GEB Enterprise S.r.l.
General Electronics Business

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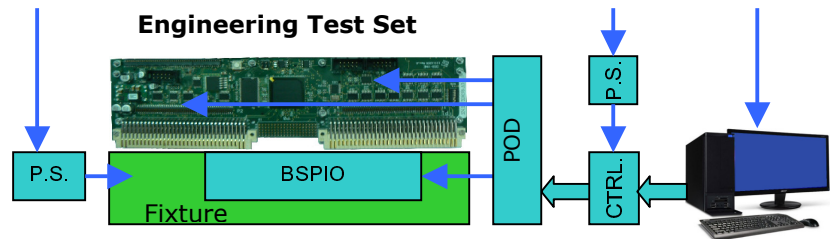
USB MicroTap
Controller & Pod

Low Cost Embedded USB, JTAG MicroTap

Overview

The GEB MicroTap is a **low Cost JTAG** (BSCAN) controller with medium performance, it makes available the cheapest solution that can fitted in a test equipment. GEB MicroTap integrates the BSCAN controller and pod, it opens a boards or systems to be tested using Bascan Tools. The physical connection has been made using a standard USBII PC port. In fact the MicroTap is a bridge between a standard USB and one or more BSCAN Taps.
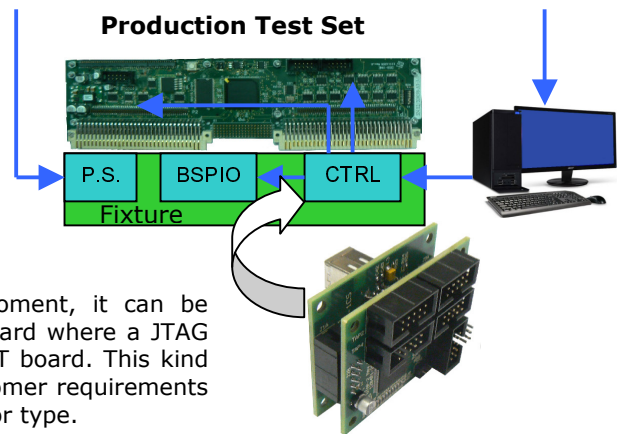
The MicroTap has been developed to follow the requirements of low volume CEMs (Contract Electronic Manufacturers), this one offers medium range performance at low cost, the TCK max frequency (6MHz) as well to PLD programming and low-volume flash programming.

Assuming the custom test program targeted on the UUT is already developed, when You have to run a Jtag test programm on UUT (Unit Under Test) You need:

- A standard BSCAN software, such as Production Package from Jtag Technologies, able to apply, check and identify all the issues on the UUT.
- A carrier, able to power your UUT, connect the TAPs and the I/O connectors, normally called BSCAN FIXTURE.
- A BSCAN controller (and pod) able to apply the test files to the TAPs, using the software above.

Engineering Test Set

Often, the BSCAN Controllers have been tought to be used in engineering area, that kind of controllers have the best performance but these are to expensive. Furthermore the controller case and its cables are designed to be used in Engineering department, two or three boxs connect together to the Fixture using a lot of cables…. it could be pitifully usable in Your applications.

Production Test Set

The MicroTap could be also used in Engineering enviroment, it can be connected to a target board (UUT) such as a daugther board where a JTAG header connector has been provided by customers on UUT board. This kind of bscan controller can be personalized following the customer requirements in board size, interface voltage levels or interface connector type.
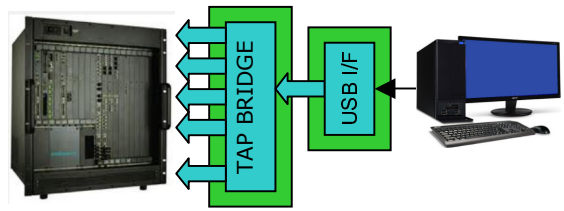
Related Tools

Furthermore, the GEB MicroTap is compatible with all JTAG Technologies' tools such as:

