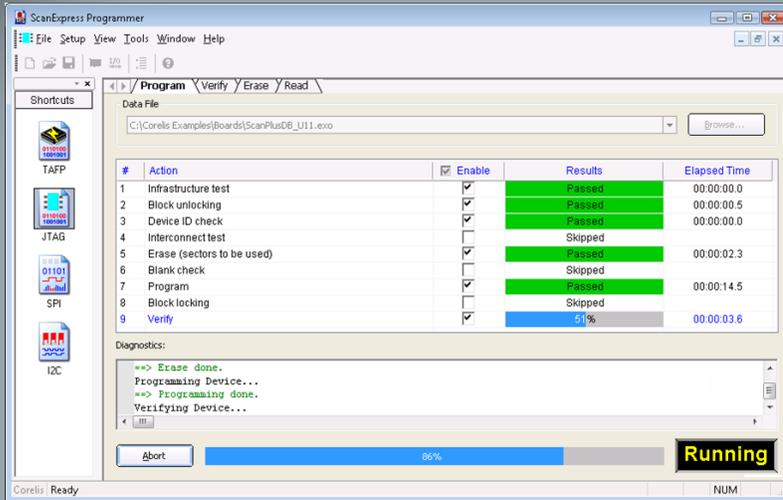


# ScanExpress Programmer™

Universal In-System Programming Tool

**CORELIS**  
An EWA Company

Preferred JTAG Solutions—Acclaimed Technical Support



## Features

- High-performance In-System Programming of Flash memories, serial EEPROMs, CPLDs, FPGAs, and other in-system-programmable devices
- Supports I<sup>2</sup>C, SPI, and JTAG interfaces
- In-system programming of Flash memory devices at the CPU maximum programming speed with Target Assisted Flash
- Configurable voltage from 1.25V to 3.3V
- User programmable JTAG TCK speeds up to 100 MHz, SPI SCK speeds up to 50 MHz, and I<sup>2</sup>C/SMBus SCL speeds up to 5 MHz
- Supports Standard, Fast, and High-speed mode I<sup>2</sup>C bus data rates up to 5 Mbits/sec
- Programs up to four target devices in parallel with the JTAG module—programming and verifying data in real time
- Memory contents can be dumped to a file and used to program parts on additional targets
- Powerful JTAG chain fault detection, diagnostics, and a built-in debugger help isolate hardware problems quickly
- Interfaces with LabVIEW, LabWindows/CVI, Agilent VEE, Visual Basic, and other third party test executives
- Supports Corelis high-performance JTAG controllers
- Compatible with the Corelis ScanExpress family of products
- Works with Windows XP, Windows Vista, and Windows 7

ScanExpress Programmer is a universal in-system programming (ISP) solution designed for convenience and versatility—a modular, multi-functional, and high-performance tool to program, read, and verify Flash memories, serial EEPROMs, CPLDs, FPGAs and more.

Like all Corelis ScanExpress family products, ScanExpress Programmer is a tool for all phases of the product life cycle—whether programming early code during product development, programming production code during manufacturing, or reprogramming units out in the field, ScanExpress Programmer is designed to fit all in-system programming needs.

## Benefits

- **Save time and effort** by performing common programming functions while the target device is installed in-circuit.
- **Decrease complexity** by using a single universal instrument for multiple ISP operations.

## Applications

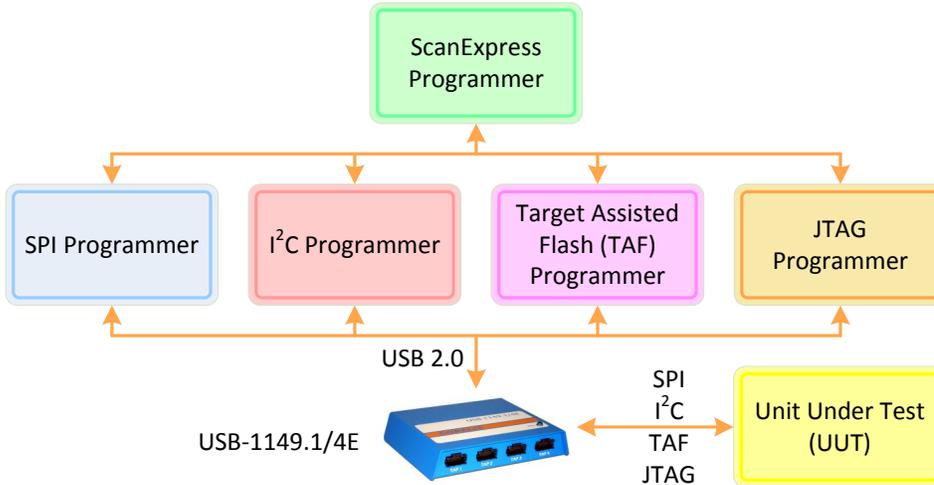
- **Development** - Engineers and developers can quickly erase, program, verify, and read code stored in memory devices during the development process.
- **Production** - ISP allows memory devices to remain on the shelf in a blank state until ready-to-ship, easing inventory management.
- **Service & Repair** - Reprogram Flash and troubleshoot firmware problems in the field or on the repair bench using ISP.

