



# ***Repair instruction***

**RBSXT-5HacD2n**

*Published November 4, 2015*

**These repair instructions are for NON WARRANTY repairs only!  
Please make visual inspection for signs of corrosion  
or mechanical damages before starting.**

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## List of RouterBoard SXT ac series

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### SXT 5 ac



### SXT SA5 ac



### SXT HG5 ac



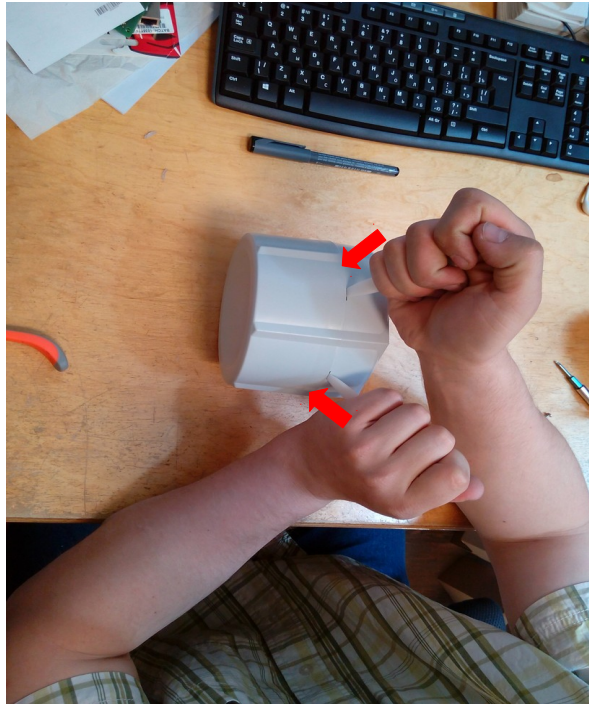
### SXT Lite5 ac



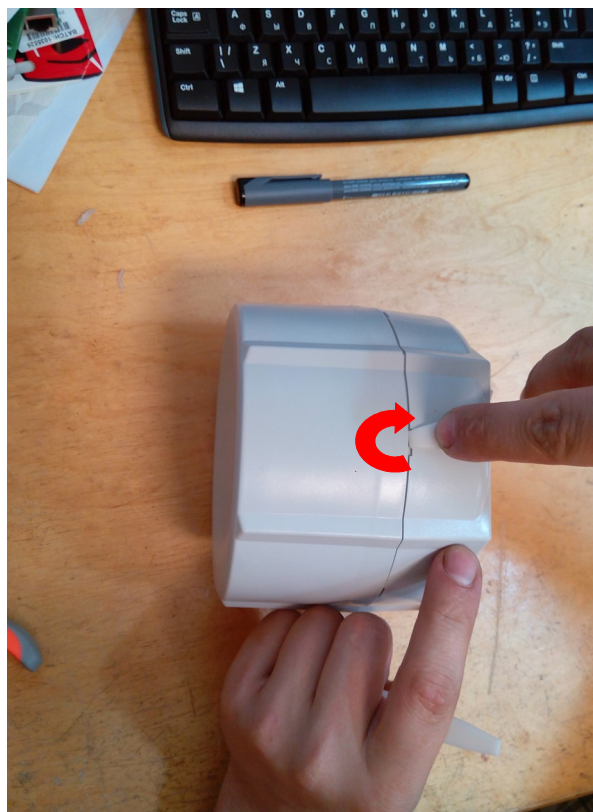
## Disassembling information

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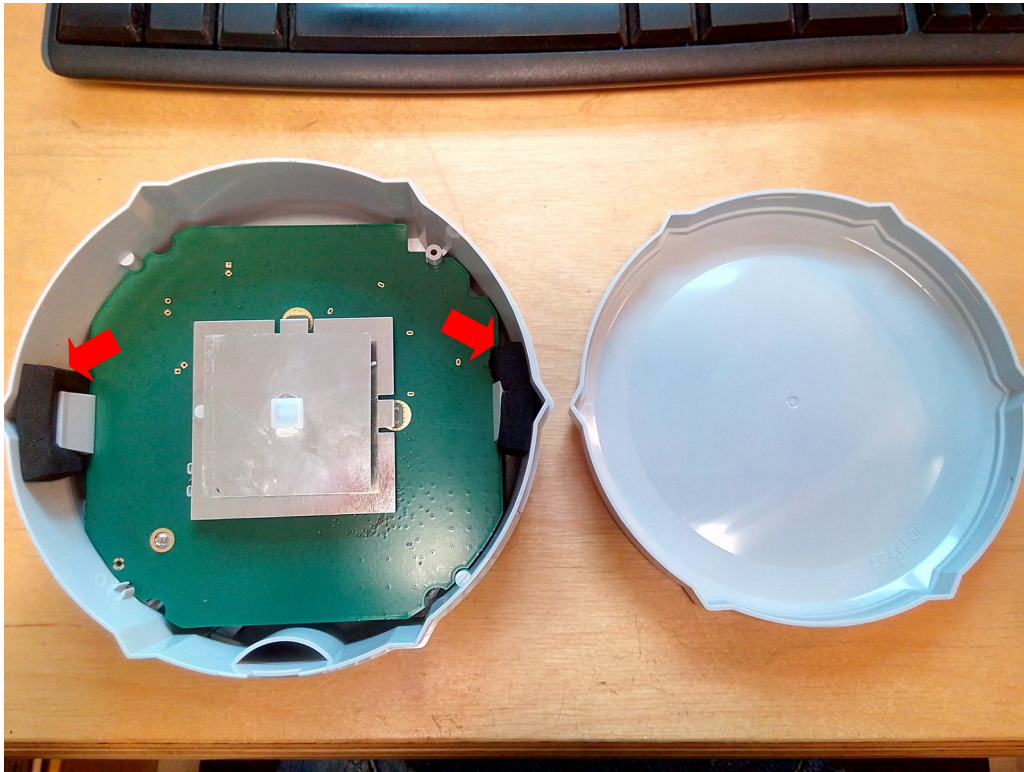
1. Use two “-” screwdrivers. Push screwdrivers in case cavities.



