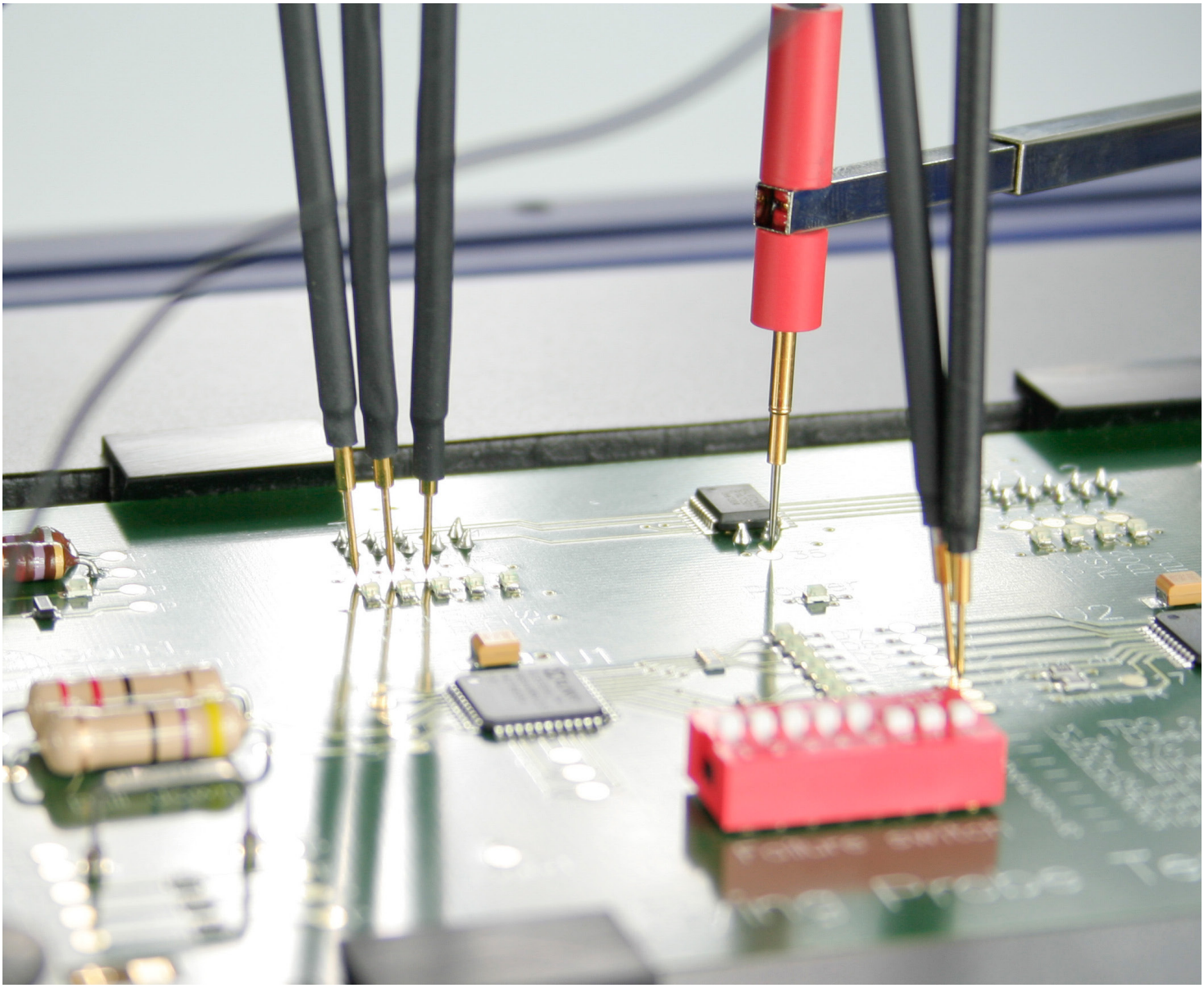
PRODUCT CATALOGUE

Embedded JTAG Solutions



GOEPEL electronic

Table of contents

Product catalogue Embedded JTAG Solutions

SCANFLEX Controller
Page 6

SFX I/O modules
Page 21

Universal Programmer
Page 31

Software
Page 49

Further products and information can be found on our webshop.

Table of contents

Product catalogue Embedded JTAG Solutions

Table of contents

Product catalogue Embedded JTAG Solutions

Table of contents

SCANFLEX Controller

SCANFLEX II Controller for USB/LAN

SFX II CUBE

Multifunctional JTAG/ Boandary Scan Controller for GBit LAN and USB 3.0

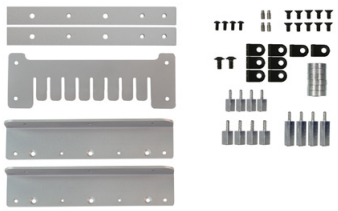
- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III architecture
- ADYCS™ III (compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, allows the definition of virtual digital pin electronics)
- FASTSCALE™ (change of speed level via software, e.g. change to C controller)
- 2 SFX / LS interfaces (for expansion with SFX carrier and SXF I/O modules)
- 8 JTAG / TAP slots (SFX II TIC or TEM modules must be ordered separately)
- 64 MPP (Multi Purpose Port), mixed-signal I/Os to support 8 TAPs
  - built-in SFX I/O module with VarioCore support
  - each channel is independently configurable (input, output, bidirectional)
  - I/O voltage is programmable in 8 groups of 8 channels each (0.9-3.6 V)
  - driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in AFPG (FLASH)
  - each signal has a 22 Ω inline resistor
- 1 SFX-I/O slot (for expansion with SFX-I/O modules)

Configuration overview · SFX II CUBE

	SFX CUBE-A	SFX CUBE-B	SFX CUBE-C
Item no.	SCO2-010	SCO2-011	SCO2-012
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data handling	normal - Scan Data Buffer	fast - SPACE™ III Architecture (up to factor 20 faster)	fast - SPACE™ III Architecture (up to factor 20 faster)
Upgrade	FASTSCALE™ (Upgrade to B or C controller)	FASTSCALE™ (Upgrade to C controller)	-

Item no. SCO2-01x

SFX II CUBE Mounting Kit



Mounting kit for the ATE integration of an SFX II CUBE. With Threaded feet for direct mounting or fitting with included magnetic feet.
Strain relief for all cable connections.

Item no. STT2-400

SCANFLEX II Controller for USB/LAN

SFX II BLADE 4

SCANFLEX II JTAG/Boandary Scan Controller for GBit LAN and USB 3.0 (without pre-mounted TIC/TEM modules)

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III Architecture
- ADYCS™ III (Compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, enables the definition of a virtual digital pin electronics)
- FASTSCALE™ (change in the speed level using software, e.g. change to C-controller)
- 2 SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)
- 4 JTAG / TAP slots (SFX II TIC or TEM modules)
- 64 MPP (Multi Purpose Port), mixed-signal I/Os to support 4 TAPs:
  - in-built SFX-I/O module with VarioCore support
  - each channel can be configured independently (input, output, bidirectional)
  - I/O voltage can be programmed in 8 groups, each with 8 channels (0.9-3.6 V)
  - driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in the AFPG (FLASH)
  - each signal has a 22 Ω in-line resistor

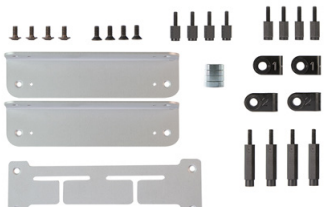
Configuration overview · SFX II BLADE 4

	SFX I BLADE 4-A	SFX II BLADE 4-B	SFX II BLADE 4-C
Item no.	SCO2-020	SCO2-021	SCO2-022
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data handling	normal - Scan Data Buffer	schnell - SPACE™ III Architektur (bis Faktor 20 schneller)	schnell - SPACE™ III Architektur (bis Faktor 20 schneller)
Upgrade	FASTSCALE™ (Upgrade auf B- oder C-Controller)	FASTSCALE™ (Upgrade auf C-Controller)	-

Item no. SCO2-02x

SFX II BLADE 4 Mounting Kit

Installation kit for ATE integration of an SFX II BLADE 4. With threaded feet for direct installation or for fitting with the magnetic feet included. Strain relief for all cable connections.



Item no. STT2-405

SCANFLEX II Controller for USB/LAN

SFX II BLADE 4 RMx1/2/3

Up to three independent SCANFLEX II Boandary Scan Controllers for GBit LAN and USB 3.0 (without pre-mounted TIC/TEM modules) for gang applications in a 19" housing (1 U)

Features per controller:

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III Architecture
- ADYCS™ III (Compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, enables the definition of a virtual digital pin electronics)
- FASTSCALE™ (change in the speed level using software, e.g. change to C-controller)
- 2 SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)
- 4 JTAG / TAP slots (SFX II TIC or TEM modules must be ordered separately)
- 64 MPP (Multi Purpose Port), mixed-signal I/Os to support 4 TAPs:
  - in-built SFX-I/O module with VarioCore support
  - each channel can be configured independently (input, output, bidirectional)
  - I/O voltage can be programmed in 8 groups, each with 8 channels (0.9-3.6 V)
  - driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in the AFPG (FLASH)
  - each signal has a 22 Ω in-line resistor

Configuration overview · SFX II BLADE 4 RMx1/2/3

	SFX II BLADE 4 RMx1/2/3-A	SFX II BLADE 4 RMx1/2/3-B	SFX II BLADE 4 RMx1/2/3-C
Item no.	SFX II BLADE 4 RMx1-A: SCO2-110 SFX II BLADE 4 RMx2-A: SCO2-120 SFX II BLADE 4 RMx3-A: SCO2-130	SFX II BLADE 4 RMx1-B: SCO2-111 SFX II BLADE 4 RMx2-B: SCO2-121 SFX II BLADE 4 RMx3-B: SCO2-131	SFX II BLADE 4 RMx1-C: SCO2-112 SFX II BLADE 4 RMx2-C: SCO2-122 SFX II BLADE 4 RMx3-C: SCO2-132
Number of controllers	SFX II BLADE 4 RMx1-A: 1 SFX II BLADE 4 RMx2-A: 2 SFX II BLADE 4 RMx3-A: 3	SFX II BLADE 4 RMx1-B: 1 SFX II BLADE 4 RMx2-B: 2 SFX II BLADE 4 RMx3-B: 3	SFX II BLADE 4 RMx1-C: 1 SFX II BLADE 4 RMx2-C: 2 SFX II BLADE 4 RMx3-C: 3
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data handling	normal - Scan Data Buffer	fast SPACE™ III architecture (up to 20 times faster)	fast SPACE™ III architecture (up to 20 times faster)
Upgrade	FASTSCALE (upgrade to B or C controller)	FASTSCALE (upgrade to B or C controller)	

