

PRODUCT
BRIEF

ScanWorks® Configurable IO Module Kit

Key Benefits:

- Improve boundary-scan test coverage by interfacing to a UUT via its peripheral connectors, which would otherwise be uncovered
- Improve boundary-scan test coverage by interfacing to a bed-of-nails fixture for access to UUT test points, which would otherwise be uncovered
- Fully bidirectional I/O provides improved diagnostics and fault coverage versus loopback testing
- Easy to wire by way of standard IDC ribbon or twisted pair cables
- Easy mapping to UUT design requirements using ScanWorks External Resources feature
- Supports ASSET's FPGA-based Fast Programming (FFP) and FPGA-Controlled Test (FCT) technologies
- The factory-installed personality can be replaced by an alternative that is ASSET supplied or user defined

Overview

The Configurable IO Module Kit (CIOM-100) is a dynamic and cost efficient system that increases boundary-scan UUT test coverage. Utilizing a UUT's existing peripheral connectors or test points, test coverage can be extended to areas that otherwise would be uncovered. The CIOM-100 has 100 fully bidirectional test signals that provide enhanced fault diagnostics (i.e. shorts and opens coverage). The CIOM-100 is flexible enough to be used for lab benchtop applications and is robust enough for a production environment.



Personalities

The CIOM-100 has an onboard configuration device allowing the CIOM-100 to take on a programmed, non-volatile personality. For example, through the use of an ASSET supplied ScanWorks project, the CIOM-100 could be converted into a multi-TAP buffer board for UUT scan-chain concatenation during boundary-scan testing. Customers can define personalities to their own requirements as well. Being in-situ programmable, the CIOM-100 can also be used for FPGA-based Fast Programming (FFP) of external non-volatile memory devices or for FPGA-Controlled Test (FCT) actions.

ScanWorks Ease of Use

Combining ScanWorks and the CIOM-100 to increase test coverage is a simple and straightforward process. Defining connections between the CIOM-100 external test resources and a UUT is accomplished via a convenient user interface or by defining the connections in a text file that can be imported into ScanWorks. Netlist merging is not required and the external test resources are not included in the UUT coverage reports. Test actions that utilize the CIOM-100 can be fully integrated into a ScanWorks Sequence flow.

ASSET Contacts:

Please contact your ScanWorks sales representative for more information.

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Key Product Features:

- Provides 100 versatile boundary-scannable I/O on 4 dual-row 100-mil headers, each such header providing for 25 signals with distinct signal returns (GND)
- Programmable in situ
- User definable by way of onboard non-volatile FPGA configuration device
- Voltages, from 0.8V, 1.2V, 1.25V, 1.5V, 1.8V, 2.5V to 3.3V, selectable independently for 2 banks of 50 I/O each
- All signal ports are 5V tolerant
- Pull-ups per I/O pin can be switched in for all I/O if required; or switched out for all I/O for coverage of on-UUT pull resistors
- Scan In port works with any ASSET controller
- Scan Out port enables the CIOM-100 to be included in the UUT scan path; alternatively, the CIOM-100 can be operated standalone, without requirement for external loopback, simply by leaving the Scan Out port unconnected
- Scan In port and Scan Out port use distinct reference voltages, either fixed at 2.5V or externally provided from 0.9V to 3.3V each
- Includes 5V power supply suited for international use