM, Cortex-M4, 32b	1	ST MICROELECTRONICS	STM32F407IGT6
U7	SINGLE-CHIP USB TO UART BRIDGE	USB Converter	1	SILICON LABS	CP2102-GM
U8	ADUM1201BRZ Dual-Channel Digital Isolators	Digital Isolators	1	ANALOG DEVICES	ADUM1201BRZ
U9	Enhanced single channel power switches	Power Switches	1	ST MICROELECTRONICS	STMPS2161STR
U10, U12	TPD3E001 Low-Capacitance 3-Channel ESD-Protection for High-Speed Data Interfaces	ESD-PROTECTION ARRAY	2	TEXAS INSTRUMENTS	TPD3E001DRLR



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U11	DP83848C/I/VYB/YB PHYTER™ QFP Single Port 10/100 Mb/s Ethernet Physical Layer Transceiver	Ethernet Physical Layer Transceiver	1	TEXAS INSTRUME NTS	DP83848CVVX/N OPB
USB1	Universal Serial Bus (USB) Shielded I/O Type B Receptacle, Right-Angle	Connector	1	MOLEX	670688000
USB2	MINI USB CONNECTOR ESB 3 SERIES (CONNECTOR)	Connector	1	ECE	ESB34101000Z
Y1	CLOCK; CRYSTAL; 7x5mm;8MHz	Crystal Oscillator	1	IQD	LFXTAL072352
Y2	CLOCK; CRYSTAL; 3.2x1.5mm 32768Hz	Crystal Oscillator	1	ILSI	IL3X2-HX5F12.5- 32.768KHZ
Z1, Z4	Pin Header; Dual ROW, 2.54mm, male; 2x20pin	Connector	2	CONNFLY	DS1021-2*20SF11
Z2	Pin Header; Dual ROW, 2.54mm, male;2x10pin	Connector	2	CONNFLY	ZL202-20G
Z3	Euro Block,5.08mmm	Connector	1	ADAM TECH	EB21A-02-D
Z5	Pin Header; Dual ROW, 2.54mm;male;2x8pin	Connector	1	TE CONNECTIV ITY	826632-8
ZR	Pin Header; Dual ROW;1.27mm;male,2x5pin	Connector	1	CONNFLY	ZL322-2X5P