Item no. SCO2-11x, SCO2-12x, SCO2-13x

SCANFLEX II Controller for USB/LAN

SFX II BLADE 8 RMx1/2

Up to two independent SCANFLEX II Boandary Scan Controllers for GBit LAN and USB 3.0 (without pre-mounted TIC/TEM modules) for gang applications in a 19" housing (1 U)

Features per controller:

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III Architecture
- ADYCS™ III (Compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, enables the definition of a virtual digital pin electronics)
- FASTSCALE™ (change in the speed level using software, e.g. change to C-controller)
- SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)
- JTAG / TAP slots (SFX II TIC or TEM modules must be ordered separately)
- MPP (Multi Purpose Port), mixed-signal I/Os to support 4 TAPs:
  - in-built SFX-I/O module with VarioCore support
  - each channel can be configured independently (input, output, bidirectional)
  - I/O voltage can be programmed in 8 groups, each with 8 channels (0.9-3.6 V)
  - driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in the AFPG (FLASH)
  - each signal has a 22 Ω in-line resistor

Configuration overview · SFX II BLADE 8 RMx1/2

	SFX II BLADE 8 RMx1/2-A	SFX II BLADE 8 RMx1/2-B	SFX II BLADE 8 RMx1/2-C
Item no.	SFX II BLADE 8 RMx1-A: SCO2-140 SFX II BLADE 8 RMx2-A: SCO2-150	SFX II BLADE 8 RMx1-B: SCO2-141 SFX II BLADE 8 RMx2-B: SCO2-151	SFX II BLADE 8 RMx1-C: SCO2-142 SFX II BLADE 8 RMx2-C: SCO2-152
Number of controllers	SFX II BLADE 8 RMx1-A: 1 SFX II BLADE 8 RMx2-A: 2	SFX II BLADE 8 RMx1-B: 1 SFX II BLADE 8 RMx2-B: 2	SFX II BLADE 8 RMx1-C: 1 SFX II BLADE 8 RMx2-C: 2
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data processing	normal - Scan Data Buffer	schnell SPACE™ III architecture (up to 20 times faster	schnell SPACE™ III Architecture (up to factor 20 faster)
Upgrade	FASTSCALE (upgrade to B oder C controller)	FASTSCALE (upgrade to C controller)	

Item no. SCO2-14x, SCO2-15x

SCANBOOSTER

SCANBOOSTER II

Boandary Scan Controller for GBit LAN and USB2.0 for moderate performance (without pre-mounted TIC/TEM modules)

- maximum TCK frequency: 16 MHz
- ADYCS™ III (compensation of propagation delays, without propagation delay measurement)
- 2 JTAG/TAP slots (SFX II TIC or TEM modules must be ordered separately)
- 32 MPP (Multi Purpose Port), mixed signal I/Os to support 2 TAPs
  - every channel is independent configurable (input, output, bidirectional)
  - I/O voltage is programmable (0.9-3.6 V) in 4 groups of 8 channels
  - driving ability of the channels +/- 24 mA
  - usage as Generic I/Os, PIP replacement and control lines in the AFPG (FLASH)
  - every signal is equipped with a 22 Ω in-line resistor

Item no. SCO2-100

Options for SCANFLEX II Controller and SCANBOOSTER II

SFX II TIC01/LX

TAP Interface Card as plug-in module

- 1 JTAG connection / TAP with single-ended interface
- programmable input (0.0-3.0 V) and output voltage (0.9-3.6 V)
- programmable input and output impedance
- programmable driver strength
- relay switched 5 V output signal

Item no. STT2-110

SFX II TIC01

TAP Interface Card as plug-in module

- 1 JTAG connection / TAP with single-ended interface
- programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V)
- programmable input and output impedance
- switched 5 V output signal

Item no. STT2-111

Options for SCANFLEX II Controller and SCANBOOSTER II

SFX II TIC01/VX

TAP Interface Card as plug-in module

- one JTAG connection/TAP with single-ended interface
- programmable input (0.0-3.0 V) and output voltage (1.65-4.5 V)
- programmable input and output impedance
- switched 5 V output signal
- SYSTEM CASCON version 4.9.5 or higher

Item no. STT2-112

SFX II TIC120/LX

TAP Interface Card as plug-in module

- one multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP, SWIM, RS232
- programmable input voltage (0.0-3.0 V)
- programmable input impedance
- programmable driver strength
- switched 5 V output signal
- SYSTEM CASCON version 4.7.0 or higher

Recommended accessories: SFX II CUBE SPLITTER, article no.: (STT2-131) or TIC/TEM SPLITTER H1 (STT-390))

Item no. STT2-311

SFX II TEM

TIC Extension module as plug-in module

- with differential interface for connecting all external TIC modules
- TEM (TIC) cable 0.5 m included

Recommended accessories: SFX II CUBE SPLITTER, article no.: (STT2-131) or TIC/TEM SPLITTER H1 (STT-390)

Item no. STT2-130

Options for SCANFLEX II Controller and SCANBOOSTER II

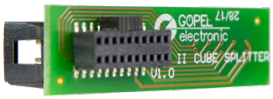
SFX II TEM/ISO

TIC Extension module/Isolated as plug-in module

- with differential and isolated interface for connecting all external TIC modules
- maximum TCK frequency: 65 MHz
- TEM (TIC) cable 0.5 m included

Item no. STT2-132

SFX II CUBE SPLITTER



Adapter from a 20-pin high-density socket to two 10-pin low-density pin headers

- compatible with SFX II TEM, SFX II TEM/ISO and SFX II TIC120/LX of the SFX II CUBE
- for IDC female headers or wire wrap connections

Item no. STT2-131

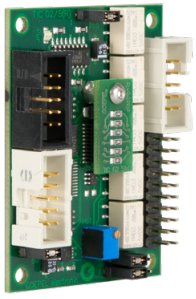
TIC/TEM SPLITTER H1

Adapter from a 20-pin high-density socket to two 10-pin low-density pin headers

- compatible with SFX II TIC120/LX and SFX II TEM(/ISO) of SFX II BLADE 4/8 and SCANBOOSTER II as well as TIC020 and TEM(/ISO) for SFX I with horizontal alignment
- for IDC female connectors or wire wrap connections

Item no. STT-390

TAP Interface Card (TIC) Type 02/S(R)



TAP interface card as a fixture installation module for connection to exchangeable or permanently installed TEM or TEM/ISO

- one JTAG connection/ TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset 1.0 V or external) and output voltage (1.65 (1.20)-3.6 V, preset 3.3 V or external)
- 5 V output signal switched by relay
- isolating relay for TAP signals for SR variant

Item no. STT-120, STT-121

Options for SCANFLEX II Controller and SCANBOOSTER II

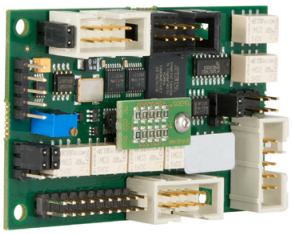
TAP Interface Card (TIC) Type 03/S(R)

TAP Interface Card as a fixture installation module in an air conditioning chamber for connection to exchangeable or permanently installed TEM or TEM/ISO

- one JTAG connection / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset 1.0 V or external) and output voltage (1.65-3.6 V, preset 3.3 V
  or external)
- 5 V output signal switched by relay
- isolating relay for TAP signals for SR variant
- temperature range from -40 °C to 80 °C

Item no. STT-122, STT-123

TAP Interface Card (TIC) Type 022/S(R)

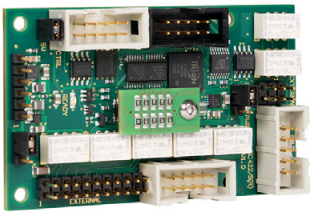


TAP Interface Card as a fixture installation module for connection to replaceable or permanently installed TEM or TEM/ISO

- one multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- adjustable input (0.0-3.3 V, preset 1.0 V or external) and output voltage (1.65 (1.20)-3.6 V, preset 3.3 V
  or external)
- 5 V output signal switched by relay
- isolating relay for TAP and AUX signals for SR variant

Item no. STT-125, STT-126

SFX II TIC422/S(R)



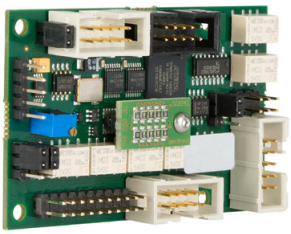
TAP Interface Card as a fixture installation module for connection to replaceable or permanently installed TEM or TEM/ISO

- one multi-bus JTAG connection/TAP with single-ended interface
- multi-bus interface for extended VarioTAP support e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP, RS232, SWIM
- programmable input (0.0 V .. 3.0 V) and output voltage (1.65 V .. 4.5 V)
- programmable input impedance (1 kΩ, 330 Ω, 250 Ω, open)
- UUT interface is 5 V tolerant
- 5 V output signal switched by relay
- isolating relay for TAP and AUX signals for SR variant
- SYSTEM CASCON version from 4.10.0 or higher
- mechanically compatible with TAP Interface Card (TIC) Type 022/S(R)

Item no. STT2-120, STT2-121

Options for SCANFLEX II Controller and SCANBOOSTER II

TAP Interface Card (TIC) Type 023/S(R)



TAP interface card as a fixture installation module in a climate chamber for connection to replaceable or permanently installed TEM or TEM/ISO

- one multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- adjustable input (0.0-3.3 V, preset 1.0 V or external) and output voltage (1.65-3.6 V, preset 3.3 V
  or external)
- 5 V output signal switched by relay
- isolating relay for TAP and AUX signals for SR variant
- temperature range from -40°C to 80°C
- temperature-resistant TEM cable 4 m included

Item no. STT-137, STT-138

TAP Interface Card (TIC) Type 122/S(R)

TAP Interface Card as a fixture installation module for connection to replaceable or permanently installed TEM or TEM/ISO

- one multi-bus JTAG connection/TAP with single-ended interface
- multi-bus interface for extended VarioTAP support e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP, RS232, SWIM
- adjustable input (0.0-3.3 V, preset VOUT / 2 or external) and output voltage (0.9-3.6 V, fixed 3.3 V
  or external, preset to external)
- 5 V output signal switched by relay
- isolating relay for TAP and AUX signals for SR variant
- support for Intel architecture

Item no. STT-133, STT-134

TAP Interface Card (TIC) Type 122/ XDP60

Special impedance-controlled connection cable for TIC122/S(R) for connection to the Intel XDP60 debug connector