**Learn More:** For more information about Corelis products, please visit [www.corelis.com](http://www.corelis.com)

ScanExpress Programmer features support for the most popular in-system programming interfaces and components. Utilizing a high-performance Corelis JTAG controller along with user-friendly and intuitive Windows-based software, ScanExpress Programmer offers fast and convenient erase, program, verify, and read capabilities for all supported programming modules.

## ScanExpress Programmer Modules

ScanExpress Programmer features three unique and individually licensed device programming modules: JTAG Programmer, SPI & I<sup>2</sup>C Programmer, and Target Assisted Flash (TAF) Programmer.



### ScanExpress Programmer Modules Interface with Corelis JTAG Controllers

The **JTAG Programmer** module is a flexible JTAG/boundary-scan programmer capable of programming Flash memory and serial EEPROM devices connected to boundary-scan components. Boundary-scan Flash programming files are generated by the ScanExpress Flash Generator™ software (sold separately).

The JTAG programmer can also program CPLDs, FPGAs, and other JTAG in-system programmable devices. Concurrent programming for up to four boards is included for increased throughput.

The **Serial Peripheral Interface (SPI) and Inter-Integrated Circuit (I<sup>2</sup>C) Programmer** module offers fast programming of SPI devices and convenient programming of I<sup>2</sup>C memory devices by controlling the serial bus signals directly through dedicated SPI and I<sup>2</sup>C interface available on supported Corelis boundary-scan controllers.

The **Target Assisted Flash (TAF) Programmer** module utilizes Corelis' JTAG Embedded Test (JET) technology to take control of the system CPU to achieve the fastest possible in-system-programming performance for Flash memory devices.

## Ordering Information

- **Part Number—20600**  
**ScanExpress Programmer Professional**  
Includes SPI, I<sup>2</sup>C, and JTAG modules.
- **Part Number—20601**  
**ScanExpress Programmer - Direct SPI and I<sup>2</sup>C**  
Serial bus programming.
- **Part Number—20603**  
**ScanExpress Programmer - JTAG**  
JTAG Flash and CPLD programming.
- **Part Number—206XX**  
**ScanExpress Programmer - TAF**  
Target Assisted Flash programming. Includes one CPU support package. For a complete list of supported processors and part numbers, please contact the Corelis sales department:

**Email:** [sales@corelis.com](mailto:sales@corelis.com)

For more information, please visit our website at

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

## CORELIS

13100 Alondra Blvd.  
Cerritos, CA 90703, USA

+1 888-808-2380 (US & Canada)  
+1 562-926-6727 (International)  
+1 562-404-6196 (Fax)

[www.corelis.com](http://www.corelis.com)

## ScanExpress Programmer Performance

Programming Scenario	JTAG	I <sup>2</sup> C	SPI	TAF
Flash memory connected to a TAF-supported CPU	Fast	-	-	Very Fast
Flash memory connected to any JTAG device(s)	Fast	-	-	-
SPI serial EEPROM with direct (external) SPI access	Slow	-	Fast	-
I <sup>2</sup> C serial EEPROM with direct (external) I <sup>2</sup> C access	Medium	Fast	-	-
CPLD programming	Fast	-	-	-

ScanExpress™, ScanExpress Programmer™, ScanExpress Flash Generator™, and USB-1149.1/4E™ are trademarks of Corelis, Inc.

All other product or service names are the property of their respective owners.

© Copyright Corelis, Inc. 2011. All rights reserved.

Corelis, Inc., reserves the right to make changes in design or specification at any time and without notice.

20600-DS VERSION 1.0 - 12/9/2011