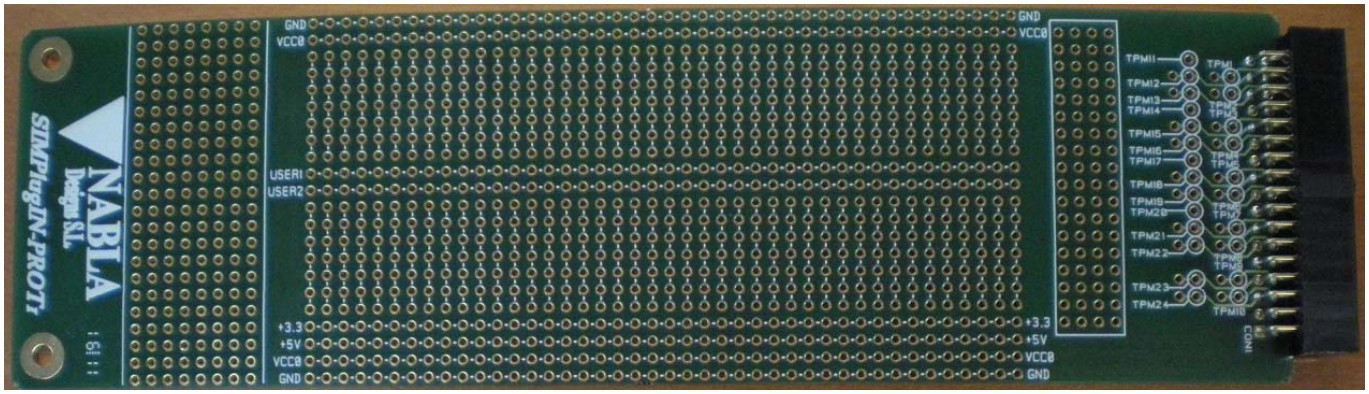
SIMPlugIN-PROT User Manual

... a SIMPlugIN board® family member

Revision: see file name on page header
Date: August 26th 2011



REVISION HISTORY

0.1	First release

0) Introduction and references

This manual describes how to operate SIMPlugIN-PROT board.

SIMPlugIN family boards are intended for engineers (engineering students too) that want to enjoy an easy to use and easy to expand FPGA development system.

SIMPlugIN-PROT is an add-on board that provides convenient prototyping space for rapid connection of user chips and components.

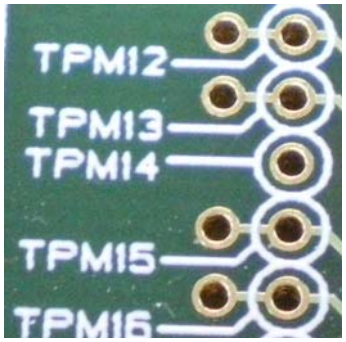
To improve reliability and endurance all holes of the board are completely plated, that is, both sides and the wall of the pit are plated. This gives much more endurance than low cost prototyping boards that have only one side plated and neither the other side nor the wall of the pit are plated

0.1) References

- SIMPlugIN- 6XL45 user manual and schematics.

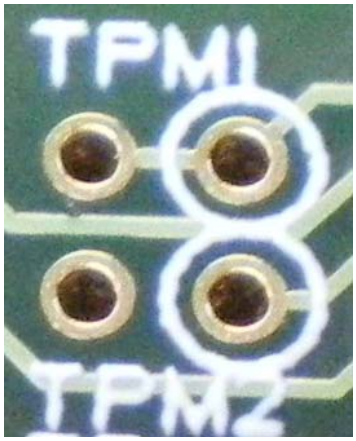
1) General description

Test points and “wire points”