Item no. STT-135

Options for SCANFLEX II Controller and SCANBOOSTER II

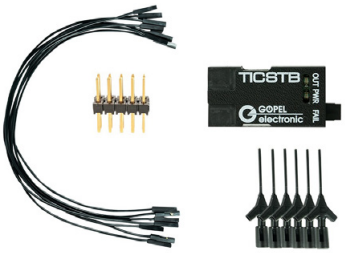
TIC Self Test Board

Self test module for JTAG / TAP signals

- Plug-in card for standard 10-pin TAP connector of TIC modules

Item no. STT-115

TIC / FXT Self Test Board



Self test module for JTAG / TAP signals

- for fixture applications
- 7 access cables with terminals for contacting the transceiver contacts or ICT needles included
- one 10-pin pin header

Item no. STT-116

SFX II WLAN1

- Wireless LAN (WLAN) 150 Mbit/s USB 2.0 adapter for connection to SFX II controller
- compatible with IEEE 802.11b/g/n standard
- WPA, WPA2 encryption
- 2.4 GHz frequency band
- only usable for SFX II CUBE ,SFX II BLADE Controller and FlashFOX

Item no. SCO2-WLAN1

TAP Isolator

External desktop box for isolating TAP signals between primary interface and target

- selectable output voltage (2.5 V, 3.3 V or adjustable 1.65-4.5 V)
- maximum TCK frequency: 65 MHz
- TAP cable included
- external 5 V power supply required

Art.-Nr . STT-910

SCANFLEX II Controller for PXI Express

SFX II PXIe C4/FXT

Multifunctional JTAG/Boandary Scan Controller

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III architecture
- ADYCS™ III (compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, allows the definition of virtual digital pin electronics)
- FASTSCALE™ (change of speed level withtels software, e.g. change to C controller)
- 4 SFX II TEM (permanently installed)
- 32 MPP (Multi Purpose Port), mixed-signal I/Os to support 4 TAPs
  - built-in SFX-I/O module with VarioCore support
  - each channel is independently configurable (input, output, bidirectional)
  - I/O voltage is programmable in 4 groups of 8 channels each (0.9-3.6 V)
  - Driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in AFPG (FLASH)
  - each signal has a 22 Ω inline resistor
- 1 EXT interface (for expansion with SFX-I/O modules)
- requires only one slot and can be controlled via a PXI Express Rack

Configuration overview · SFX II PXIe C4/FXT

	SFX II PXIe C4/FXT-A	SFX II PXIe C4/FXT-B	SFX II PXIe C4/FXT-C
Item no.	SCO2-330	SCO2-331	SCO2-332
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data handling	normal - Scan Data Buffer	fast - SPACE™ III architecture (up to 20 times faster)	fast - SPACE™ III architecture (up to 20 times faster)
Upgrade	FASTSCALE™ (Upgrade to B or C Controller)	FASTSCALE™ (Upgrade to C Controller)	-

Item no. SCO2-33x

SFX II PXIe C4/LX

Multifunctional JTAG/Boandary Scan Controller

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III architecture
- ADYCS™ III (compensation of propagation delays)
- HYSCAN™ (Hybrid Scan, allows the definition of virtual digital pin electronics)
- FASTSCALE™ (change of speed level withtels software, e.g. change to C controller)
- 4 SFX II TIC01/LX (V2) (permanently installed)
- 32 MPP (Multi Purpose Port), Mixed-Signal I/Os zur Unterstützung von 4 TAPs
  - built-in SFX-I/O module with VarioCore support
  - each channel is independently configurable (input, output, bidirectional)
  - I/O voltage is programmable in 4 groups of 8 channels each (0.9-3.6 V)
  - Driver capability of the channels +/- 24 mA
  - use as generic I/Os, PIP replacement and as control lines in AFPG (FLASH)
  - each signal has a 22 Ω inline resistor
- 1 EXT interface (for expansion with SFX-I/O modules)
- requires only one slot and can be controlled via a PXI Express Rack

SCANFLEX II Controller for PXI Express

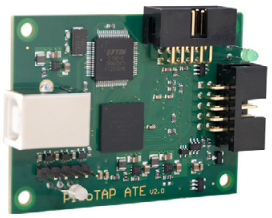
Configuration overview · SFX II PXIe C4/LX

	SFX II PXIe C4/LX-A	SFX II PXIe C4/LX-B	SFX II PXIe C4/LX-C
Item no.	SCO2-230	SCO2-231	SCO2-232
Max. TCK frequency	20 MHz	50 MHz	100 MHz
Data handling	normal - Scan Data Buffer	fast - SPACE™ III architecture (up to 20 times faster)	fast - SPACE™ III architecture (up to 20 times faster)
Upgrade	FASTSCALE™ (Upgrade to B or C Controller)	FASTSCALE™ (Upgrade to C Controller)	-

Item no. SCO2-23x

Low Cost Controller

PicoTAP ATE



Boandary Scan Controller for USB2.0

- ultra-compact design
- maximum TCK frequency: 15 MHz
- one multi-bus JTAG connector / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- 4 additional AUX signals
- programmable I/O voltage (1.65-3.6 V)
- programmable input comparator threshold for TDI (0-3,0 V)
- each signal has a 22 Ω inline resistor
- no power supply unit required - power is supplied via USB 2.0 (Type-B Connector) interface
- switchable open-drain MOSFET for controlling external power relays

Item no. PTC-101

PicoTAP ATE Box

PicoTAP ATE Boandary Scan Controller with housing

Features see Item no. : PTC-101

Item no. PTC-102

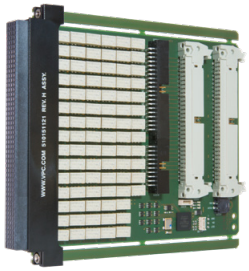
SCANFLEX for VPC (Virginia Panel Corporation)

SFX-TAP6/VPC Adapter/ISO

- Mass Interconnect Interface for up to 6 TAPs and PIP / MPP signals SCANFLEX II CUBE or SFX II BLADE with 6 x SFX II TEM(/ISO) or SFX-TAP6 /FXT(/ISO))
- based on the 192 pin receiver from Virginia Panel (P / N 510150152)
- support for 2 x 6 x 10-pin and 4 x 12-pin IDC cables (not included)
- with separate ground planes for each TAP and PIP/MPP
- an external differential TIC module is required for each TAP used (not included)

Item no. STT-500

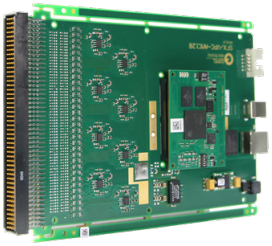
SFX-TAP6/VPC Adapter/Relay-(ITA/REC)



- Mass Interconnect Interface for up to 6 TAPs and PIP / MPP signals SCANFLEX II CUBE or SFX II BLADE with 6 x SFX II TEM(/ISO) or SFX-TAP6 /FXT(/ISO))
- ITA: based on the 192 pin ITA module from Virginia Panel (P/N 510151121)
- REC: based on the 192 pin receiver from Virginia Panel (P/N 510150152)
- e.g. support for 2 x 60-pin, 1 x 40-pin
- isolating relay for all signals

Item no. STT-501, STT-502

SFX / VPC-AMC128L



SCANFLEX Analog Measurement Card

- 128 independent measuring channels (16 simultaneous)
- based on the 192 pin receiver from Virginia Panel (P/N 510150152)
- for each of the 128 measurement channels independent, programmable voltage ranges in 3 steps: +/-2,5 V, +/-5 V and +/-10 V
- input impedance >1 MΩ
- control via Gigabit LAN

Item no. RPD-760

SFX / VPC-AMC128H

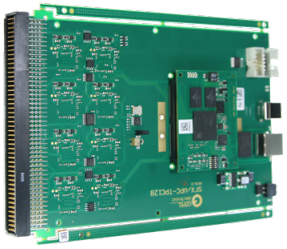
SCANFLEX Analog Measurement Card

- 128 independent measuring channels (16 simultaneous)
- based on the 192 pin receiver from Virginia Panel (P/N 510150152)
- for each of the 128 measurement channels independent, programmable voltage ranges in 3 steps: +/-13 V, +/-26 V and +/-52 V
- input impedance >1 MΩ
- control via Gigabit LAN

Item no. RPD-761

SCANFLEX for VPC (Virginia Panel Corporation)

SFX/VPC-TPC128



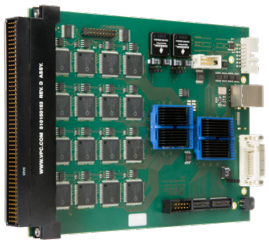
SCANFLEX Test Pattern Card

- 128 I/O channels (16 groups with 8 I/O signals each for up to 16 UUTs)
- 8 additional PIO channels
- VPC Interface with 192 Pin Receiver from Virginia Panel (P/N 510150152)
- control via Gigabit LAN and web interface
- no driver installation required

Item no. RPD-721

SCANFLEX TAP transceiver for gear test and programming for VPC

SFX/VPC-TAP16/M1

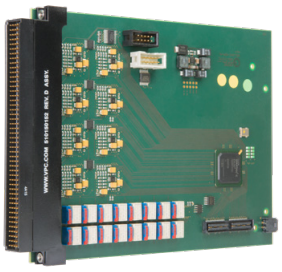


Fixture SCANFLEX TAP Transceiver for gang applications

- Mass Interconnect Interface for 8 x 2 TAPs (eight TAPs with two TDIs for each TAP)
- based on 192 pin Receiver from Virginia Panel (P/N 510150152)
- 16 fixed TIC020 with multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V) per TAP
- programmable input impedance per TAP
- Relay switched 5 V output signal per TAP when using the SFX/VPC-MPP/M1 card
- 1 SFX/LS interfaces (for expansion with SFX carriers and SXF-I/O modules)
- also available as FXT variant (with differential transmission)

Item no. RPD-700

SFX/VPC-MPP/M1



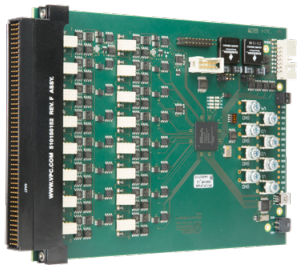
Fixture SCANFLEX TAP Transceiver for gang applications

- Mass Interconnect Interface for 128 MPP (Multi Purpose Port) signals (16 groups x 8 MPP signals) to support 16 TAPs
- based on 192 pin Receiver from Virginia Panel (P/N 510150152)
- every channel is independent configurable (input, output, bi-directional)
- I/O voltage is programmable (1.8-4.5 V) in 16 groups of 8 channels
- driving ability of the test channels +/- 24 mA
- usage as generic I/Os, test channels, PIP replacement and control lines in the AFPG (FLASH)
- every signal is equipped with a 22 Ω inline resistor
- SFX/VPC-TAP16/M1 required (expansion module)