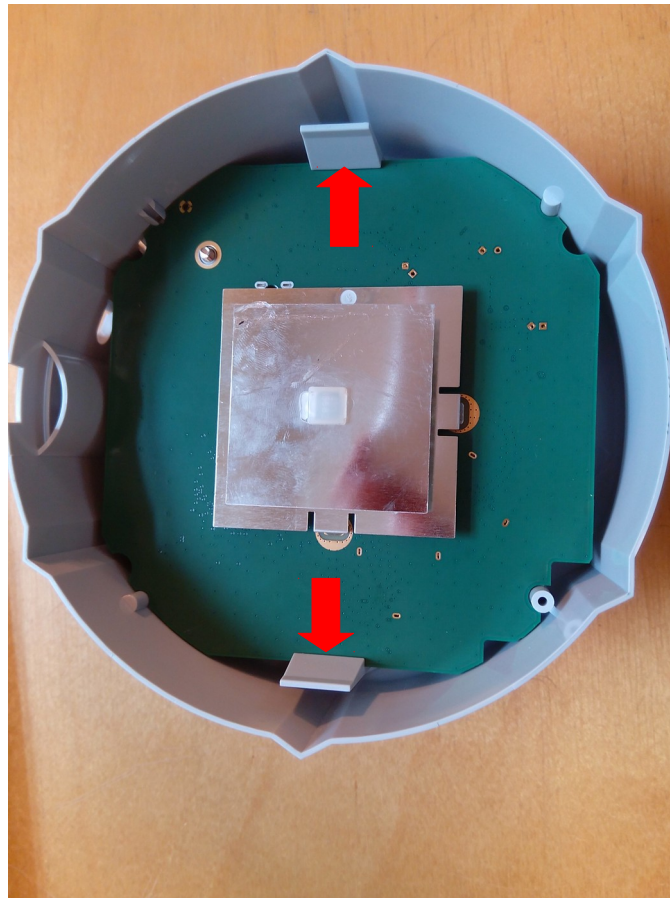
2. Rotate screwdriver and pull both case parts.