- Development tools like JTAG ProVisionTM or Jtag Function test JFT
- Production packages like the Stand-Alone Package (PSA), Production Integration Packages for LabVIEW, LabWindows, TestStand, C/C++ and Visual Basic.
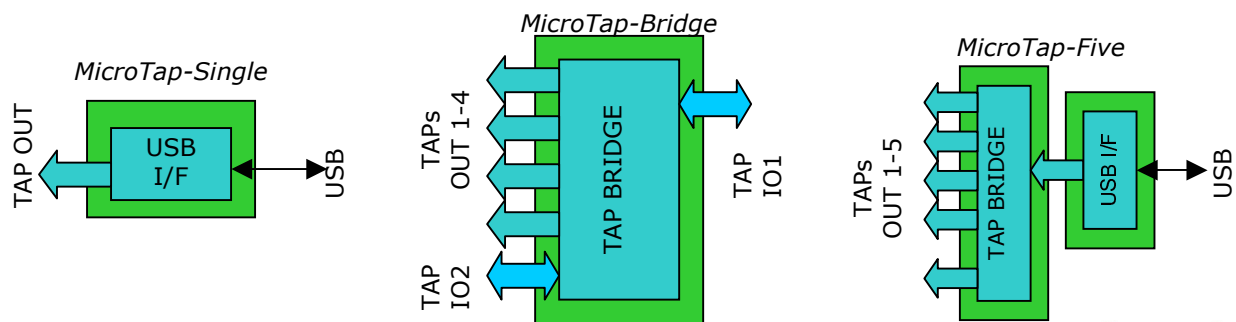
Application Example

One example is how to upgrade a system to reach a good level of BSCAN compliance system, starting from a non BSCAN one and assuming that is composed of some BSCAN ready Boards. This kind of system, the BSCAN boards should have one or more BSCAN chain might not be be reached from the functional connettor to be both joined in a accessible BSCAN chain. The MicroTap board, embedded in the system, can solve the problem giving a direct access to these boards thru its test connectors. Through its 5 Taps, single board tests can be performed directy in the system. Also a test of whole system can be runned, including non bscan compliant boards if they are accessible by a bscan one.
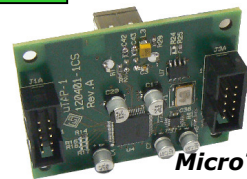

Product Description

The MicroTap consists of two boards:
- The first one makes the bridge from USB to 1 TAP
- The second one makes a Tap bridge from 1 TAP to 5 Taps. It can also be used as a general porpouse bridge from 1TAP to 4Taps, to do it TAP5 out can be reconfigured as a TAP in.

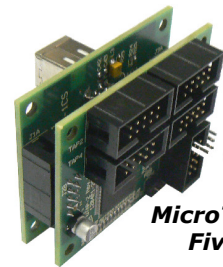*MicroTap-Single*   *MicroTap-Bridge*   *MicroTap-Five*

The two kinds of boards can be combined and configured to obtain three different functions, corresponding to three different versions:
1. MicroTap–Single, just one Tap Controller and Pod
2. MicroTap-Bridge 1 to 4 Taps bridge
3. MicroTap-Five, 1 to 5 Taps Controller/Pod

MicroTap-Single

Main Features

- Targetted to Embedded Application
- Fully compatible with JTAG Techonogies PROVISION and JFT tools
- Compatible with USB 1.1 and 2.0 formats
- Fully-compliant 1149.x TAPs
- TCK up to 6 MHz
- Fixed 3V3 TAP voltage

MicroTap-Five

Related Documents

JTAG Test Overview: www.geb-enterprise.com/files/File/altri_files/TestJtag-DS_EN.pdf
BSPIO Multivoltage I/O: www.geb-enterprise.com/files/File/altri_files/BSPIO-STDIF1688-DS_EN.pdf
SIMPLEX-4, 312 I/O carrier: www.geb-enterprise.com/files/File/altri_files/Simplex4-DS_EN.pdf

Ordering Information

Product Name	GEB Code	Description
MicroTap–Single	130327A1	USB to BSCAN interface, Single TAP controller, naked
MicroTap-Five	130327A5	USB to BSCAN interface, Five TAP controller, naked
MicroTap-Bridge	130327A4	Bscan Bridge, one TAP to four TAPs, naked
Accessories	071024-53A5	2U FDK624 Front/Rear Panel MicroTap Carrier