Item no. RPD-720

SCANFLEX TAP transceiver for gear test and programming for VPC

SFX/VPC-PWR16/M1



Fixture SCANFLEX Power Control for gang applications

- Mass Interconnect Interface with support of eight UUTs with four (8 x 4) voltages or 16 UUTs with two (16 x 2) voltages
- based on 192 pin Receiver from Virginia Panel (P/N 510150152)
- voltage range max. +/-20 V with 2 A single ended (for every voltage of a UUT)
- arranged in a 2 x 2 x 8 matrix (8 times 2 relays with 2 voltages each, a relay thus always switches 2 voltages at the same time)
- measurement of input voltages
- 10 Bit ADC for current and voltage measurement: resolution 4 mA and 40 mV
- overcurrent detection and automatic switch off on every UUT possible
- output voltages are defined by an external power supply
- up to four (different) modules are cascadable
- control via SFX/LS Power Bus when using an SFX/VPC-TAP16/M1
- control via USB (mini USB jack) when using other SFX Transceivers

Item no. RPD-740

SCANFLEX TAP Transceiver for gang testing and programming

SFX-TAP16/G-RM

SCANFLEX TAP Transceiver for gang applications in a 19" enclosure

- 8 x 2 TAPs (eight TAPs with two TDIs for each TAP)
- 16 fixed TIC020 with multi-bus JTAG connection/TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- programmable input- (0.0-3.0 V) and output voltage (1.8-4.5 V) per TAP
- programmable input impedance per TAP
- relay switched 5 V output signal per TAP
- 1 SFX/LS interfaces (for expansion with SFX carriers and SXF-I/O modules)

Item no. STT-700

SFX-TAP16/G-RM-FXT

SCANFLEX TAP Transceiver for gang applications in a 19" enclosure

- 8 x 2 TAPs (eight TAPs with two TDIs for each TAP)
- 16 fixed on-board TEM modules
- an external differential TIC module is required for each TAP used (not included)
- 1 SFX/LS interfaces (for expansion with SFX carriers and SXF-I/O modules)

Item no. STT-710

SFX I/O modules for SCANFLEX and SCANFLEX II

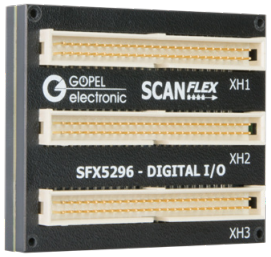
SFX-5296LX

SCANFLEX digital I/O module (mixed signal)

- 96 single ended (SE) test channels in 3 x 32 bit groups; I/O voltage per group: 0.9-3.6 V ; driving ability of the channels: +/- 24 mA
- I/O voltage is programmable for each group
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- extended test resources on the I/O pins (SE):
  - 12 bit ADC + 1 k RAM (Signal Recorder)
  - 10 bit DAC + 1 k RAM (Arbitrary Waveform Generator)
  - Event Detector
  - frequency meter
  - switchable Pull-up and Pull-down resistors (10 k each)
  - adjustment of the driver strength

Item no. SMO-001

SFX-5296



SCANFLEX digital I/O module

- 96 single-ended (SE) test channels in 3 x 32 bit groups; I/O voltage per group: 1.8-4.5 V; driving capability of the channels: +/- 24 mA
- every channel is independent configurable (input, output, bidirectional and tri-state)
- I/O voltage is programmable for each group

Item no. SMO-000

SFX-5350

SCANFLEX digital I/O module

- 50 differential test channels
- default interface: LVDS (can be changed by a module update)
- driving ability of the test channels depends on the I/O standard
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- external configurable termination per channel
- VarioCore support (dynamic loading of IPs into an FPGA)

Item no. SMO-005

SFX-5212

SCANFLEX digital I/O module

- 12 single ended (SE) test channels in 1 x 12 bit groups; I/O voltage per group: 12/24 V internal or 8-30 V external; driving ability of the channels: +/- 150 mA (@ external)
- I/O voltage is programmable for each group
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- Switch for external voltage connection
- VarioCore support (dynamic loading of IPs into an FPGA)

Item no. SMO-008

SFX I/O modules for SCANFLEX and SCANFLEX II

SFX-6216

SCANFLEX analogue measuring module

- 16 analog measuring channels with isolating relay for galvanic isolation
- 12 bit ADC with 4 channels (250 ksps) allows simultaneous measurement of 4 of the 16 channels
- programmable ± 50 V and ± 5 V voltage range per channel
- input impedance> 1 MΩ
- 2 external trigger signals
- VarioCore support (dynamic loading of IPs into an FPGA)

Item no. SMO-026

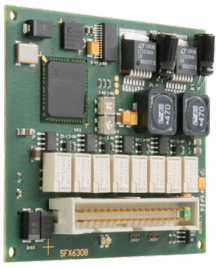
SFX-5704

SCANFLEX mixed signal I/O module

- 4 single ended (SE) test channels in 4 x 1 bit groups; I/O voltage per group: -10- +10 V ; driving ability of the channels: +/- 300 mA
- I/O voltage is programmable for each group
- each channel consists of a driver / sensor stage
- 12 bit ADC for discrete data acquisition
- isolation relay for electrical isolation of the driver / sensor channels
- can be used in conjunction with SFX-Carrier 5, SFX-TAP8 or SFX-TAP8 / FXT (module must support 48 V, see documentation)
- external power supply 48 V (P/N STT-900) required

Item no. SMO-011

SFX-6308



SCANFLEX Analog I/O module, operation only with SFX-Carriers and SFX-TAP8

- 4 analog measuring and driver channels with isolating relay for galvanic isolation
- output voltage channels and measuring inputs have a voltage resolution of 12 bits in a range of -10 V to + 10 V
- input impedance> 1 MΩ
- 8 digital I/O pins optionally available as external trigger inputs
- maximum driver current 200 mA (short term) and 100 mA with continuous load (eg 5V / 50 Ω)
- High measuring accuracy of <± 15 mV
- High output driver accuracy of ± 25 mV (up to 100 mA drive current)
- VarioCore support (dynamic loading of IPs into an FPGA)
- can be used in conjunction with SFX-Carrier 5, SFX-TAP8 or SFX-TAP8 / FXT (module must support 48 V, see documentation)
- 1 x 34-pin 1 m IDC cable included
- external power supply 48 V (P/N STT-900) required

Item no. SMO-121

SFX I/O modules for SCANFLEX and SCANFLEX II

SFX-9305

SCANFLEX multi port bus I/O module

- 5 freely assignable ports for the connection of BAC I/O interface cables (Bus Access Cable)
- automatic detection and configuration of the BAC I/O interface cable
- 3 independent serial I/O standard interfaces
- VarioCore support (dynamic loading of IPs into an FPGA)
- Bus Access Cable (BAC) not included

Item no. SMO-006

SFX-9305 Options: Bus Access Cable (BAC)

Bus Access Cable (BAC) 9305-USB 2.0/H

Single Port SFX-9305 Bus Access Cable with USB2.0 (Host) housed in a Mini Desktop box

- signal conditioning (A-type Receptacle) for test of USB2.0 Device Interfaces (Slave)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-001

Bus Access Cable (BAC) 9305-LAN10/100

Single Port SFX-9305 Bus Access Cable with Ethernet 10/100 MBit housed in a Mini Desktop box

- for Ethernet connections with 10/100 Mbit
- signal conditioning (RJ45 Socket)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-003

Bus Access Cable (BAC) 9305-USB 2.0/S

Single Port SFX-9305 Bus Access Cable with USB2.0 (Slave) housed in a Mini Desktop box

- signal conditioning (B-type Receptacle) for test of USB2.0 Host Interfaces
- support of USB Low Speed and Full Speed mode
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-004

SFX-9305 Options: Bus Access Cable (BAC)

Bus Access Cable (BAC) 9305-RS232

Single Port SFX-9305 Bus Access Cable with RS232 housed in a Mini Desktop box

- signal conditioning (DB9 Pin female)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-005

Bus Access Cable (BAC) 9305-RS422/485

Single Port SFX-9305 Bus Access Cable with RS422/485 housed in a Mini Desktop box

- signal conditioning (DB9 Pin female)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-006

Bus Access Cable (BAC) 9305-CAN/HS

Single Port SFX-9305 Bus Access Cable with CAN/HS housed in a Mini Desktop box

- for CAN Bus - High Speed
- terminated signal conditioning (DB9 Pin male)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-007

Bus Access Cable (BAC) 9305-CAN/LS

Single Port SFX-9305 Bus Access Cable with CAN/LS housed in a Mini Desktop box

- for CAN Bus - Low Speed
- terminated signal conditioning (DB9 Pin male)
- cable length 0.5 m/1.5 ft, other length on reques

Item no. BAC-008

SFX-9305 Options: Bus Access Cable (BAC)

Bus Access Cable (BAC) 9305-LIN

Single Port SFX-9305 Bus Access Cable with LIN housed in a Mini Desktop box

- signal conditioning (DB9 Pin male)
- cable length 0.5 m/1.5 ft, other length on request

Item no. BAC-009

Bus Access Cable (BAC) 9305-LAN1G

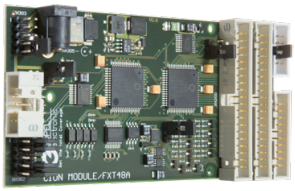
Single Port SFX-9305 Bus Access Cable with Ethernet 1GBit housed in a Mini Desktop box

- for Ethernet connections with 10/100/1000 Mbit
- signal conditioning (RJ45 Socket)
- cable length 0.5 m/1.5 ft , other length on request

Item no. BAC-010

CION modules

CION Module/FXT48A



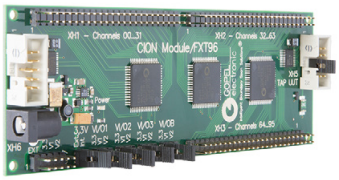
Boandary Scan I/O module (mixed signal)

- 48 Boundary Scan test channels, provided by CION ICs
- adjustable logic levels from 1.8 V to 5.0 V, 5.0 V I/O tolerance
- each test channel can be programmed separately in its data direction
- Driver capability of test channels ± 24 mA
- 1 12-Bit AD converter LTC2309
- 4 ADC channels, preset with input voltage range (0-5 V)
- 2 ADC channels, preset with input voltage range (0-10 V)
- 2 ADC channels, preset with input voltage range (0-30 V)
- 2 10-Bit DA converters AD5338
- 4 DAC channels (0-4.096 V)
- 2 optically isolated digital inputs
- 2 optically isolated digital outputs
- 1 RS485 Transceiver/2 RS232 Transceivers
- cascadable