3. Remove rubber bushing



4. Push back Plastic PCB holders and take out the board.

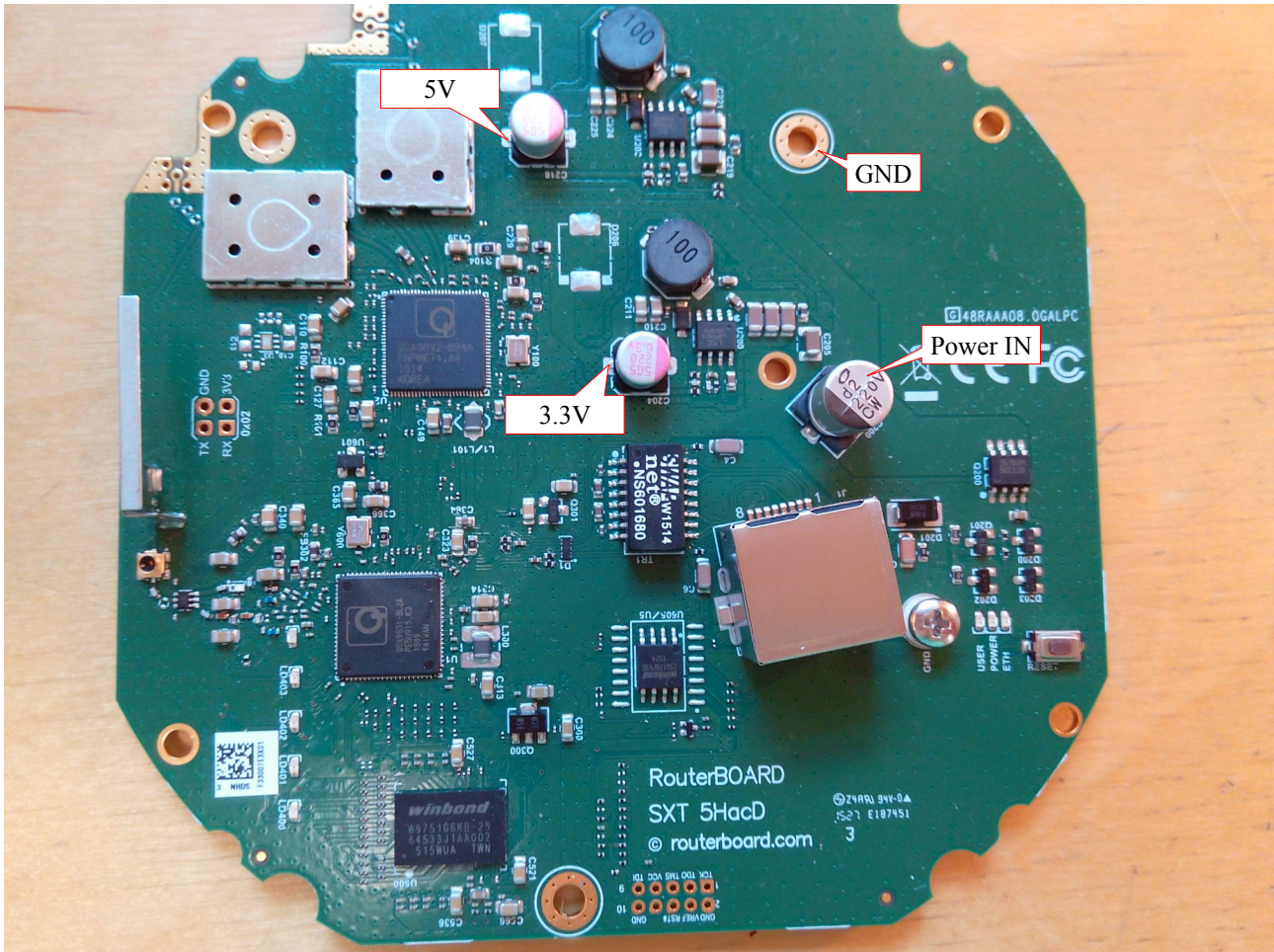


## Routerboard does not power on

There no signs of any LED, LCD or buzzer activity

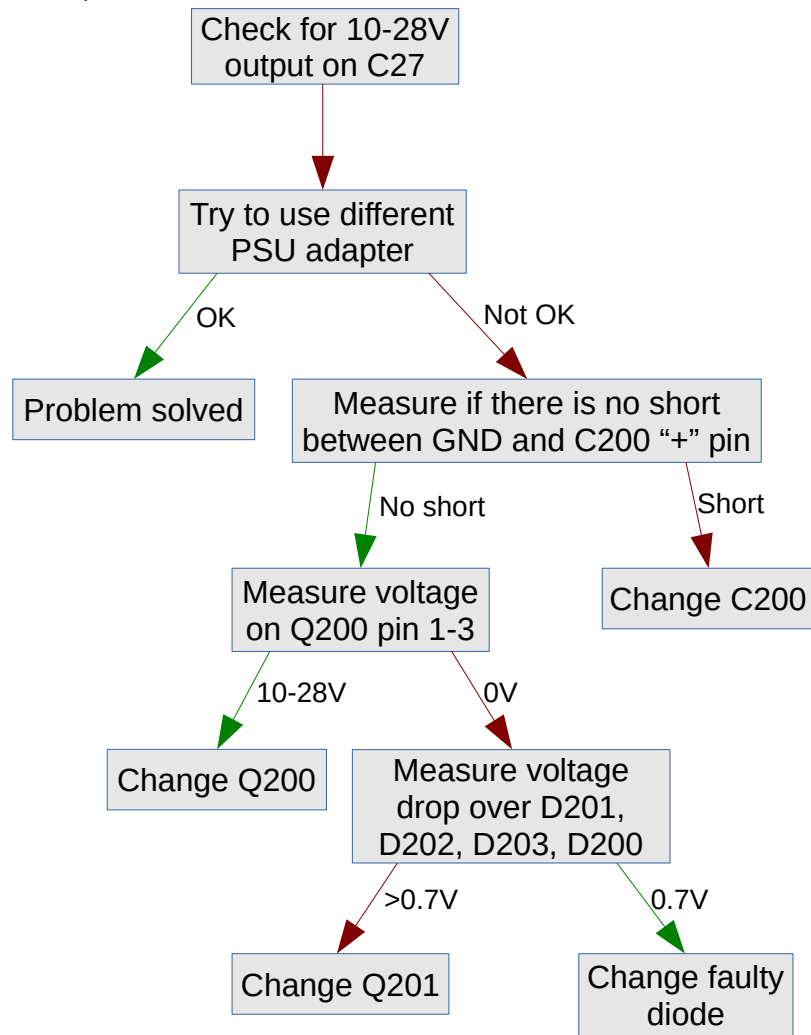
### Find potential problem area

RouterBOARD does not turn on when one of the power is disconnected. Check Which voltage is switched off, Power IN (10 – 28V), 3.3V or 5V.

