TroubleShooting for RB1200

These repair instructions are for NON WARRANTY repairs only!

Please make visual inspection for signs of corrosion or mechanical damages before starting.

No power, blue LED does not shine



RB does not boot



Ethernet ports 10, 9(J501, J502) do not work, drops ping packets



Ethernet ports 8, 7, 6 (J601, J701, J702) do not work, drops ping packets



Ethernet ports 5, 4, 3, 2, 1 (J8701-J8705) do not work, drops ping packets



Voltage monitor does not work



PCB Temperature monitor does not work



CPU Temperature monitor does not work



Reference number	Part Number	Manufacturer	Description
D1101	SK36-T3-LF	Won-Top Electronics Co., Ltd.	Diode Schottky 60V 3A SMC
D1402	BZX84-C6V2,215	NXP Semiconductors	Diode Zener BZX84C 6.2V 5% 350mW SOT23
FB301, FB601, FB602, FB701-FB705, FB5603, FB5605, FB8701-FB8705, FB9801-FB9806	BLM15AG121SN1D	Murata manufacturing Co.	Ferr Chip Beads 120 Om 500mA, 0402, FB120
FB604,FB1403, FB1406, FB1409	BLM18PG331SN1D	Murata manufacturing Co.	Ferr Chip Beads 330 Om 1200mA, 0603
FB1101	FBMA-11-453215- 900A90T	King Core Electronics Inc.	Ferr Bead 90 Ohm, 9A, 4mOhm, 1812
FB1405	RC0603JR-070RL	Yageo Corporation	Resistor 0R 5% 0603
FB1407, FB1410	BLM18SG121TN1D	Murata manufacturing Co.	Ferr Chip Beads 120Ohm, 3.0A, 0603
J501, J502, J601, J701, J702, J8701-J8705	ARB-1FAK-F235-B	Super Link Electronics Co, Ltd	RJ45 Ethernet connector 10/100/1000 magnetics(Gigabit), LEDs(G/Y)
Q101	2N7002,215	NXP Semiconductors	Transistor MOSFET N-Ch 60V 180mA 50hm 300mW
Q1103, Q1108, Q1405, Q1407	AO4484	Alpha & Omega	N-Ch MOSFET 40V 10A 10mOhm SO-8
Q1401	BCX5616TA	Diodes Zetex Limited	Trans NPN, 80V,2A,1W, hfe=100-250, SOT89
RT101	ERT-J1VT152J	Panasonic CVCA	NTC Thermistor 1.5K, 0603, 5%
U101	LMV321IDBVR	Texas Instruments	IC OPAMP GP R-R 1MHZ SGL SOT23-5
U102, U104	SN74LVC1G3157DCK R	Texas Instruments	IC SWITCH SPDT SC70-6
U103	LM258DR	Texas Instruments	IC DUAL OP AMP 8-SOIC
U301	ICS9FG104DGLFT	Integrated Device Technology, Inc [IDT]	IC FREQ TIMING GENERATOR 28TSSOP
U601, U701, U702	AR8021-AL1E	Atheros Technology Ltd.	Single-port Gigabit Ethernet (GbE) PHY device
U603	IDT2305-1DCG8	Integrated Device Technology, Inc [IDT]	PLL clock driver 1-to-5, 10MHz- 133MHz SO8
U1101, U1406	RT8209BGQW	Richtek Technology Corporation	Synchronous Buck Controller,Vin=4.526V, WQFN- 14L_3.5x3.5
U1103	AIC1384-GSHTR	ANALOG INTEGRATIONS CORPORATION	DDR2 Termination Regulator, PSOP-8
U1405, U1409	RT8016GQW	Richtek Technology Corporation	Step-down DC/DC converter 1.5MHz 1A WDFN-6L 2x2 Vin=2.55.5V, Vout=0.6VVin, lout=1.0A, f=1.5MHz,

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Reference number	Part Number	Manufacturer	Description
U1407	RT8058GQW	Richtek Technology Corporation	1MHz, 2A, Step-Down DC/DC Converter, WQFN-16L 3x3
U1410	APU1205Y5-HF	Advanced Power Electronics Corp.	0.3A, ADJ LDO, SOT23-5
U5601, U5602	AR8131-AL1E-R	Atheros Technology Ltd.	AR8131, QFN48-04MM, Gbe NIC, PCIe, 3V T&R
U8701	AR8316-AK1E	Atheros Technology Ltd.	6-port GbE Switch
Y301	NXE25.000AC20F-AHF	NSK Jenjaan Quartek Corporation	Crystal 25MHz 30ppm 20pF -10+70 HC-49 (SMD) H=3.2mm
Y401	NAOD66.666-C3C	NSK Jenjaan Quartek Corporation	Crystal Oscillator 66.666MHz 30ppm 3.3V 15pF -10+70 7x5

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