Item no. 340-023

CION modules

CION Module/FXT96

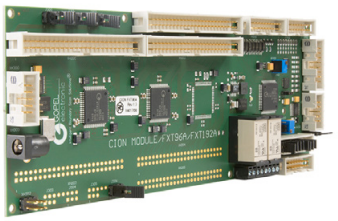


Boandary Scan I/O module

- 96 single ended (SE) Boundary Scan test channels in 3 x 32 bit groups; I/O voltage per group:
  1.8-5.0 V ; driving ability of the channels: +/- 24 mA
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 33 MHz
- all pin headers on the top side
- cascadable

Item no. 340-000

CION Module/FXT96A

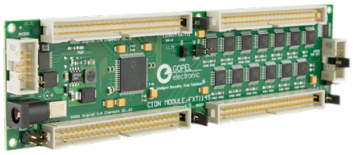


Boandary Scan I/O module (mixed signal)

- 96 single ended (SE) Boundary Scan test channels in 3 x 32 bit groups; I/O voltage per group:
  1.8-5.0 V ; driving ability of the channels: +/- 24 mA
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 33 MHz
- all I/O pins are connected to pin strips
- 16 ADC channels (12 bit, 8 x 0 V-VREFAD (default 4.096 V), 4 x 0-10 V @ VREFAD = 4.096 V, 4 x 0-30 V
  @ VREFAD = 4.096 V)
- 8 DAC channels (12 bit, 0-VREFDA (default 4.096 V))
- VREFAD and VREFDA are adjustable (1.2 V ... 4.096 V)
- 4 optically isolated digital inputs
- 4 optically isolated digital outputs
- 3 open collector outputs
- 2 power relay with a total of 4 closers , loadable up to 5 A each
- cascadable

Item no. 340-021-1

CION Module/FXT114-S



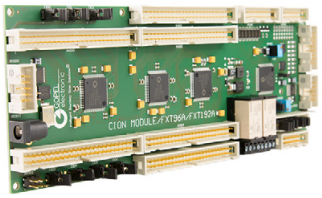
Boandary Scan I/O module

- 64 single ended (SE) Boundary Scan test channels in 2 x 32 bit groups; I/O voltage per group:
  1.8-5.0 V ; driving ability of the channels: +/- 24 mA
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- 50 differential Boundary Scan test channels , IEEE 1149.6 Support
- 25 of the 50 differential test channels are dedicated inputs (LVDS / BLVDS / CML / LVPECL – compatible)
- 25 of the 50 differential test channels are dedicated LVDS outputs
- maximum TCK frequency: 33 MHz
- all I/O pins are connected to pin strips
- cascadable

Item no. 340-003

CION modules

CION Module/FXT192A



Boandary Scan I/O Modul (Mixed signal)

- 192 single-ended (SE) boundary scan test channels in 6 x 32-bit groups; I/O voltage per group:
  1.8-5.0 V; channel drive capability: +/- 24 mA
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- each channel is independently configurable (input, output, bidirectional) and supports the Unstress function
- maximum TCK frequency: 33 MHz
- all I/O pins are routed to pin headers
- 16 ADC channels (12 bit, 8 x 0-VREFAD (standard 4.096 V), 4 x 0-10 V @ VREFAD = 4.096 V, 4 x 0-30 V @ VREFAD = 4.096 V)
- 8 DAC channels (12 bit, 0-VREFDA (standard 4.096 V))
- VREFAD and VREFDA are adjustable (1.2 V ... 4.096 V)
- 4 optically isolated digital inputs
- 4 optically isolated digital outputs
- 3 Open Collector outputs
- 2 power relays with 4 NO contacts (up to 5 A)
- cascadable

Item no. 340-020-1

CION-LX modules

CION-LX Module/FXT48

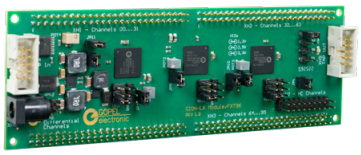
Boandary Scan I/O module with CION-LX devices (mixed signal)

- 48 single ended (SE) Boundary Scan test channels in 2 x 8 bit and 2 x 16 bit groups
- I/O voltage per group: 0.9-3.6 V ; driving ability of the channels: +/- 24 mA
- 6 differential (DE) Boundary Scan test channels in 1 x6 groups; LVDS or CML; with full support for IEEE1149.6
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 100 MHz
- extended test resources on the I/O pins:
  - 12 bit ADC + 1 k RAM (Signal Recorder) on SE pins
  - 10 bit DAC + 1 k RAM (Arbitrary Waveform Generator) on SE pins
  - Event Detector on SE and DE pins
  - frequency meter on SE and DE pins
  - switchable Pull-up and Pull-down resistors (10 k each) on SE pins
  - adjustment of the driver strength on SE pins
- all I/O pins are connected to pin strips
- 8 ADC channels (12 bit, 4 x 0-5 V, 2 x 0-10 V, 2 x 0-30 V)
- 4 DAC channels (10 bit, 0-4.096 V)
- 2 optically isolated digital inputs
- 2 optically isolated digital outputs
- 1 RS485 transceiver/2 RS232 transceiver
- cascadable

Item no. CLXM-001

CION-LX modules

CION-LX Module/FXT96

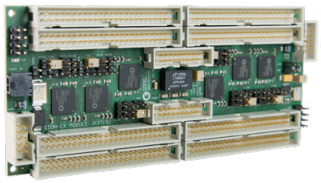


Boandary Scan I/O module with CION-LX devices (mixed signal)

- 96 single ended (SE) Boundary Scan test channels in 3 x 32 bit groups; I/O voltage per group:
  0.9-3.6 V ; driving ability of the channels: +/- 24 mA
- 12 high current (HC) Boundary Scan test channels in 1 x 12 bit groups; I/O voltage per group: 0.9-2.0 V; driving ability of the channels +/- 40 mA
- 24 differential (DE) Boundary Scan test channels in 1 x 24 groups; LVDS or CML; with full support
  for IEEE1149.6
- I/O voltage fixed on the board: 3.3 V, 2.5 V, 1.2 V
- I/O voltage can be set for each group to 3.3 V (default), 2.5 V, 1.2 V or by external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 100 MHz
- CION compliance mode and hot swap support for UUTs
- extended test resources on the I/O pins:
  - 12 bit ADC + 1 k RAM (Signal Recorder) on SE and HC pins
  - 10 bit DAC + 1 k RAM (Arbitrary Waveform Generator) on SE and HC pins
  - Event Detector on all pins
  - frequency meter on all pins
  - switchable Pull-up and Pull-down resistors (10 k each) on SE and HC pins
  - adjustment of the driver strength on SE and HC pins

Item no. CLXM-000

CION-LX Module/FXT192



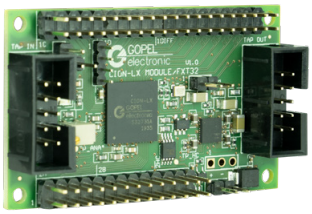
Boandary Scan I/O module with CION-LX devices (mixed signal)

- 192 single ended (SE) Boundary Scan test channels in 6 x 32 bit groups; I/O voltage per group:
  0.9-3.6 V ; driving ability of the channels: +/- 24 mA
- 24 high current (HC) Boundary Scan test channels in 2 x 12 bit groups; I/O voltage per group: 0.9-2.0 V; driving ability of the channels +/- 40 mA
- 48 differential (DE) Boundary Scan test channels in 2 x 24 groups; LVDS or CML; with full support
  for IEEE1149.6
- I/O voltage fixed on the board: 3.3 V, 2.5 V, VI/O (default 1.2 V)
- I/O voltage can be set for each group to 3.3 V (default), 2.5 V, 1.2 V or by external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 100 MHz
- extended test resources on the I/O pins:
  - 12 bit ADC + 1 k RAM (Signal Recorder) on SE and HC pins
  - 10 bit DAC + 1 k RAM (Arbitrary Waveform Generator) on SE and HC pins
  - Event Detector on all pins
  - frequency meter on all pins
  - switchable Pull-up and Pull-down resistors (10 k each) on SE and HC pins
  - adjustment of the driver strength on SE and HC pins

Item no. CLXM-002

CION-LX modules

CION-LX module/FXT32



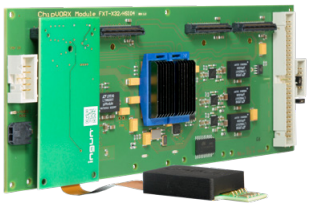
Boundary Scan I/O module with CION-LX device (mixed-signal)

- ultra-compact size, optimized for direct installation in test fixtures
- extended IEEE1149.x architecture (IEEE1149.1, IEEE1149.6 and IEEE1149.8.1)
- 32 multifunctional single-ended Boundary Scan test channels
- 8 differential test channels with IEEE1149.6 support
- programmable I/O port voltage (0,9-3,3 V) for each port (A-D) independently
- every channel is independently configurable (input, output, bi-directional and tristate) and supports unstress feature
- maximum possible TCK Frequency: 100 MHz
- extended test resources on the I/O pins:
  - 12 Bit ADC + 1 k RAM (Signal Recorder) on SE Pins
  - 10 Bit DAC + 1 k RAM (Arbitrary Waveform Generator) on SE Pins
  - event detector on all pins
  - frequency meter on all pins
  - switchable Pull-up and Pull-down resistors (10 k each) on SE pins
  - adjustment of the driver strength on SE pins
- cascadable

Item no. CLXM-004

ChipVORX modules

ChipVORX module/FXT-X32/HSIO4

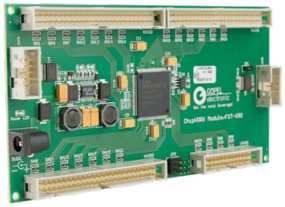


ChipVORX module for testing high-speed interfaces

- 4 slots for interface adapter cards for high-speed I/O test (incl. bit error rate test) with 2 serial high-speed transceivers each with maximum 6.6 Gbit/s
- 32 Boandary Scan test channels with 3.3 V (no 5.0 V I/O tolerance), provided by a freely programmable Xilinx Kintex-7 FPGA
- driver capability of the test channels max. ±16 mA
- universal 32 MHz and 100 MHz clock generators
- special support for ChipVORX® technology
- additional four SPI configuration memories

