Red Pitaya d.o.o.
Velika pot 22
5250 Solkan
Slovenia

www.redpitaya.com

Modification and testing of the Red Pitaya SDR with external clock

Prepared by: Leon Škapin

Date: 17.5.2019

1. Preface:

Purpose of this document is to present modification of Red pitaya SDR, to note a special version which is using external sampling clock.

2. Modification

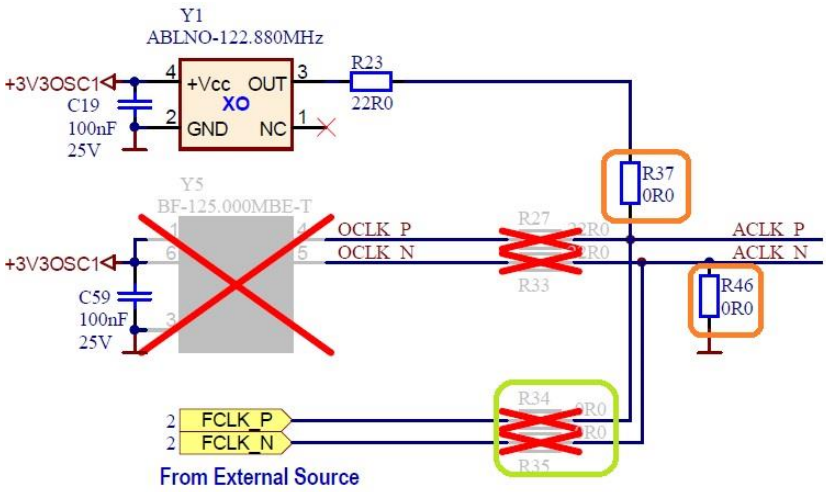
Modification is performed with STEM 122-16SDR, V1r1 that has already been tested following regular testing procedure.

Remove:

- R37, R46

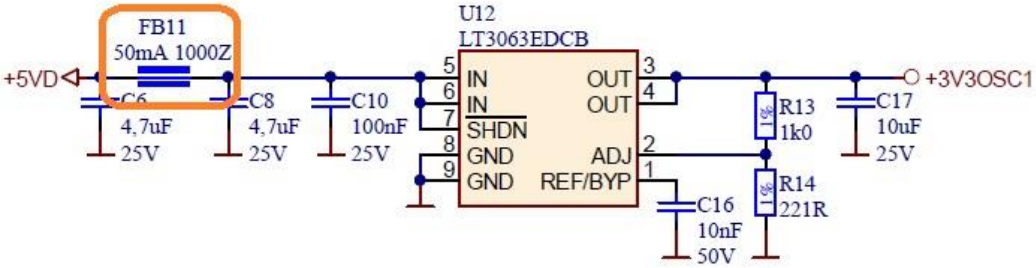
Add:

- R34 = 0R, R35 = 0R



Remove:

- FB11

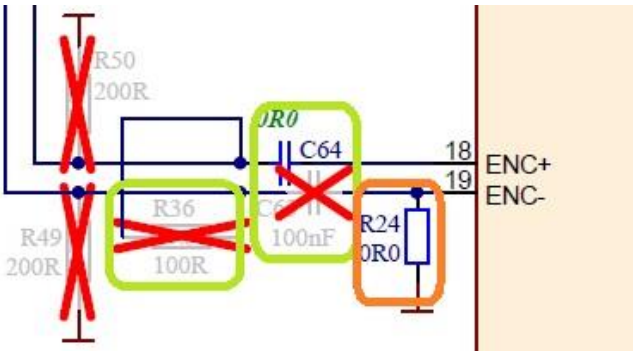


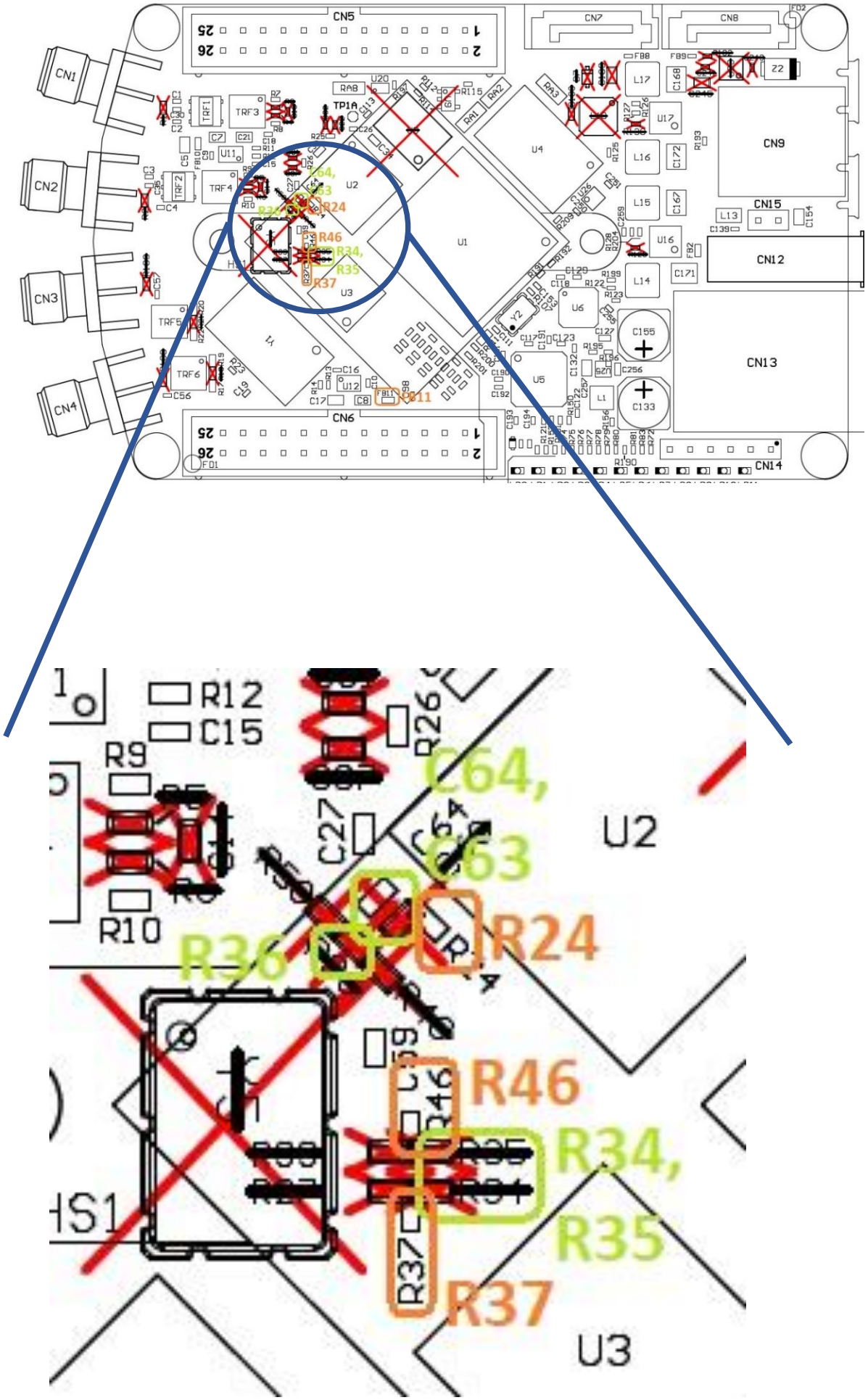
Remove:

- 0R on C64, R24

Add:

- C64 = 100nF, C63 = 100nF,
- R36 = 100R



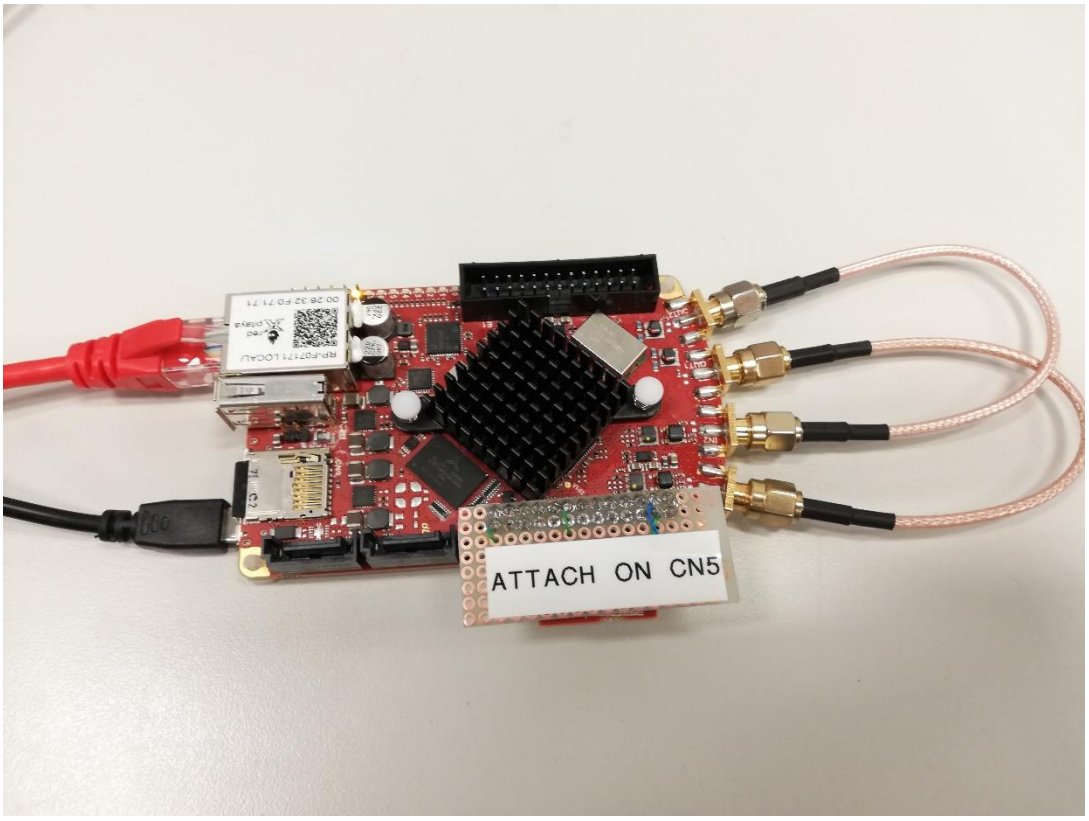

CN5
CN6
CN7
CN8
CN9
CN12
CN13
CN14
CN15
CN1
CN2
CN3
CN4
U1
U2
U3
U4
U5
U6
C64,
C63
R24
R36
R46
R34,
R35
R37
R12
C15
R9
R10
C27
HS1

3. Testing

(this is just a rought sketch of testing procedure steps, more detailed description will be prepared)

Insert SD card, connect ethernet cable and power supply.

Connect external oscillator to CN5 (E2) on Red pitaya.

Connect Out1 to In1 and Out2 to In2.

Open Red Pitaya application on web browser, start oscilloscope and signal generator. Check that the signal is aquired without distortion with proper signal level.