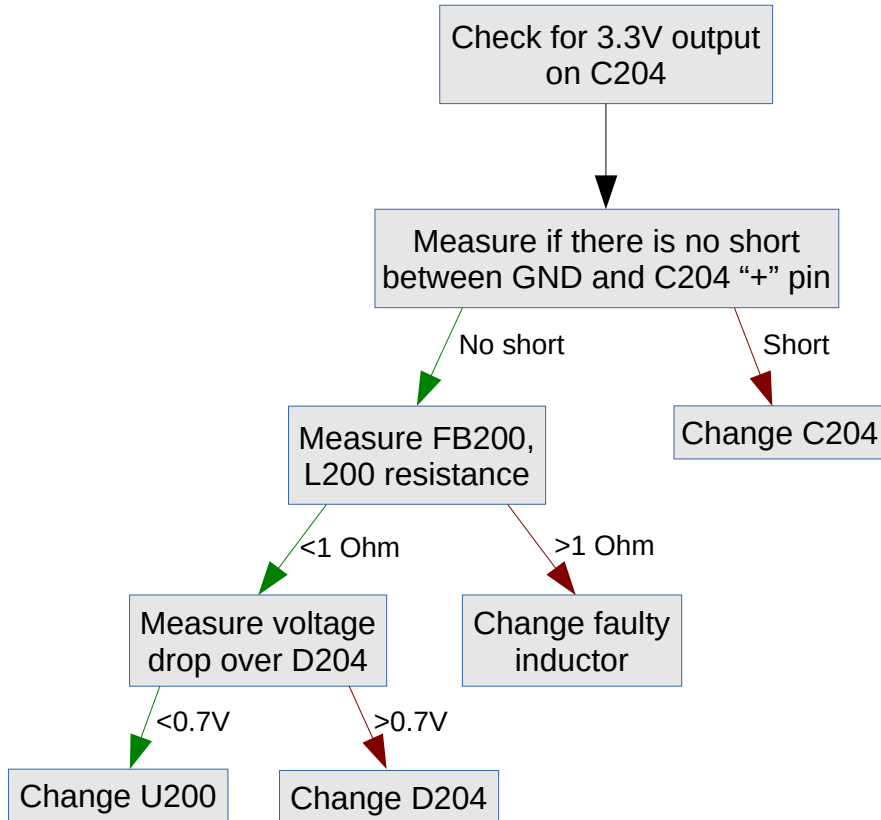


## If Power\_IN Failed

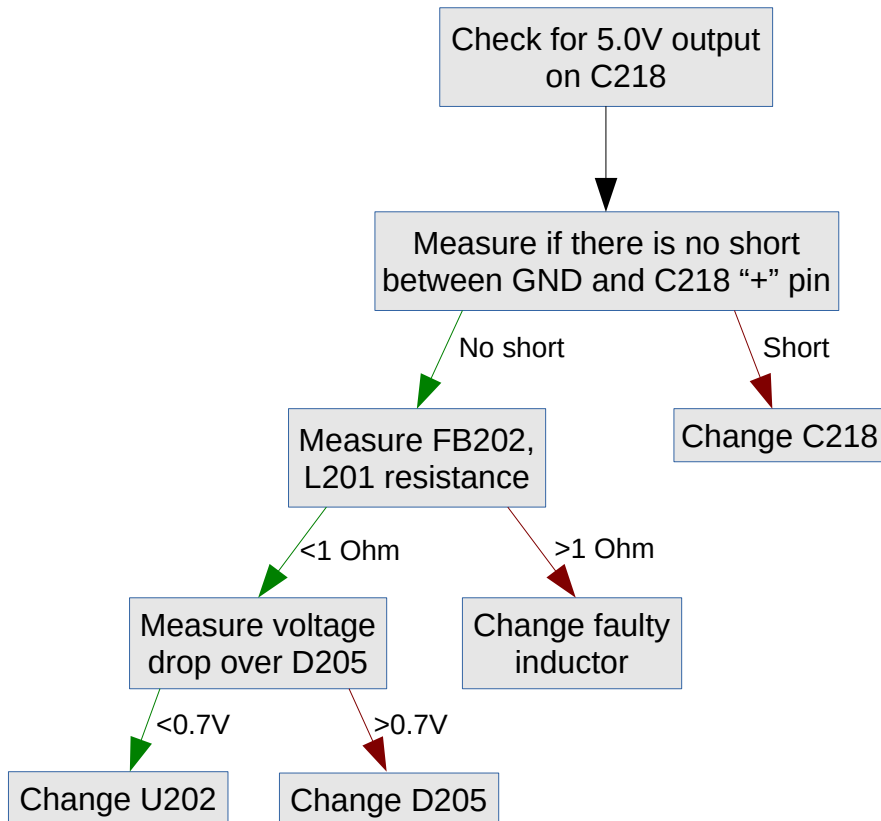
1. No power on 10-28V input



2. No Voltage on 3.3V output

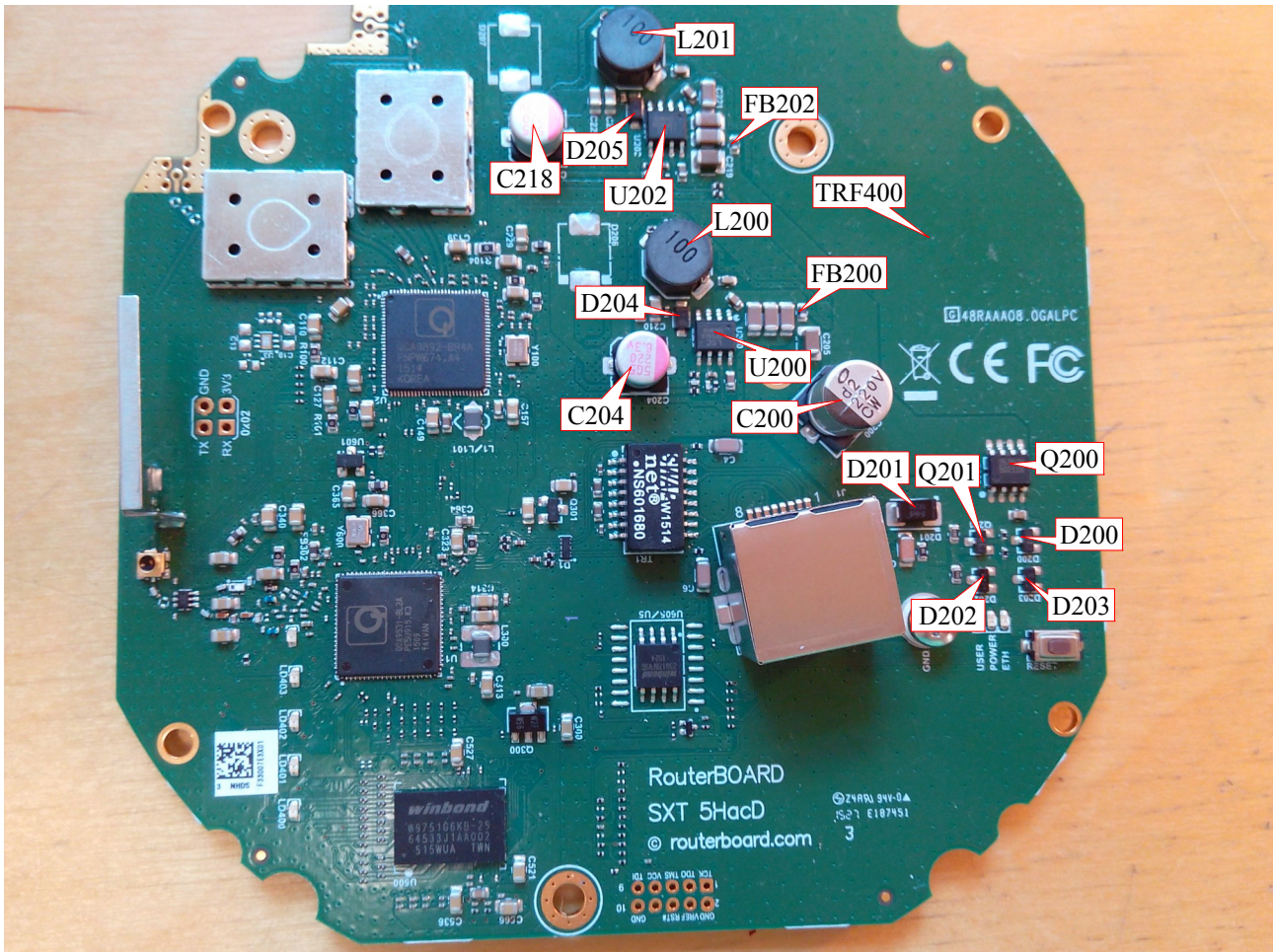


3. No Voltage on 5V output





#### 4. Supply voltage components location on RouterBOARD



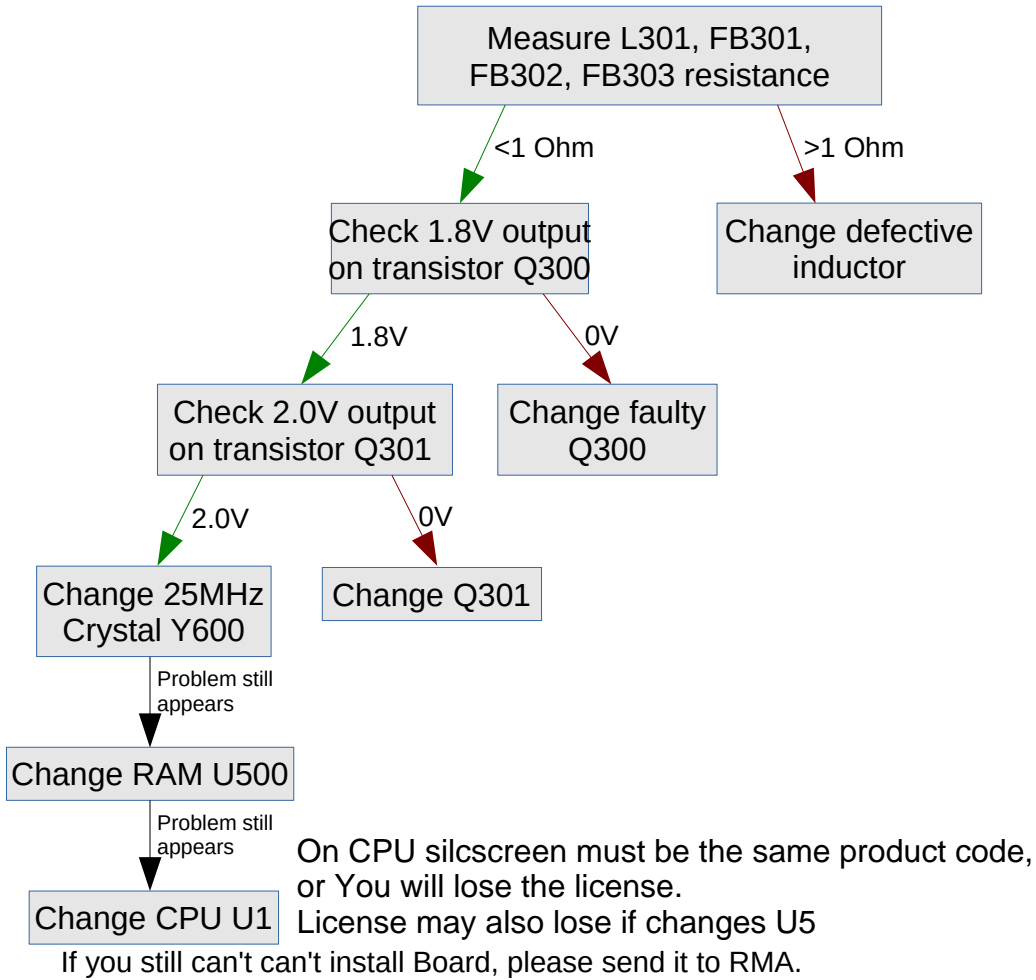
#### 5. Supply voltage Components table

Reference	Manufacturer code	Description	Manufacturer
C200	EMZE350ADA221MHA0G	Capacitor elec 220uF 20% 35V 8x10 SMD 8000h 600mA 0.220hm MZE-series	NIPPON CHEMI-CON CORPORATION
C204, C218	VL006M221E06PKKKV00R	Capacitor PolymerAl 220uF 20% 6.3V 6.3x6mm SMD 5000h 2.8A 22mOhm VL-series	KUAN KUN ELECTRONIC ENTERPRISE CO., LTD. (Su-scon)
D200	BZX84C10-AU_R1_000A1	Diode Zener BZX84C 10V 5% 410mW SOT23 Automotive	PanJit International Inc.
D201	B2100AF	Diode Schottky 100V 2A SMA	Lite-On Semiconductor corporation
D202	BZX84B30-AU_R1_000A1	Diode Zener BZX84B 30V 2% 400mW SOT23	PanJit International Inc.
D203	BZX84-C3V6,215	Diode Zener BZX84C 3.6V 5% 350mW SOT23	NXP Semiconductors HK LTD-Sample Store
D204, D205	SS1060FL-T1-LF	Diode Schottky 60V 1A SOD123	Won-Top Electronics Co., Ltd.
FB200, FB202	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
L200, L201	BCRH8D43-100N-NL	Inductor 10uH 30% 3.6A 8.3x8.3x4.7 34mOhm RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
Q200	P9006EVG	Transistor MOSFET P-Ch -60V -4.5A 90mOhm SO-8	Niko Semiconductor Co. Ltd.
Q201	BC856B,215	Transistor PNP -65V -100mA 250mW Hfe=220-470 SOT-23 RoHS	NXP Semiconductors
U200, U202	LSP5523-R8A	DC-DC Step-down converter 4.5-30V input 3A output Sync SO8, RoHS	Lite-On Semiconductor corporation