Item no. CXIO-030

ChipVORX module/FXT-X90



ChipVORX I/O module with configurable FPGA

- 90 boundary-scan test channels provided by a freely programmable Xilinx Spartan-6 FPGA
- Logic level adjustable from 1.2 V to 3.3 V for 76 channels (no 5.0 V I/O tolerance)
- fixed logic level for 14 channels with 3.3 V (no 5.0 V I/O tolerance)
- each test channel can be freely programmed in its data direction
- driver capability of the test channels max. ±24 mA
- universal 32 MHz clock generator
- special support for ChipVORX® technology
- additional SPI configuration memory for own FPGA designs or connector for external connection of an SPI configuration memory (option "-EC")

Item no. CXIO-010

Accessories for ChipVORX modules

ChipVORX X32/PCIe x1 Adapter card

Slot adapter card for ChipVORX module FXT-X32/HSIO4

- contains one PCIe x1 connector (socket)
- power supply connector for external power supply and monitoring for PCIe slot
- standard JTAG connector for boundary scan (IEEE1149.1 and IEEE1149.6)
- Bit Error Rate and Eye Test of PCIe signals (corresponding ChipVORX IP required)

Item no. CXIO-031

ChipVORX X32/PCIe x1 AdaptX X32/ PCIe x1 Adapter card

Slot adapter card for ChipVORX module FXT-X32/HSIO4

- contains 2 standard USB 3.0 type A connectors
- Support of functional USB 2.0 tests
- controllable power supply of the USB connectors and overcurrent monitoring and limiting
- Bit Error Rate and Eye Test of USB Super Speed signals (corresponding ChipVORX IP required)

Item no. CXIO-032

ChipVORX X32/SATA Adapter card

Slot adapter card for ChipVORX module FXT-X32/HSIO4

- contains 2 standard eSATA connectors (1x host, 1x device) to test both variants
- be able to the eSATA connectors on the adapter allow a high number of mating cycles (min. 1500)
- compared to standard SATA connectors
- Bit Error Rate Test and Eye Test of the SATA signals (corresponding ChipVORX IP required)

Item no. CXIO-033

ChipVORX X32/Gbit LAN Adapter card

Slot adapter card for ChipVORX module FXT-X32/HSIO4

- Standard RJ45 connector for easy adaptation of the DUT
- 2 status LEDs for visual control of the current Ethernet LAN connection
- Ethernet LAN tests with 10 Mbit/s, 100 Mbit/s or 1 Gbit/s can be carried out
- only functional test possible (corresponding ChipVORX IP required), no bit error rate and eye test

Item no. CXIO-034

Universal Programmer

FlashFOX 8

Stand-Alone production programmer for microcontrollers, flash components or PLDs/ FPGAs and other programmable devices

- support of many programming interfaces depending on the connected POD
- 8 freely assignable ports for the connection of FlashFOX PODs
- automatic detection and configuration of the PODs
- Control via GBit LAN, WLAN, USB 3.0, serial interface (RS232) or ATE interface
- API interface available
- Log traceability system
- FlashFOX PODs not included

Item no. FFOX-010

FlashFOX 8/X4

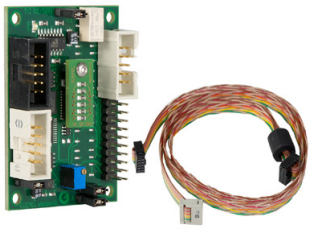
Stand-Alone production programmer for microcontrollers, flash components or PLDs/ FPGAs and other programmable devices

- support of many programming interfaces depending on the connected POD
- 4 freely assignable ports for the connection of FlashFOX PODs
- upgrade to FlashFOX 8 possible
- automatic detection and configuration of the PODs
- Control via GBit LAN, WLAN, USB 3.0, serial interface (RS232) or ATE interface
- API interface available
- Log traceability system
- FlashFOX PODs not included

Item no. FFOX-011

Options for Universal Programmer

POD02/S(R)



POD as a fixture built-in module for connection to FlashFOX

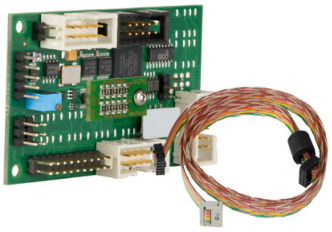
- suitable for all FlashFOX variants
- 1 JTAG connector/ TAP with single ended interface
- adjustable input- (0.0-3.3 V, preset 1.0V or external) and output voltage (1.65-3.6 V, preset 3.3 V or external)
- TAP interface protection
- relay switched 5V output signal
- isolating relays for TAP and AUX signals for SR type
- 50cm TEM Cable inclusive

Item no. FFOX-001, FFOX-002

Options for Universal Programmer

POD022/S(R)

POD as a fixture built-in module for connection to FlashFOX

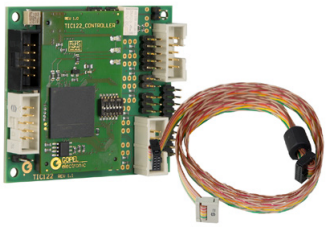


- suitable for all FlashFOX variants
- one multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP
- adjustable input- (0.0-3.3 V, preset 1.0V or external) and output voltage (1.65-3.6 V, preset 3.3 V or external)
- TAP interface protection
- relay switched 5V output signal
- isolating relays for TAP and AUX signals for SR type
- 50 cm TEM Cable inclusive

Item no. FFOX-003, FFOX-004

POD122/S(R)

POD as a fixture built-in module for connection to FlashFOX

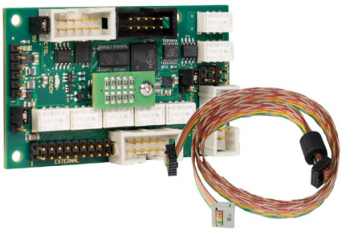


- suitable for all FlashFOX variants
- one multi-bus JTAG connection / TAP with single-ended interface
- multi-bus interface for extended VarioTAP support: e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP, RS232, SWIM
- adjustable input- (0.0-3.3 V, preset VOUT/2 or external) and output voltage (0.9-3.6 V, fixed 3.3 V or external, preset to external)
- TAP interface protection
- relay switched 5V output signal
- isolating relays for TAP and AUX signals for SR type
- 50 cm TEM Cable inclusive

Item no. FFOX-005, FFOX-006

POD422/S(R)

POD as a fixture built-in module for connection to FlashFOX



- suitable for all FlashFOX variants
- one multi bus connector/ TAP with single ended interface
- multi bus interface for extended VarioTAP support, e.g. SWD, SBW, BDM, PIC, H/S CSI, DAP, RS232, SWIM
- programmable input (0.0 V .. 3.0 V) and output voltage (1.65 V .. 4.5 V)
- programmable input impedance (1 kΩ, 330 Ω, 250 Ω, open)
- interface is 5 V tolerant
- TAP interface protection
- relay switched 5 V output signal
- isolating relays for TAP and AUX signals for SR type
- 50 cm TEM Cable inclusive

Item no. FFOX-007, FFOX-008

Options for Universal Programmer

FlashFOX 8 Power supply

External plug-in power supply 5 V / 5 A for all FlashFOX Programmer

- wide range AC input (100 VAC to 240 VAV)
- for FlashFOX 8 und FlashFOX 8/X4
- power supply has a 3.0 mm Molex plug
- three exchangeable international adapters included

Item no. FFOX-050

Solutions & Systems

JULIET

JULIET Series 3

Compact embedded JTAG solution tester as desktop system. Suitable for development and production, with integrated system electronics. Control via an external PC or laptop via USB 3.0 or Gbit LAN.

Mechanics

- compact, portable table-top unit
- solid mechanics with manual loading and unloading
- holder for needle adapter as exchangeable cassette (no empty cassette included)
- adaptation to test points and connectors up to 50 mil on both sides possible
- LED display for test results
- Control via control panel
- Extended tamper protection
- Access to all tester resources via front interface during the test procedure

Tester interface

- 4 power supplies (internal/external)
- 4 Test Access Ports (TAP) up to 50 MHz
- 192 mixed signal I/O channels
- 16 differential channels with IEEE1149.6 support
- 8 electrically isolated inputs
- 8 electrically isolated outputs
- 32 Multi Purpose Ports (MPP)
- 32 ADC channels
- 16 DAC channels
- 8 RS232 interfaces
- 4 RS485 interfaces
- Adapter coding 7 bit/ I^2C EEPROM
- Hood monitoring
- CION compliance mode
- CION Bypass Mode

Boandary Scan Test

- IEEE 1149.1
- IEEE 1149.6
- IEEE 1149.8.1
- RAM test
- Cluster test

JULIET

Flash Programming
- Flashes (NAND, NOR, EEPROM)
- PLD/CPLD
- MCU internal flash

Functional test
- Current and voltage measurement (0-4 A, 0-48 V)
- Analog drive and measurement
- Digital drive and measure
- Extended MCU access
- Arbitrary function generator
- Signal recording
- Event detector
- Frequency meter

Power Management
- 4 controllable power rails
- Internal fixed voltages 3.3 V, 5 V, 12 V and 24 V
- current-voltage measurement for up to 4 UUTs
- Discharge function
- External sense support
- current monitoring and shutdown

SCANFLEX II Hardware
- SFX II CUBE - B

Software package
- SYSTEM CASCON GALAXY-TS
- Licensing via USB dongle (network license available on request)
- Tester Link Software
- Online PASS/FAIL statistics
- Optional MES connection

ESA Technologien
- JTAG/Boandary Scan
- ChipVORX®
- VarioTAP®
- VarioCore®

PCB handling
- max. board dimensions: 340 mm x 230 mm
- max. number of needles: 600 (1 N)

Documentation
- Manual DEU/ENG (PDF)

Requirements
- electrical requirements: 100-240 VAC, 50-60 Hz, max. 350 W
- dimensions: 630 mm (W) x 550 mm (D) x 345 mm (H)
- weight: approx. 30 kg
- ambient temperature: 10 - 35° Celsius

Machine maintenance contract (MMC) mandatory, test project (adapter and test program), PC and screen not included, available on request.

