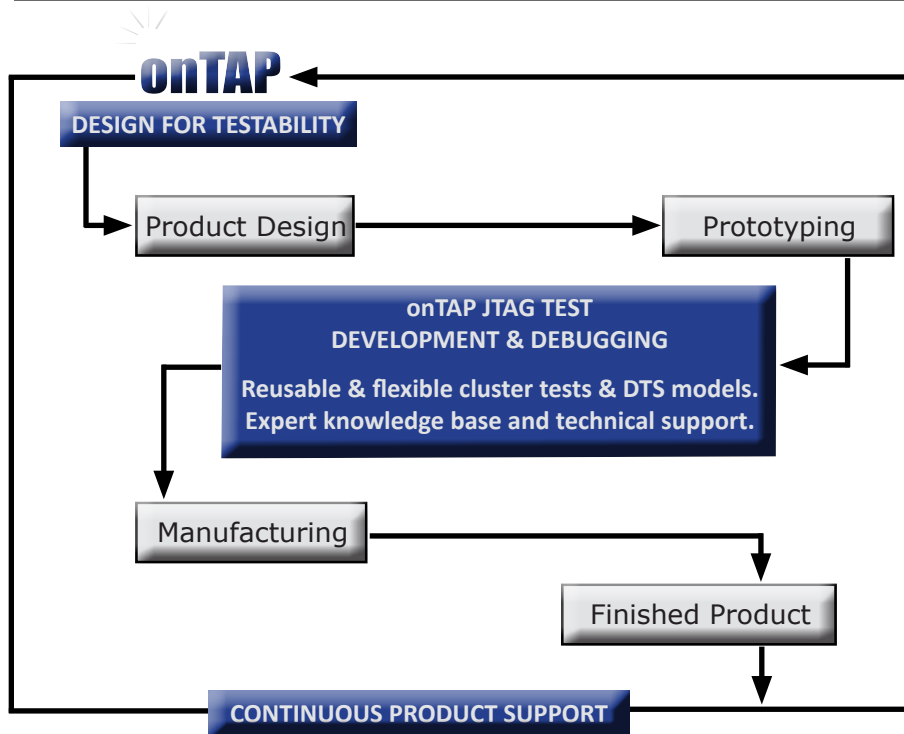


# onTAP Series 4000 Overview

onTAP Series 4000 software and hardware simplifies boundary scan test and programming throughout your product life cycle. It enables you to easily and cost effectively design, develop, manufacture, and support your electronics with confidence. With onTAP you will design your boards for IEEE 1149.1 and 1149.6 JTAG compliance, develop, debug, and implement all JTAG tests for scan and non-scan devices (DDR2, DDR3, SRAM...), **control multiple levels of I2C**, program FLASH (In System Programming **ISP**), **SPI Direct Drive**, and implement Built In Self Test (**BIST**) all through a JTAG port and USB cable.

Flynn Systems' 10 years of testing JTAG IEEE 1149 standards delivers this robust and powerful solution. onTAP provides expert test solutions thanks to our vast knowledge base and JTAG testing experience, easy to use control screens with graphical debugging, and on-call technical support.



## PCB Design for Test and JTAG Compliance

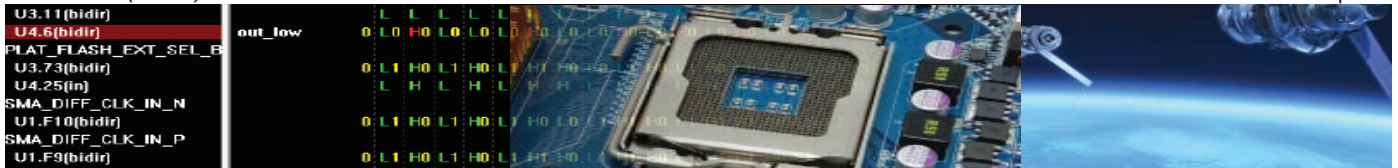
Improve your designs, reduce your costs, and your time-to-market!