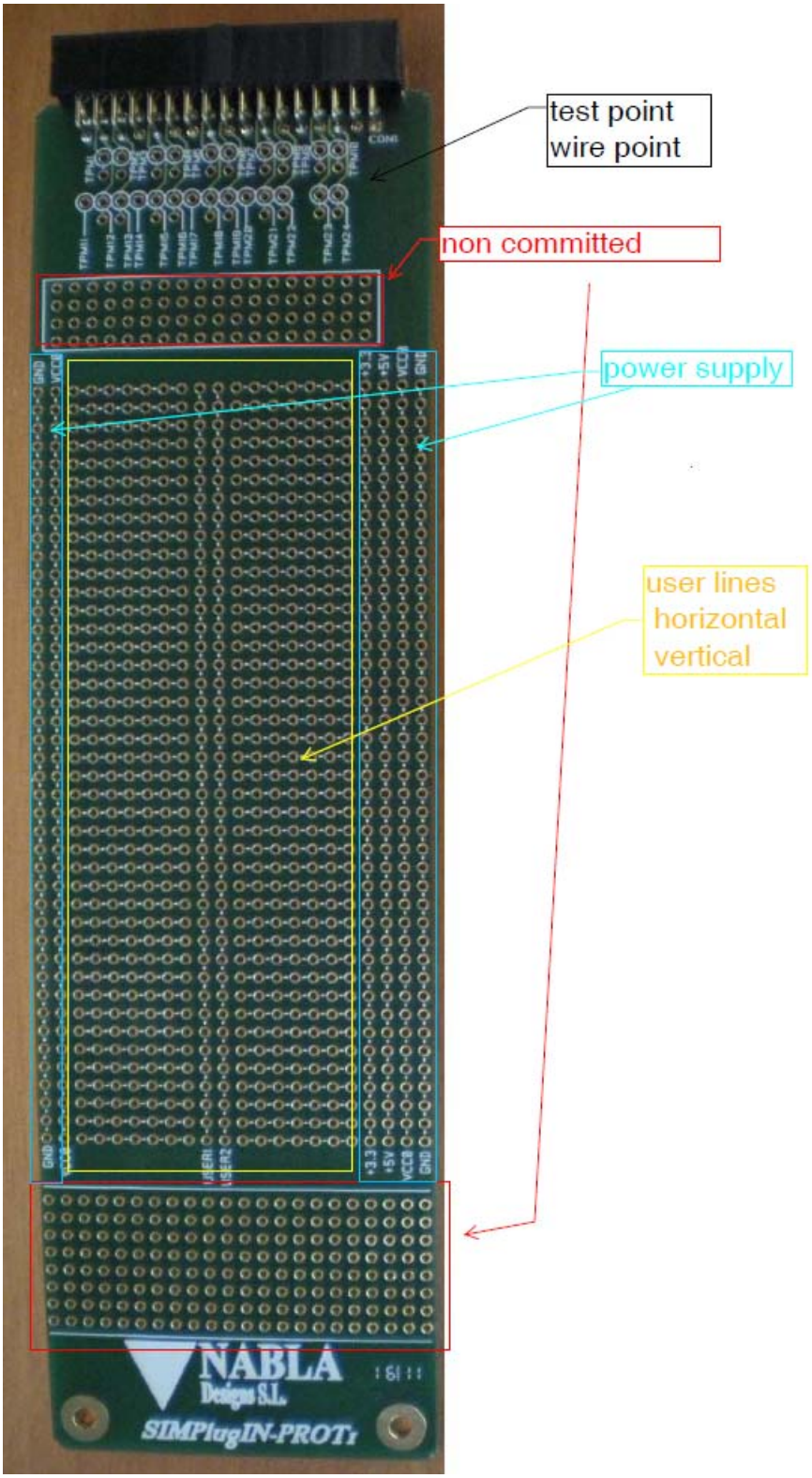
All 20 active (that is connected to FPGA pins in SIMPlugIN main board) are connected to two points. One is marked as test point and is intended for user measurements (e.g. oscilloscope probe). The other point is to solder a wire (“wire point”) to any other place of the prototyping space of the board. In the following photograph several test point (TPM12, TPM13, TPM15, TPM16) can be seen; note TPM14 that is GND test point and has no companion “wire point”.

ERRATUM: there is one exception to the rule “test point + wire point, paired and connected”. As can be seen in the following photograph TPM2 has near it a wire point but the two points are NOT connected. This erratum will be corrected in a future revision of PCB.



For the rest of functionality refer to the photograph in next page.