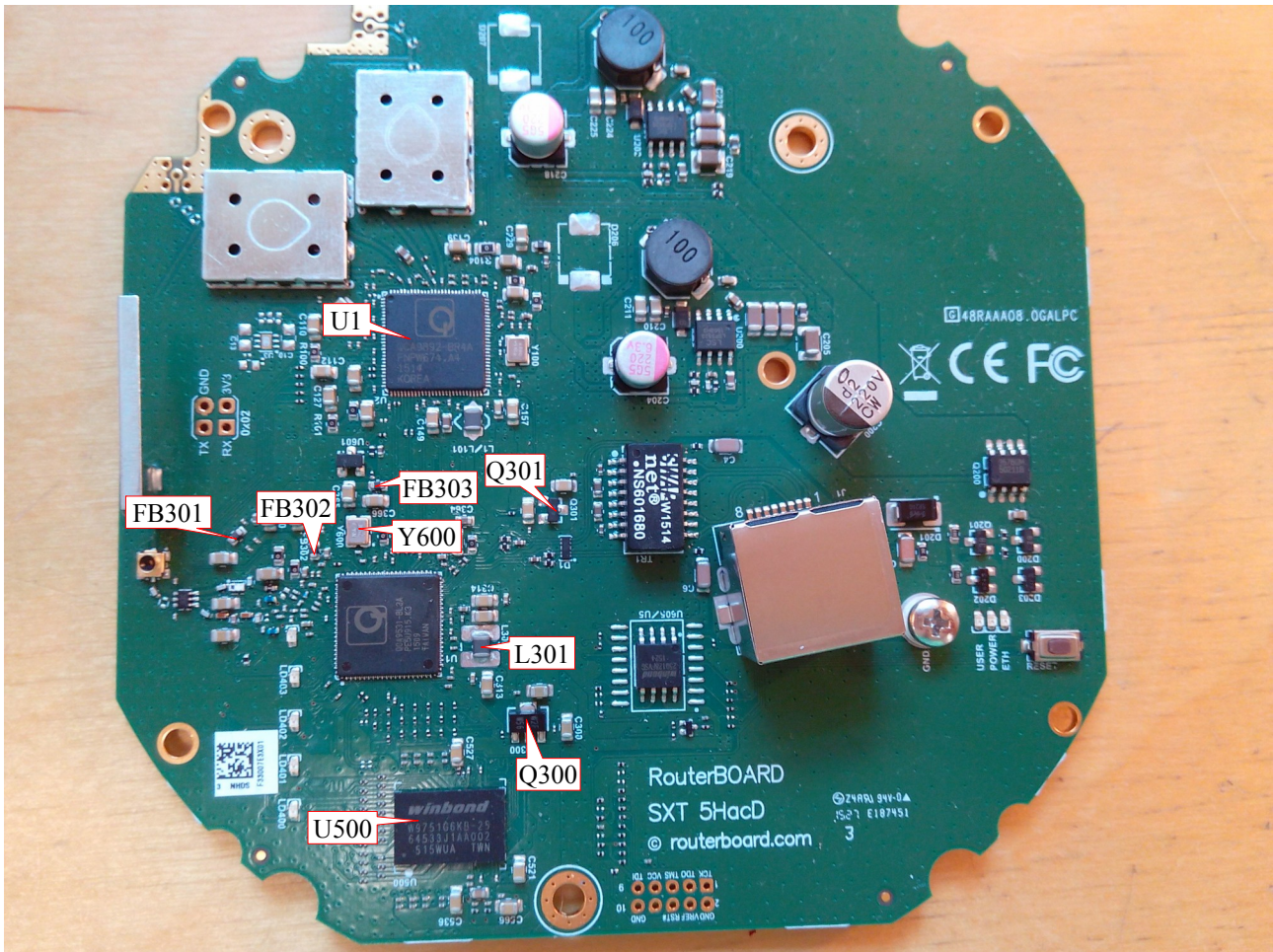
# Routerboard does not boot

## If Netinstall can see the board, but can not install it

1. Troubleshooting flow chart



## 2. Components location on RouterBOARD



## 3. Components table

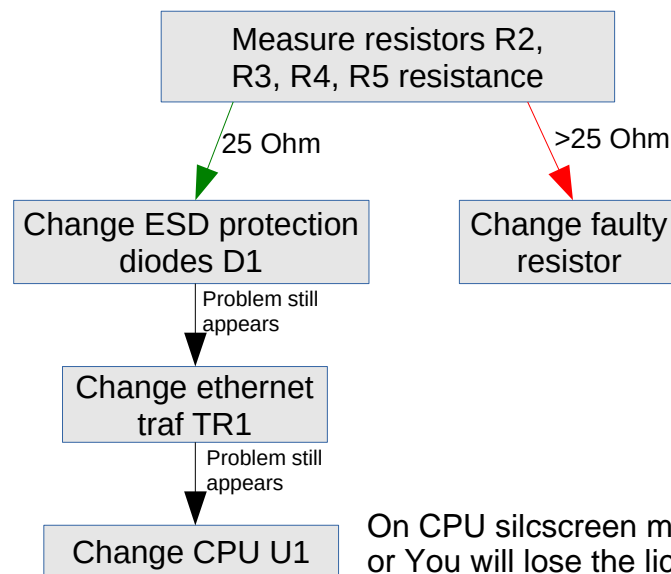
Reference	Manufacturer code	Description	Manufacturer
FB301-FB303	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
L103	BC43-2R2M-NL	Inductor 2.2uH 2.6A 4.5x4x3.2 RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
Q300	DXT2907A-13	Transistor PNP -60V -600mA 0.5W Hfe=100-300 SOT89 RoHS	Diodes Incorporated
Q301	MMBT2907A	Transistor PNP -60V -600mA 250mW Hfe=100-300 SOT-23	Lite-On Semiconductor corporation