With a decade of successful IEEE 1149.1 (JTAG) testing and development experience, combined with thousands of real-life user applications and projects, we are well suited to help guide your design with our design-for-test (DFT) tools, while providing live technical support to ensure your designs are at least optimized for IEEE 1149.1 and 1149.6 compliance and have the proper JTAG access to ensure the most comprehensive test coverage.

Flynn Systems and onTAP will save you time and money from the start!

### Highlights: Series 4000

- Automated Netlist-Based Test Generation
- Test to IEEE 1149.1 and IEEE 1149.6 standards
- The most comprehensive fault coverage
- Pin-level diagnostics to quickly debug boards.
- ProScan graphical interface/test environment
- Friendly notebook style test development wizard
- ISP Configures FPGAs & CPLDs
- Test multi-die modules
- Flash programming
- Increased programming and verification speeds
- Readers for over two dozen CAD netlist formats
- BSDL file reader and syntax checker
- Windows 2000, XP, Vista and Windows 7 compatible on 32 and 64 bit machines. With 2.2 GHz Processor and 3 GB RAM



## Test Development

onTAP's Development tool delivers rapid verification of your board design and layout.

When you are ready to test your design, onTAP interrogates the TAP, identifying and verifying boundary scan chain integrity.

Utilize onTAP's organized notebook tabs to quickly develop reusable JTAG tests, including memory and cluster tests and flash programming, and reusable DTS models for flash and memory devices. Tests and models are transferrable to other sites, and projects.

Gain visibility and interact directly with your board through the ProScan test/debug environment.

## Manufacturing Test

Know that you have proven, comprehensive, and cost-effective test solutions when sending your board to manufacturing!

The onTAP manufacturing tool enables you to implement pre-developed, proven tests from your design team, or those made for you by Flynn Systems as a turn-key service.

ProScan enabled and returns highly precise, pin-level diagnostic messages directing you to the exact location of the faults. Program your Flash memory devices, cluster test memory devices, and configure logic. onTAP with ProScan also provides low-level pin manipulation in this environment for simple step through pin diagnosis.

## Contract Test Development

Flynn Systems has been a leader in ATG vector testing for 25 years, and boundary scan testing for 10 years. We have the knowledge, experience, and foresight you need to develop a cost effective, rapid JTAG solution you can implement without any hassles. We have delivered solutions for large and small companies the world over. No project is too big or too small.

## Support

After your designs, prototyping and test development are complete, Flynn Systems will work with you and your CM to quickly locate and fix faults ensuring board integrity and preventing delays in production.

When you use onTAP, you have access to over 25 CAD Netlist readers and a comprehensive library of models such as Flash, DDR2, SRAM, as well as CPLDs, FPGAs.

Flynn Systems strives to deliver the best, most affordable JTAG Solution. With that comes responsive support delivering reliable improvements and updates to our tools based on your suggestions and needs. Use your laptop and our USB cable to develop and implement onTAP tests wherever you are.

## Flexible & Reusable Models for Tests

Flexibility is key when working in a test and manufacturing environment. Series 4000 allows you to make simple changes to DTS models. Those changes eliminate templates and restrictions on how and where the models can be used. When you change a model, chances are you'll want to re-use that model in another design. onTAP provides that freedom.

## Flash Programming

onTAP Series 4000 will program your FLASH memory rapidly through the onTAP USB Cable and JTAG port.

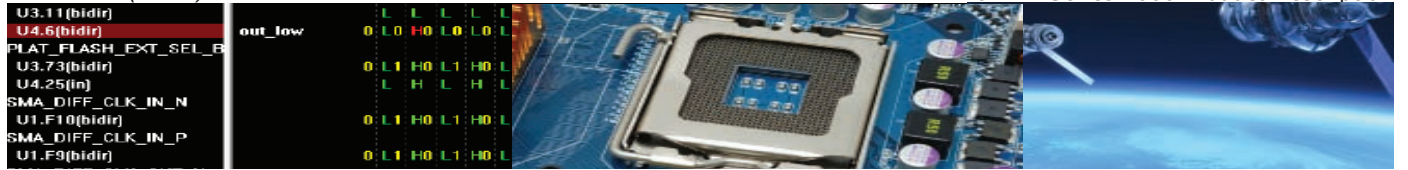
Flynn Systems' USB programming cable offers an adjustable TCK rate, and is configurable from within the software.