- **Non committed areas**. There are two areas with a matrix of unconnected plated holes.
- **Power supply areas**. Lines of plated holes connected to power pins of the connector (GND, VCCO, +3.3V and +5V.
  NOTE: if 3.3 volt or 5 volt are needed then the base board must be configured to supply these voltage in its dedicated pins.
- **User areas**. Independent horizontal and vertical lines of connected holes.


test point
wire point
non committed
power supply
user lines
horizontal
vertical
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2) Connectors

Add-on connector

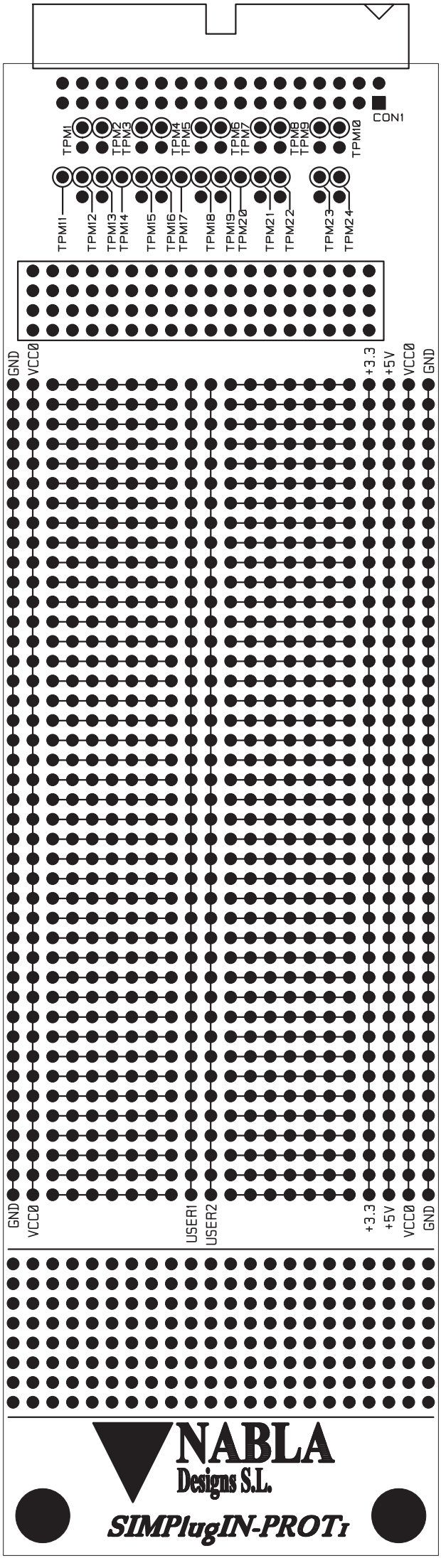
pin	signal	test point
1	+3.3	
2	+5.0	
3	GND	
4	VCCO	
5		TPM24
6		TPM10
7		TPM23
8		TPM9
9	GND	
10	VCCO	
11		TPM22
12		TPM8
13		TPM21
14		TPM7
15	GND	
16	VCCO	
17		TPM19
18		TPM6
19		TPM18
20		TPM5
21	GND	
22	VCCO	
23		TPM16
24		TPM4
25		TPM15
26		TPM3
27	GND	
28	VCCO	
29		TPM13
30		TPM2
31		TPM12
32		TPM1
33	GND	
34	VCCO	

3) Configuration jumpers

There are no configuration jumpers

4) Test points

add-on connector pin	signal	test point
32		TPM1
30		TPM2
26		TPM3
24		TPM4
20		TPM5
18		TPM6
14		TPM7
12		TPM8
8		TPM9
6		TPM10
-	GND	TPM11
31		TPM12
29		TPM13
-	GND	TPM14
25		TPM15
23		TPM16
-	GND	TPM17
19		TPM18
17		TPM19
-	GND	TPM20
13		TPM21
11		TPM22
7		TPM23
5		TPM24


