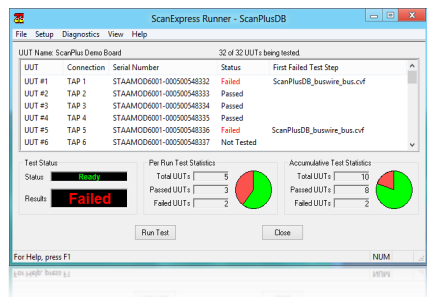


# ScanExpress Runner™ Gang Edition

High-Volume Production JTAG Test Executive



## Revolutionize the way you think about test

### Features

- Concurrent testing and in-system programming for up to 8 simultaneous UUTs.
- Parallel user-programmable, sustained test clock rate up to 80 MHz per TAP for up to 640 MHz effective throughput.
- Hardware comparison of expected and actual test patterns provides fast concurrent test and diagnosis.
- Support for external write enable and ready/busy signals on every TAP for increased in-system programming performance.
- Multi-UUT support works with the ScanTAP™ series of intelligent pods and NetUSB-1149.1™ series of external JTAG controllers.
- Sequencing and execution of test steps and test plans generated by Corelis ScanExpress™ tools.
- Works with Microsoft Windows Vista, Windows 7, Windows 8/8.1, and Windows 10.

### Applications

#### Boundary-Scan Test

Use concurrent boundary-scan to test, debug, and verify hardware through all phases of the product life cycle—from development to production and into the field.

#### In-System Programming

Erase, program, and verify flash memories, serial PROMs, CPLDs, FPGAs, and other programmable devices within a circuit or system design, concurrently on multiple targets.

#### High Volume Production

Test and program up to 8 units simultaneously using a simple JTAG connection for each UUT.

Electronic manufacturing test systems must be fast and efficient. Schedules today are shorter, products are more complex, and the market demands higher speed—the product needs to be built and shipped yesterday.

**ScanExpress Runner Gang Edition** is a concurrent boundary-scan and in-system programming test executive designed specifically for high volume production. Unlike traditional test systems which execute sequentially on a single unit under test (UUT) at a time, **ScanExpress Runner Gang Edition** provides concurrent (gang) testing on up to 8 UUTs for improved test and programming times.

Increase efficiency with gang testing—concurrent execution is the path to shorter production cycles and higher throughput.

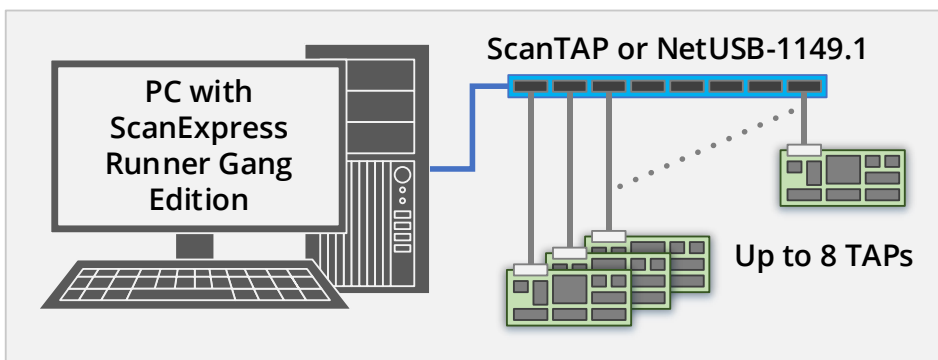
### Benefits

- Save time by testing up to 8 units simultaneously on a single test station.
- Increase in-system-programming ; the advanced architecture provides persistent, concurrent scan vector output and extraction, ensuring that effective throughput remains high.
- Compatible with the complete ScanExpress™ family of boundary-scan and JTAG embedded test products.

The ScanExpress Runner Gang Edition test executive enables concurrent execution of IEEE-1149.1 (JTAG) boundary-scan tests with an easy-to-use graphical user interface (GUI) and advanced features. Basic Diagnostic (BDO) functionality is included and can be enhanced with the optional Advanced Diagnostics (ADO) module for detailed pin and net level diagnostics.

## Test Plan Support

ScanExpress Runner Gang Edition supports test plans created by ScanExpress TPG and ScanExpress JET, including third party in-system programming files in the SVF and STAPL formats<sup>1</sup>. Test plan failures encountered in concurrent mode will not interrupt or prohibit the continuation of testing on remaining boards, ensuring that production throughput remains high at all times.



ScanExpress High-Volume Production Test System with ScanTAP-8

## JTAG Controller Compatibility

ScanExpress Runner Gang Edition provides concurrent test execution when using ScanTAP intelligent pods or NetUSB-1149.1 series JTAG controllers. Multi-TAP controllers can be used for concurrent testing and for multiple TAPs within a UUT simultaneously. For example, a PCIe-1149.1 JTAG controller with a ScanTAP-8 pod may be used concurrently test up to 4 UUTs with two TAP connections per UUT. ScanExpress Runner Gang Edition may also be used to execute sequential test plans on the USB-1149.1 series of controllers on a single UUT.

## ScanExpress Runner Gang JTAG Controller Support

ScanTAP Pods	Part Number	Concurrent UUTs
ScanTAP-8	10329	8
ScanTAP-4	10302A	4
Standalone Controllers	Part Number	Concurrent UUTs
NetUSB-1149.1/SE	10339B	8
NetUSB-1149.1/E	10337B	4
USB-1149.1/4E	10390	1
USB-1149.1/1E	10380R	1

## Third Party Application Integration

In addition to the graphical operator interface, ScanExpress Runner Gang Edition includes a third party application interface (API) consisting of DLLs, command-line functions, and LabVIEW virtual instrument drivers. The API integrates easily with off-the-shelf test executive solutions and in-house software solutions alike.

## Ordering Information

ScanExpress Runner Gang Edition licenses can be purchased to allow for up to 8 concurrent UUTs.

**Part Number—20521**

Support for up to 8 UUTs.

**Part Number—20520:**

Support for up to 4 UUTs.

ScanExpress Runner Gang Edition licenses are also capable of executing ScanExpress Runner Standard Edition.

For more information about Corelis hardware and software products, please visit our website at

<http://www.corelis.com/>

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<sup>1</sup>ScanExpress JET and STAPL file format test steps are executed sequentially.