Flynn Systems maintains a comprehensive library of FLASH memory devices, along with models for memory devices such as DDR2, SRAM, SDRAM etc. as well as CPLDs and FPGAs and will create new models for your project.

## Incorporating Modules

With shrinking real estate on boards, devices get smaller and more compact, sometimes containing several pieces of silicon - we know them as modules. onTAP easily incorporates modules and their internal parts during test development.

onTAP will incorporate the module in to the test, making sure all elements are properly tested.



## Additional tools and accessories

### onTAP DLL ad DLL GUI Demo Tools

When the need arises to test from a third party test executive, choose onTAP's customizable DLL. Whether plugging in to a test executive, or running as a plug-in to your own interface, the onTAP DLL is a flexible run-time code enabling you to optimize your test strategy to include onTAP JTAG test with your ICT, AOI, and functional test. The standard DLL interface comes LabView ready, and can be plugged in to any other test environment.

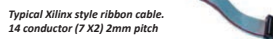
### USB Test and Programming Cable - Plug and Play

The onTAP USB test and programming cable is the link between onTAP and your application with Xilinx flying leads, Altera style cable, or custom headers.

Using high speed A-A (included) USB cables, connect the onTAP USB cable to your application. The onTAP cable TCK clock is adjustable. It automatically senses and adjusts to target I/O voltages, and interfaces to devices operating at 1.5 to 5.0 VDC. The onTAP cable self-adjusts to the target chain using the VRef voltage, allowing it to configure to many different JTAG ports, which is helpful not only in design, but manufacturing. Through this cable, onTAP can easily handle multiple chains.



Typical Xilinx style flying leads



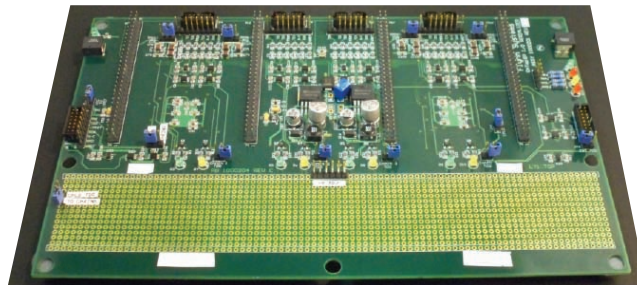
Typical Xilinx style ribbon cable.  
14 conductor (7 X2) 2mm pitch



30 MHz Dual Channel USB Cable

### Serializer & GPIO Board

The dual purpose GPIO/Serializer board can serialize multiple chains, each with different IO voltage levels and can also provide over 1200 GPIO drive and capture test points.



- DFT increases productivity, delivers cost effective JTAG solution
- Delivers guaranteed results
- onTAP Boundary Scan Expert Knowledge Base
- 10 Years of Experience with IEEE 1149.1
- Successful, satisfied customers with proven solutions

### In Their Words

**" ... I was concerned about testability. I need not have worried. I let onTAP create an interconnect test, and it tested the board in less than a second! It was pretty amazing to watch.**

This board was designed and manufactured here but was sent offsite for the FPGA design...we really had no way to test the board...if the board didn't work offsite, we would not have had an easy way to troubleshoot it from here.

**It [onTAP] surely saved my bacon."**

T. Wild, Senior Engineer, Harris RF

Customer since 2005

**"Flynn Systems has excellent communication, a lot of patience for customers, very good support and always on time.**

**onTAP Boundary Scan Software accelerates and simplifies the development of boundary-scan applications.**

onTAP can automatically generate interconnect tests, including a check for pull-ups, pull-down resistors and mid-state shorts. Flynn Systems' provides support when needed.

The test vector generation and test execution **using onTAP software saved a lot of man-hours for our company and I received positive feedback from management."**

G.Biberdzic, Production Engineering  
- Automated Tests and Troubleshooting  
EVERTZ MICROSYSTEMS LTD  
Customer since 2007