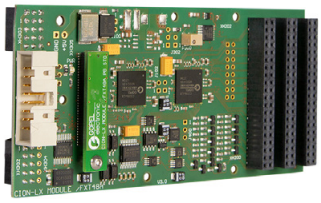
Configuration overview · JULIET Series 3

	JULIET Series 3/RTS	JULIET Series 3/FDS	JULIET Series 3/DRS
Item no.	JLT-040	JLT-041	JLT-042
Software	Test Station Run-Time	Test Station Failure Diagnostic	Test Station Failure Diagnostic & Repair
JTAG chains	4 (max. 50 MHz)		
I/O channels	192 - Mixed signal		
ADC channels	32		

Item no. JLT-04x

Accessories JULIET

CION-LX Module/FXT48AJ



Boandary Scan I/O module with CION-LX components (Mixed signal)

- 48 single ended (SE) Boundary Scan test channels in 2 x 8 bit and 2 x 16 bit groups
- I/O voltage per group: 0.9-3.6 V ; driving ability of the channels: +/- 24 mA
- 6 differential (DE) Boundary Scan test channels in 1 x6 groups; LVDS or CML; with full support for IEEE1149.6
- I/O voltage fixed on the board: 3.3 V
- I/O voltage can be set for each group to 3.3 V (default) or via external voltage
- every channel is independent configurable (input, output, bi-directional) and supports the Unstress feature
- maximum TCK frequency: 100 MHz
- extended test resources on the I/O pins:
  - 12 bit ADC + 1 k RAM (Signal Recorder) on SE pins
  - 10 bit DAC + 1 k RAM (Arbitrary Waveform Generator) on SE pins
  - Event Detector on SE and DE pins
  - frequency meter on SE and DE pins
  - switchable Pull-up and Pull-down resistors (10 k each) on SE pins
  - adjustment of the driver strength on SE pins
- all I/O pins are connected to pin strips
- 8 ADC channels (12 bit, 4 x 0-5 V, 2 x 0-10 V, 2 x 0-30 V)
- 4 DAC channels (10 bit, 0-4.096 V)
- 2 optically isolated digital inputs
- 2 optically isolated digital outputs
- 1 RS485 transceiver/2 RS232 transceiver
- cascadable

Item no. CLXM-003

JULIET / Barcode Reader Typ A

Hand-held barcode reader for 1D codes (Datalogoc Gryphon GD4130-BK), others on request.

Item no. JLT-003

JULIET / Barcode Reader (2D)

Hand-held barcode reader for 2D codes (Honeywell Xenon 1900GSR-2), others on request.

Item no. JLT-102

Accessories JULIET

JULIET / Selftest Fixture

Selftesting adapter with active selftesting electronics, including adapter box. Can also be used with restrictions for JULIET Series 2.

Item no. JLT-004

JULIET / Selftest Fixture S3

Selftest adapter with active selftest electronics, including adapter box.

Item no. JLT-115

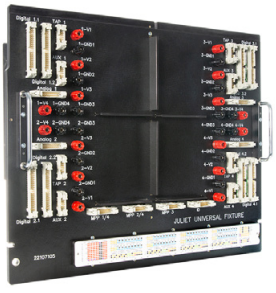
JULIET / Universal Fixture

Special adapter for universal cable adaptations including adapter box. All tester resources can be contacted via standard plug connectors.

Item no. JLT-005

JULIET / Universal Fixture S3

Special adapter for universal cable adaptations including adapter box. All tester resources can be contacted via standard plug connectors. Compatible with JULIET S1 and S2.



Item no. JLT-118

Accessories JULIET

JULIET / Toolset

Tool kit for JULIET including CION module and wear parts package

Item no. JLT-009

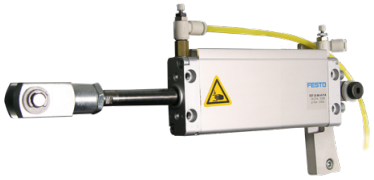
JULIET / Toolset LX

Tool kit for JULIET including CION LX module and wear parts package

Item no. JLT-112

JULIET / Cover Lift

Pneumatic cylinder for automatic opening of the hood after the test procedure has been completed. (This option is only for opening the hood and cannot be retrofitted)



Item no. JLT-100

JULIET / Fixture Case

Shipping and storage container for JULIET adapter. Interior made of ESD padding, lid with locking hooks and label pocket, stackable (dimensions 600x400x236 mm)

Item no. JLT-007

Accessories JULIET

JULIET / Cover Lock

Pneumatic cylinder for automatic locking of the cover during the test procedure.
(This option cannot be retrofitted and is used exclusively to protect the test system and the assembly. Not suitable as a solenoid interlock).

Item no. JLT-101

JULIET / Packing Case

Shipping and storage containers for JULIET (including Euro pallet, suitable for export according to IPPC standard)

Packaging dimensions 79x68x48 cm (LxWxH), empty weight 25 kg
Pallet dimensions 120x80x14 cm(LxWxH), empty weight 20 kg

Item no. JLT-103

BARCUDA

BARCUDA VP230

Embedded JTAG tester for 16 assemblies

- 19 inch rack with slide-in modules and VPC interface
- 12 U rack from Schroff with VPC G12 Interface
- Industrial PC desktop version
- TFT Monitor 21.5 Zoll
- Tester software
  - CASCON Galaxy-TS Failure Diagnostic Edition (FDE)
  - Tester Link Software for Embedded JTAG Solutions
  - Software Maintenance Contract (SMC)
- Tester hardware
  - SXF/PCIe 1149-B
  - SFX/VPC-TAP16/M1
  - SFX/VPC-MPP/M1
  - SFX/VPC-PWR16/M1
  - SFX/VPC-TPC128
  - SFX/VPC-AMC128

Item no. BCD-100

RAPIDO

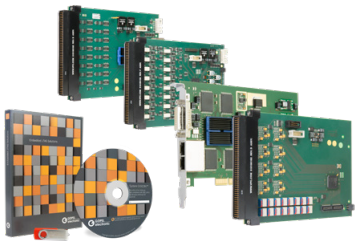
RPS910-S16

Inline programming station for 16 assemblies incl. in-line handler

- 17 VPC slots below / 6 VPC slots above
- belt module with automatic width adjustment from 60 to 250 mm
- IPC-SMEMA-9851 interface (other available on request)
- PC system
- touchscreen monitor
- in-built industrial PC
- power supply
- uninterrupted power supply (UPS) for the whole system
- 3-channel power supply unit for supplying assemblies and adapters
- 5 V / 24 V system voltage in the adapter
- SCANFLEX hardware
  - SFX / PCI-1149-B Controller Card
  - SFX / VPC tranceiver card for 16 TAPs
  - SFX / VPC multipurpose card with 128 channels
  - SFX / VPC power card for supplying up to 16 assemblies
- PCB handling
  - board dimensions: 60 x 60 mm to 400 x 250 mm
  - max. height of the components – top: 60 mm, underside: 20 mm
  - max. PCB weight: 1500 g
  - max. number of pins: 900 (above and below)

Item no. RPD-130

RAPIDO / S16PLUS



Upgrade kit for additional 16 assemblies for testing and programming. Complete set with controller, transceiver, multipurpose (MPP), power card, SFT hardware and software licences, incl. installation for new machines

Item no. RPD-001

RAPIDO / Barcode Reader Type A

System-integrated barcode reader for 2D labels (Microscan MicroHAWK ID-30), others available on request

Item no. RPD-004

RAPIDO

RAPIDO SFT

Interchangeable selftesting adapter for all RAPIDO models with active selftesting electronics and FID (recommended)

Item no. RPD-005

FID (TOP oder BOTTOM)

Fixture Identification and Data module (FID) for lower and upper adapters. Intelligent counter module with project-specific data storage, maintenance history and output for maintenance requests, including FID configuration software

Item no. RPD-009/010

Integration packages

ATE Integration for Acculogic Flying Probe

ATE Integration package for Acculogic FLS980Dxi

Item no. IP-ACPxx-x

ATE Integration for VIAVI MDA / ICT / FKT

ATE Integration package for VIAVI 42xx / 52xx and 58xx

Item no. IP-VIxx-x

Integration packages

ATE Integration for Digitaltest Condor Flying Probe

ATE Integration package for Digitaltest MTS500 / MTS505 Condor

Item no. IP-DTPxx-x

ATE Integration for Digitaltest ICT Entry / Vacuum / Cable

ATE Integration package Base for Digitaltest MTS30 / MTS180 / MTS300 / MTS888 / Sprint

Item no. IP-DTxxx-x

ATE Integration for Dr. Eschke

ATE Integration package for Dr. Eschke CT300 / CT350

Item no. IP-DR3xx-x

ATE Integration for Eiger Design

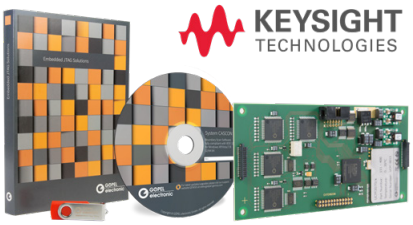
ATE Integration package for Eiger Design J-Tester

Item no. IP-EDJxx-x

Integration packages

ATE Integration for Keysight 3070 ICT

ATE Integration package for Keysight HP3070 / 3070 / i3070/ i5000/ Utility Card / Slot / Perfor mance Port



Item no. IP-KExxx-x

ATE Integration for LXinstruments FCT

ATE Integration package for LXinstruments Funktionstester

Item no. IP-LXIxx-x

ATE Integration for Polar Instruments

ATE Integration package for Polar Instruments (GRS500) / GRS550

Item no. IP-PI5xx-x

ATE Integration for Reinhardt

ATE Integration package for Reinhardt ATS-(U)KMFT

Item no. IP-RHAxx-1

Integration packages

ATE Integration for Rohde & Schwarz TSVP

ATE Integration package for Rohde & Schwarz TSVP

Item no. P-RSTxx-1

ATE Integration for Seica Flying Probe

ATE Integration package for Seica Pilot H4 / L4 / M4 / V8

Item no. IP-SEPxx-1

ATE Integration for Seica ICT

ATE Integration package for Seica Compact SL / TK / Multi

Item no. IP-SECxx-1

ATE Integration for SPEA ICT

ATE Integration package for SPEA 3030 ICT

Item no. IP-SP3xx-x

Integration packages

ATE Integration for SPEA Flying Probe

ATE Integration package for SPEA Flying Prober 4020 / 4040 / 4050 / 4060 / 4080

Item no. IP-SPxxx-x

ATE Integration for Takaya APT - Flying Probe

ATE Integration package for Takaya APT94xx / 96xx / 1400F / 1600FD

Item no. IP-TKxxx-x

ATE Integration for Teradyne Spectrum ICT

ATE Integration package for Teradyne Spectrum / 88xx / TSSE

Item no. IP-TD8xx-x

ATE Integration for Teradyne Teststation ICT

ATE Integration package for Teradyne Teststation TS / 12x / TSLH / TSLX / TSx51/52 / GR228x

Item no. IP-TDxxx-x

Integration packages

ATE Integration for Test-OK

ATE Integration package for TEST-OK UCM Expansion Board

Item no. IP-TOKxx-1

ATE Integration for TRI TR5001

ATE Integration package for TRI TR5001

Item no. IP-TR5xx-x

Demokit

SYSTEM CASCON Demo Kit

Complete tool kit

- Boandary Scan Controller PicoTAP
- USB cable
- goJTAG Demo Board
- CASCON GALAXY Advanced Edition, limited to use with the included goJTAG Demo Board
- compatible with Windows 7 / 8.x / 10 (32 / 64 bit)
- USB dongle