CON1
TPM1
TPM2
TPM3
TPM4
TPM5
TPM6
TPM7
TPM8
TPM9
TPM10
TPM11
TPM12
TPM13
TPM14
TPM15
TPM16
TPM17
TPM18
TPM19
TPM20
TPM21
TPM22
TPM23
TPM24
GND
VCC0
+3.3
+5V
VCC0
GND
USER1
USER2
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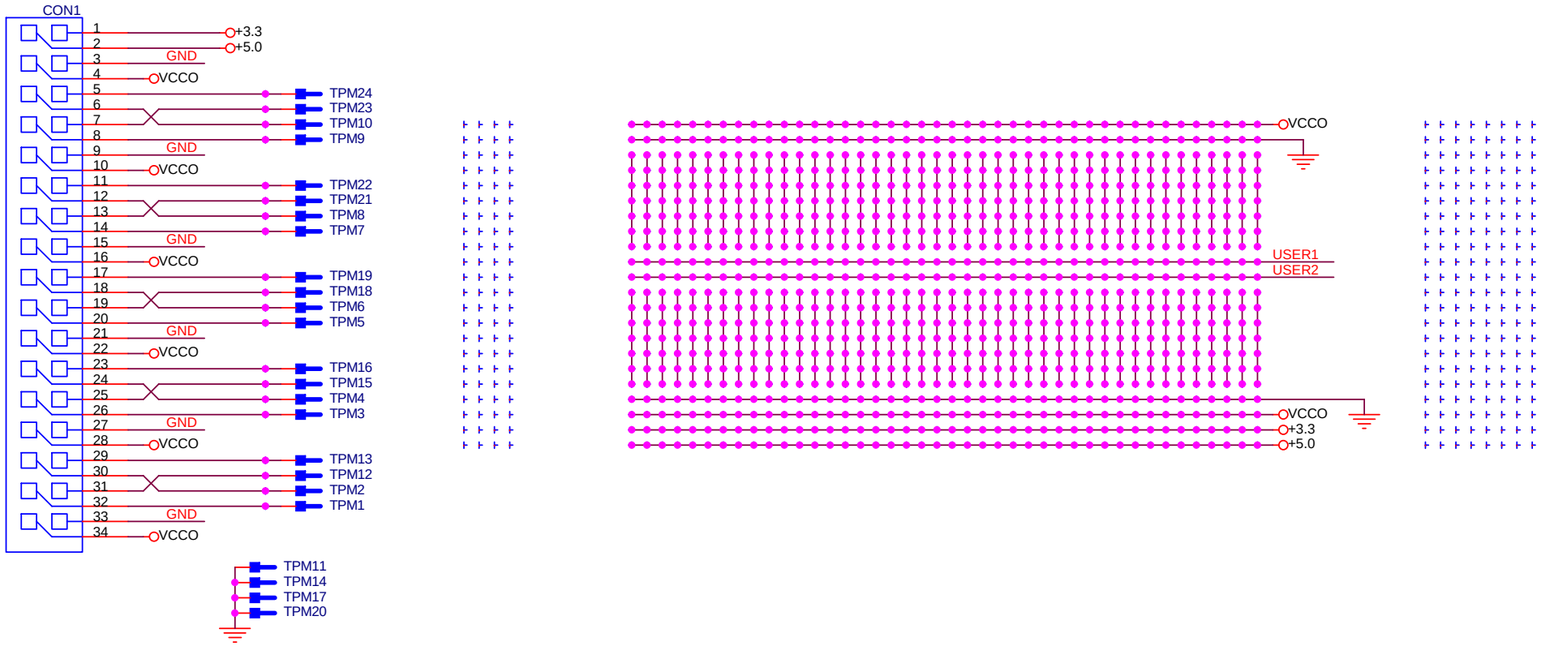

NABLA Designs S.L.

Project: SIMPlugIN	Board: SIMPlugIN-SERIAL
Board description: Add-on PROTOTYPING BOARD	
Size: A3	Page description:
Rev 0.2ac	
Last modified date: Friday, August 26, 2011	Page 1 of 1

Revised: Wednesday, March 30, 2011				
Item	**Quanti**	**Reference**	**Part**	**PCB Footprint**
1	1	CON1	HEADER_17X2_FEMALE_R/A	
2	1232	TPX1,TPM1,TPX2,TPM2,TPX3,	DNP header 1x1	header 1x1
		TPM3,TPX4,TPM4,TPX5,TPM5,		
		TPX6,TPM6,TPX7,TPM7,TPX8,		
		TPM8,TPX9,TPM9,TPX10,		
		etc.		