

SIMtrace - Bug #1437

on resistance of bus switch not acceptable, at least not for Vcc

02/19/2016 10:48 PM - laforge

Status:	Closed	Start date:	
Priority:	Immediate	Due date:	
Assignee:	tsaitgaist	% Done:	0%
Category:	SIMtrace hardware		
Target version:			
Spec Reference:			

Description

As can be seen from the IDTQS3244 data sheet, the ON resistance is higher than 16 ohms in case of a 3.3V power input (VCC_PHONE).

This causes significant voltage drop over the switch, resulting in way too low supply voltage arriving at the SIM card.

It seems like we really need to re-think the switching concept. A short-time fix might be to supply power from the SIMTRACE to the sim, rather than passing it through. However, even for the CLK/IO/RST signals the 16Ohms might cause significant signal degradation.

History

#1 - 06/21/2011 09:21 AM - tsaitgaist

- Resolution set to fixed

the bus switch has been changed : a type CB3Q (CB3Q3244) it now used instead of the QS3244.

It has a Ron of ~5 Ohms and always <=9 Ohms.

change made in git 13b6eff33a7c0d41c47080f26fdedd18db1c1c45

The VCC_PONE/SIM is now on a separate circuit. VCC_SIM can either be powered by VCC_PHONE (sniff,mitm) using the power switch (FPF2005), or can be powered (card reader mode) by the second output of the new LDO (AP7332 replaces TPS73633)

change made in git bcd3695c1a47c07dc073762b33afec24caf2a939

#2 - 02/20/2016 06:42 PM - laforge

- Project changed from OsmocomBB to SIMtrace

- Category changed from 244 to SIMtrace hardware