SIMtrace 2 - Feature #3501

Multi-sim addon board idea

08/26/2018 06:12 PM - demodulate

Status:	New	**Start date:**	08/26/2018
Priority:	Low	**Due date:**	
Assignee:	sysmocom hardware team	**% Done:**	0%
Category:	hardware		
Target version:	PCB v2		
Spec Reference:			

Description

If the SIMTrace2 board is redone, I would like to propose that the bottom of the board, or free space on the board, is used to hold additional SIM slots with the understanding that only one slot would be used at any given point in time. A single LED could indicate which SIM is in use, if the SIM selection used a software controlled switch. Alternatively, a second board could be created as an add on to hold any number of SIMs based on the area of the board. A physical slider switch for selecting the electrical path would be suitable in either case.

Would this be useful for anyone using the SIMTrace2?

History

#1 - 08/27/2018 07:04 AM - laforge

- Category set to hardware

- Assignee set to sysmocom hardware team

- Target version set to PCB v2

I currently cannot really think of a real use-case for this and would recommend caution against not introducing too many features to grow complexity.

The current board design is an inexpensive two-layer circuit board. Placing components on the bottom side would likely introduce the need for a more expensive four-layer PCB.

What is IMHO more realistic is that we expose the SIM card slot signals not only inside the slot, but also on some pins/pads, (together with two unused GPIOs, VCC + GND), so that an add-on board could be attached at that point. The add-on board then would have the switches/multiplexers as well as the multiple SIM slots.

#2 - 08/28/2018 12:43 PM - tsaitgaist

I would even got further, we should have 4 smart card slots, one for each factor (0FF-4FF/full-nano). this would avoid having to use adapters. having 3FF and 4FF is probably not a must since the 2FF slot can also hold them, but I think the 0FF (normal credit card size) would be quite beneficial for all who would like to debug normal/other smart cards (in full size).

#3 - 08/28/2018 03:00 PM - laforge

On Tue, Aug 28, 2018 at 12:43:15PM +0000, tsaitgaist [REDMINE] wrote:

> I would even got further, we should have 4 smart card slots, one for each factor (0FF-4FF/full-nano). this would avoid having to use adapters. having 3FF and 4FF is probably not a must since the 2FF slot can also hold them, but I think the 0FF (normal credit card size) would be quite beneficial for all who would like to debug normal/other smart cards (in full size).

I think those are two different requirements

a) multiple slots in which cards are inserted in parallel, and where you can select whihc SIM shall be connected at any given time. I think that was what the original requestor had in mind.

b) multiple slots of which only one can be used (card inserted) at any given point in time, which are simply all connected in parallel in order to avoid the neeed for any SIM card size adapters. This sounds more like what you are hinting.

The option "b" is of course very easy to implement, if PCB space exists. The risk is very low, basically just the additional stubs created on CLK and I/O lines. No need for any multiplexers etc.