Item no. TAS-011

Accessories

Boandary Scan Probe

Logic tester

- JTAG / Boundary Scan (TAP) Interface
- JTAG / Boundary Scan Signal Emulation
- with Drive / Sense – electronics
- spot lighting
- toggle function
- status LED

Item no. 312-000

Board Grabber & Accessories

SFX/Board Grabber-L

- total size: 470 x 505 x 160 mm
- frame size: 400 x 300 mm
- for a PCB size of up to 285 x 235 x 4 mm when the rails are used vertically
- for a PCB size of up to 335 x 185 x 4 mm when the rails are used horizontally

Item no. SUF-010

SFX/Board Grabber-XL

- total size: 570 x 605 x 160 mm
- frame size: 500 x 400 mm
- for a PCB size of up to 385 x 335 x 4 mm when the rails are used vertically
- for a PCB size of up to 435 x 285 x 4 mm when the rails are used horizontally

Item no. SUF-020

SFX/Board Grabber-XXL

- total size: 670 x 705 x 160 mm
- frame size: 600 x 500 mm
- for a PCB size of up to 485 x 435 x 4 mm when the rails are used vertically
- for a PCB size of up to 535 x 385 x 4 mm when the rails are used horizontally

Item no. SUF-030

Board Grabber & Accessories

BG-Nail Probe/RA

for all SFX / Board Grabber

- 1 rectangular pin (black colour) with 0.5 m cable and with magnetic feet (stand-alone)

Item no. SUF-000

BG-Access Kit/5

BG-Access Kit / 5 for Boardgrabber

- 5 pins (each with a different colour)
- 550 mm cable
- includes 2 rails
- 4 board holders

Item no. SUF-001

BG-Access Kit/10

BG-Access Kit / 10 for Boardgrabber

- 10 pins (5 black and 5 in various colours)
- 550 mm cable
- includes 2 rails
- 4 board holders

Item no. SUF-002

BG-Nail Holders

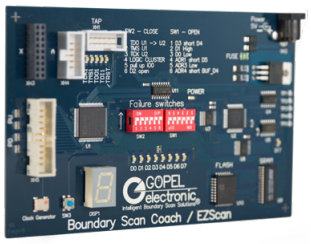
BG-Nail Holders

- BG / Nail Holders for board grabber
- rails and magnetic holders for additional pins

Item no. SUF-003

Demoboards

Boandary Scan Coach/EZScan

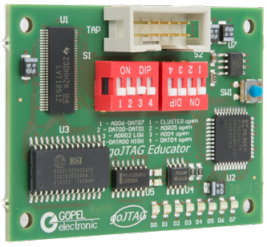


Simple training board for mastering Boundary Scan technology

- 2 Boundary Scan ICs (CPLD)
- Fault switch
- LED
- Buffer
- Logic
- RAM
- Flash

Item no. 325-001

GoJTAG Demo Board

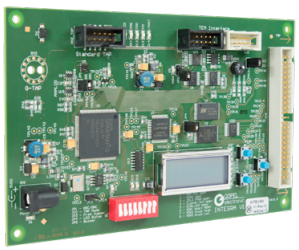


Simple training board for getting started with Boundary Scan technology

- 2 Boundary Scan ICs (CPLD)
- Fault switch
- Push button
- Serial Flash
- RAM
- LED

Item no. TAS-003

Integra V1



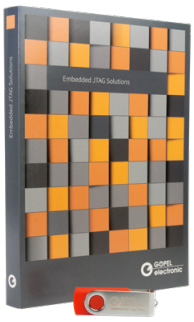
Reference board for demonstrating and qualifying JTAG/ Boundary Scan integrations in ICT / MDA / FCT / FPT

- Boundary Scan modules (FPGA, CPLD)
- Non-Boundary Scan modules (flash, RAM, display, ADC, DAC, LED, reverser)
- additional test points are available on both sides for pin access, enabling a combination of Boundary Scan and ICT / MDA / FPT operations
- simulation of production faults using fault switch
- G-TAP support
- dimensions: 160 x 100 mm

Item no. TAS-005

Software

CASCON GALAXY-DS Base Edition

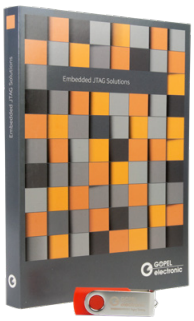


Boandary Scan software package with tools for

- Test Program Generation
  - ATPG Infrastructure Test
  - ATPG Interconnection Test 1149.1
  - Basic Test Generation
  - TP Generation 1149.4
  - Data import Processor
- Data Analyzing, Visualizing and Debugging
  - Design and Testability Explorer
  - Netlist Merger
  - Advanced Vector Browser
  - ScanAssist Multi Mode Debugger
  - ScanAssist Interactive Pin Toggler
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 and 1149.6
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - Test / ISP (Batch) Execution
  - SX Upgrade / TAP Liwith
  - VarioCore Handler
  - Hybrid Vector Splitter
  - SX Upgrade / Scan Router Handler
  - Multi User Manager
  - Floating Licence Manager
  - Automated Process Scripting
  - CASCON Device Library
  - CASCON Full Platform License

Item no. 211-001

CASCON GALAXY-DS Standard Edition



Boandary Scan software package with tools for

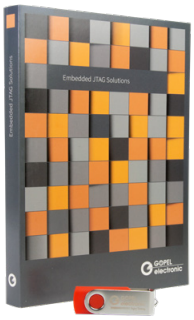
- Test Program Generation
  - ATPG Infrastructure Test
  - ATPG Interconnection Test 1149.1
  - ATPG Memory Access
  - ATPG Device Model
  - Basic Test Generation
  - TP Generation 1149.4
- In-System Programming
  - Basic Flash-Programming
  - Automated Flash Programming (AFPG)
  - PLD Program Generator
  - Data import Prozessor
- Data Analyzing, Visualizing and Debugging
  - Netlist Merger
  - Test Coverage Analyzer
  - Advanced Vector Browser
  - ScanAssist Multi Mode Debugger
  - ScanAssist Interactive Pin Toggler

Software

- Pin Failure Diagnostics Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 and 1149.6
  - PFD Memory Access
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - SX Upgrade / TAP Liwith
  - VarioCore Handler
  - Multi User Manager
  - Floating Licence Manager
  - CASCON Device Library

Item no. 224-001

CASCON GALAXY-DS Classic Edition



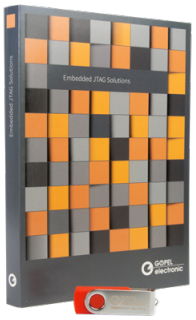
Boandary Scan software package with tools for

- Test Program Generation
  - ATPG InfrastructureTest
  - ATPG Interconnection Test 1149.1, 1149.6
  - ATPG Clusters (True Table)
  - ATPG Clusters (Wavefor m)
  - ATPG Memory Access
  - ATPG Logic Components
  - ATPG Device Model
  - Basic Test Generation
  - TP Generation 1149.4
  - Basic VarioTap Test Generation
- Data Analyzing, Visualizing and Debugging
  - Netlist Merger
  - Test Coverage Analyzer
  - Scan Vision III Layout Reader
  - Scan Vision III Layout
  - Advanced Vector Browser
  - ScanAssist Multi Mode Debugger
  - ScanAssist Interactive Pin Toggler
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 and 1149.6
  - PFD Memory Access
  - PFD Logic Components
  - PFD Clusters (Truth Table)
  - Universal Pin Failure Detection
- SYSTEM CASCON Platform Module
  - SX Upgrade / Multi TAP (>2)
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler
  - Multi User Manager (myCASCON)
  - Floating Licence Manager
- Demo Board

Item no. 223-001

Software

CASCON GALAXY-DS Advanced Edition

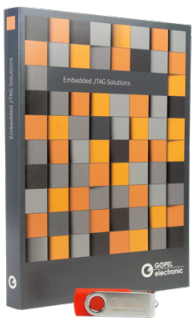


Boandary Scan software package with tools for

- Test Program Generation
  - ATPG Infrastructure Test
  - ATPG Interconnection Test 1149.1, 1149.6
  - ATPG Clusters (True Table)
  - ATPG Clusters (Wavefor m
  - ATPG Memory Access
  - ATPG Logic Components
  - ATPG Device Model Basic Test Generation
  - TP Generation 1149.4
  - AVTG Dynamic Memory Access
  - Basic VarioTAP Test Generation
  - ATPG Flying Probe
- In-System Programming
  - Basic Flash Programming
  - Automated Flash Programming (AFPG)
  - Automated VarioTAP Flash Programming
  - Automated VarioTAP Flash Programming
  - PLD Program Generator
- Data import Processor Data Analyzing, Visualizing and Debugging
  - Netlist Merger
  - Test Coverage Analyze

Item no. 222-001

CASCON GALAXY-TS Run Time Edition

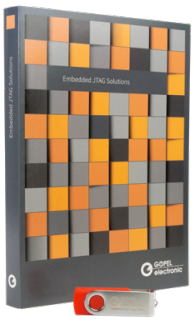


Boandary Scan software package with tools for

- Data Analyzing, Visualizing and Debugging
  - Advanced Vector Browser
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - VarioCore Handler
  - Multi User Manager

Item no. 211-011

CASCON GALAXY-TS Failure Diagnostic Edition

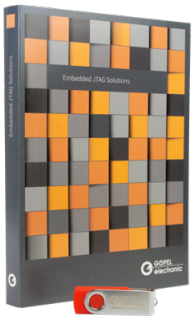


Boandary Scan software package with tools for

- Data Analyzing, Visualizing and Debugging
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 and 1149.6
  - PFD Memory Access
  - PFD Logic Components
  - PFD Clusters (Truth Table)
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - SX Upgrade / TAP Liwith(>2)
  - VarioCore Handler
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler

Item no. 225-011

CASCON GALAXY-TS Diagnostic & Repair Edition



Boandary Scan software package with tools for

- Data Analyzing, Visualizing and Debugging
  - Scan Vision III Layout
  - Advanced Vector Browser
  - ScanAssist Multi Mode Debugger
  - ScanAssist Interactive Pin Toggle
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 and 1149.6
  - PFD Memory Access
  - PFD Logic Components
  - PFD Clusters (Truth Table)
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - SX Upgrade / TAP Liwith(>2)
  - VarioCore Handler
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler
  - Multi User Manager
  - Floating Licence Manager

Item no. 225-020

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