U1	QCA9531-BL3A-R	2x2 2.4GHz SoC with MIPS24K 550 Mhz CPU USB2.0 12x12mm DRQFN-156	Qualcomm Atheros Technology Ltd.
U500	NT5TU32M16EG-AC	DDR2 SDRAM 512Mbit DDR2-800 32Mx16bit BGA-84 0+95C	NANYA TECHNOLOGY CORPORATION [F]
Y600	NXK25.000AE18F-KAB6-2	Crystal 25MHz 20ppm 18pF -20+70 3.2x2.5	NSK Jenjaan Quartek Corporation

# Ethernet port does not work

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## No link on Ethernet port

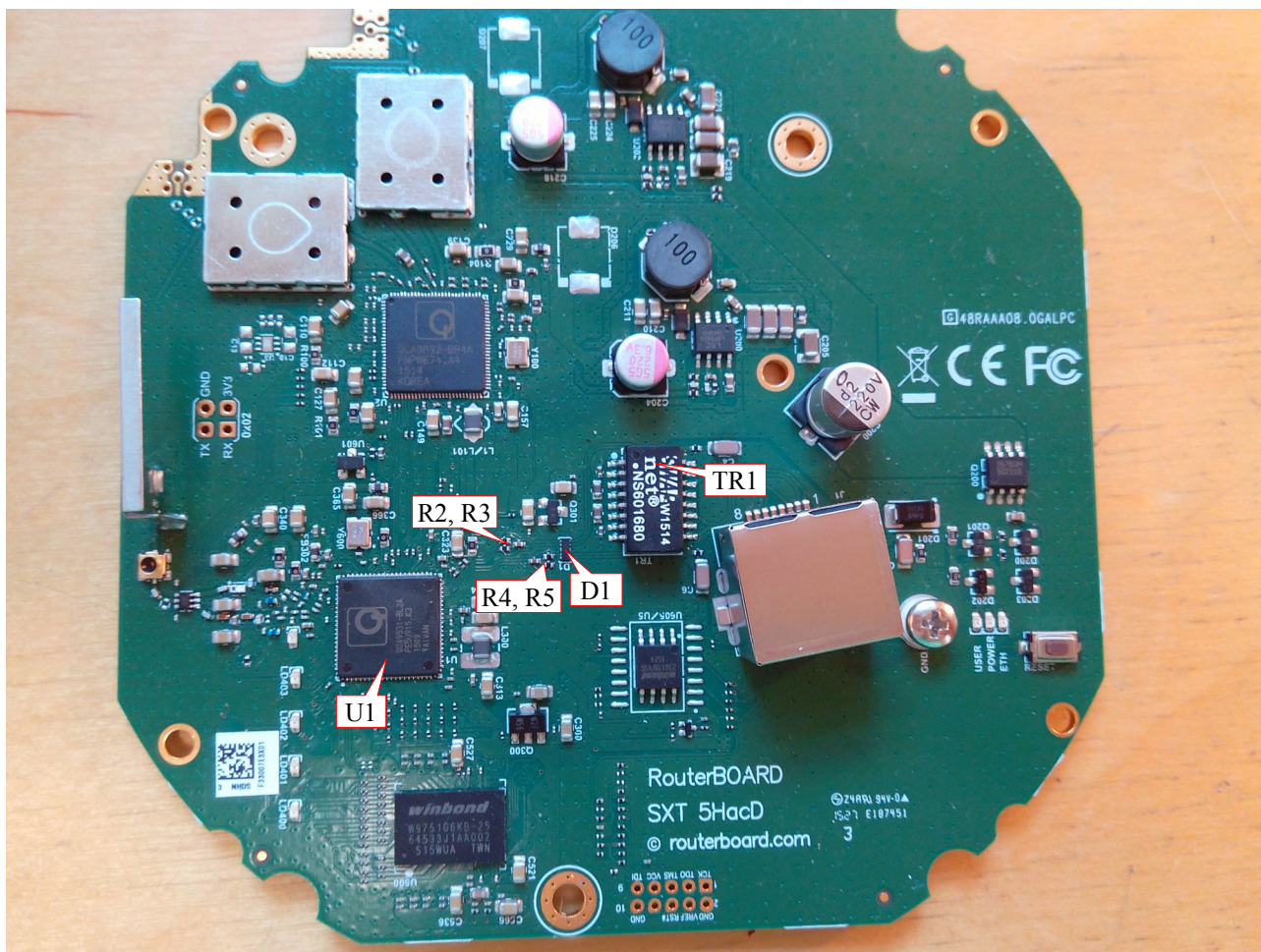
1. Troubleshooting flow chart



On CPU silcscreen must be the same product code, or You will lose the license.  
License may also lose if changes U5

If there is still no link on ethernet port, please send board to RMA.

## 2. Ethernet port components location on RouterBOARD



## 3. Ethernet port components table

Reference	Manufacturer code	Description	Manufacturer
D1	L15ESDL5V0NA-4	Diode Array TVS 150W 4 channel low cap DFN-10	Lite-On Semiconductor corporation
R2...R5	RC0402FR-0749R9L	Resistor 49.9R 1% 0402	Yageo Corporation
TR1	NS601680	10/100 Single Ethernet transformer SMD 16pin RoHS T&R	Feeli Cheng Enterprise CO., LTD.
U1	QCA9531-BL3A-R	2x2 2.4GHz SoC with MIPS24K 550 MHz CPU USB2.0 12x12mm DRQFN-156	Qualcomm Atheros Technology Ltd.

# WiFi does not work

## 2.4 GHz wireless doesn't work

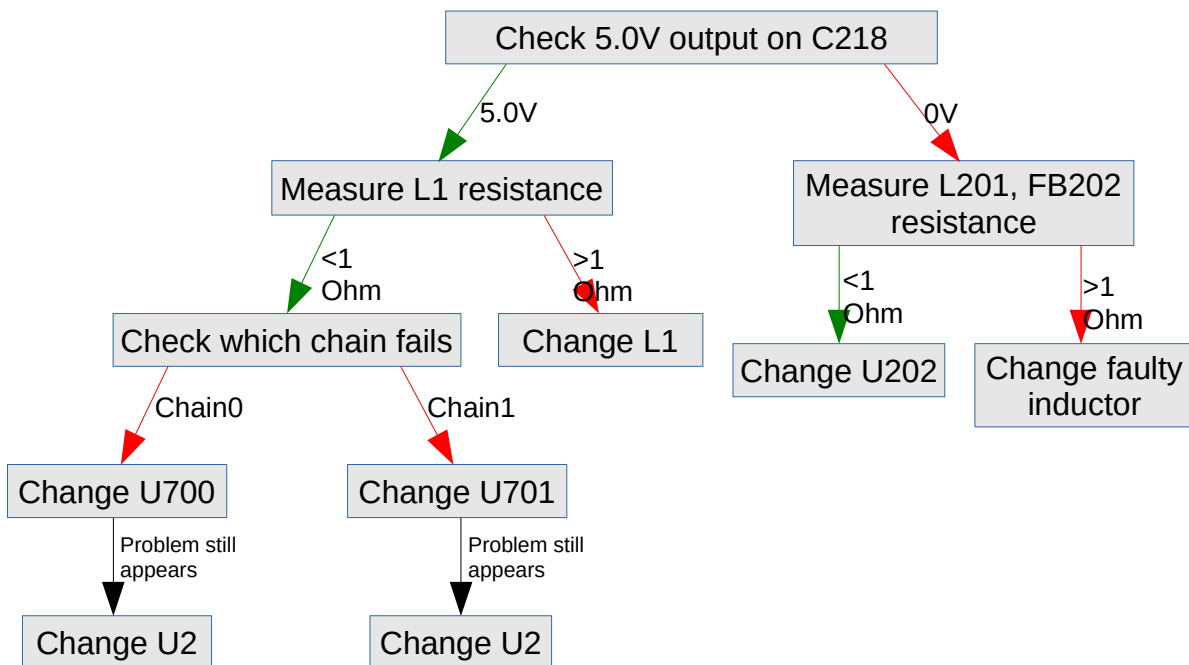
### 1. Troubleshooting flow chart

- Change U702
- Change F702
- Change U1

If wireless still does not work, please send board to RMA.

## 5 GHz wireless doesn't work

### 1. Troubleshooting flow chart



### 2. RF components table

Reference	Manufacturer code	Description	Manufacturer
F702	LTL-1608-2G4S1-A2	Low pass filter 2450MHz	Mag.Layers Scientific-Technics Co., Ltd.
FB202	CB03YTYH331	Ferrite Bead 330 Ohm 1.5A 0603	Viking Tech Corporation
L1	MLH08MT2R2	Inductor Chip 2.2uH 20% 1300mA 1008 RoHS Tape&Reel	Viking Tech Corporation
L201	BCRH8D43-100N-NL	Inductor 10uH 30% 3.6A 8.3x8.3x4.7 34mOhm RoHS T&R	Bao Cheng Electronics Co.,Ltd.,
U701, U703	LTB-2012-2G4H6-A2	Ceramic Bandpass Filter 2.4GHz	Mag.Layers Scientific-Technics Co., Ltd.
U1	QCA9531-BL3A-R	2x2 2.4GHz SoC with MIPS24K 550 MHz CPU USB2.0 12x12mm DRQFN-156	Qualcomm Atheros Technology Ltd.
U2	QCA9892-BR4A-R	Peregrine 2x2 enterprise Wifi chip HF-TR-QCA9004-7YEE chipset T&R	Qualcomm Atheros Technology Ltd.
U202	LSP5523-R8A	DC-DC Step-down converter 4.5-30V input 3A output Sync SO8, RoHS	Lite-On Semiconductor corporation
U700, U701	SKY85710-11	5 GHz WLAN Front End for 802.11ac	Skyworks Solutions, Inc.
U702	RTC6603	RF SPDT Switch 0.1-3GHz SC-70 Tape&Reel	Richwave

### 3. RF components location on RouterBoard

