Embedded JTAG Solutions
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SCANFLEX controller

SCANFLEX controller for USB/LAN

SFX II CUBE

Multifunctional JTAG/Boundary Scan Controller for GBit LAN und 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, 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)
- 8 JTAG / TAP slots (SFX II TIC or TEM module must be ordered separately)
- 64 MPP (Multi Purpose Port), mixed-signal I/Os to support 8 TAPs
  - in-built SFX-I/O module with VarioCare 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 220 in-line resistor
- 1 SFX-I/O slot (for expansion with SFX-I/O modules)

Configuration overview · SCANFLEX II CUBE

<table>
<thead>
<tr>
<th>Item number</th>
<th>SFX II CUBE-A</th>
<th>SFX II CUBE-B</th>
<th>SFX II CUBE-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. TCK frequency</td>
<td>SCO2-010</td>
<td>50 MHz</td>
<td>SCO2-012</td>
</tr>
<tr>
<td>data processing</td>
<td>normal - Scan Data Buffer</td>
<td>fast - SPACE™ III architecture (up to 20 times faster)</td>
<td>fast - SPACE™ III architecture (up to 20 times faster)</td>
</tr>
<tr>
<td>upgrade</td>
<td>FASTSCALE™ (upgrade to B- or C-controller)</td>
<td>FASTSCALE™ (upgrade to C-controller)</td>
<td>-</td>
</tr>
</tbody>
</table>

Item no. SCO2-xxx

SFX II WLAN1

- Wireless LAN (WLAN) 150 Mbps USB 2.0 Adapter with swivel-mounted and detachable antenna for connection to SFX II controller
- compatible with the IEEE 802.11b/g/n standard
- WPA, WPA2 encryption
- 2.4 GHz frequency band

Item no. SCO2-WLAN1

SFX II CUBE Mounting Kit

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

Item no. STT2-400
SFX II TIC01 / LX
TAP Interface Card as a plug-in module for SFX II Controller
- 1 JTAG port / TAP mit single-ended interface
- programmable input (0.0-3.0 V) and output voltage (0.9-3.6 V)
- programmable input and output impedance
- programmable drive strength
- relay-switched 5 V output signal

Item no. STT2-110

SFX II TIC020 / LX
TAP Interface Card as a plug-in module for SFX II Controller
- 1 JTAG port / 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 drive strength
- relay-switched 5 V output signal
- with multi-bus interface for extended VarioTAP support

Item no. STT2-310

SFX II TEM
TIC extension module as a plug-in module for SFX II Controller
- with differential interface for connecting all external TIC modules

Item no. STT2-130

SFX II CUBE SPLITTER
Adapter from a 20-pin high-density socket to two 10-pin low-density plug connectors
- compatible with SFX II TEM, SFX II TEM/ISO and SFX II TIC020/LX of the SFX II CUBE
- for IDC socket assemblies or wire-wrap connections

Item no. STT2-131
**SFX II BLADE 4**

SCANFLEX II JTAG/Boundary Scan Controller for GBit LAN and USB 3.0 for average power (without pre-installed TIC / TEM modules)

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III Architecture
- ADVCS™ 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 220 Ω in-line resistor

**Configuration overview · SCANFLEX II BLADE 4**

<table>
<thead>
<tr>
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<th>SFX II BLADE 4-A</th>
<th>SFX II BLADE 4-B</th>
<th>SFX II BLADE 4-C</th>
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<tr>
<td>max. TCK frequency</td>
<td>20 MHz</td>
<td>50 MHz</td>
<td>100 MHz</td>
</tr>
<tr>
<td>data processing</td>
<td>normal - Scan Data Buffer</td>
<td>fast - SPACE™ III architecture</td>
<td>fast - SPACE™ III architecture</td>
</tr>
<tr>
<td>upgrade</td>
<td>FASTSCALE™ (upgrade to B- or C-controller)</td>
<td>FASTSCALE™ (upgrade to C-controller)</td>
<td>-</td>
</tr>
</tbody>
</table>

**SFX II BLADE 4 RMx3**

Three independent SCANFLEX II JTAG/Boundary Scan Controllers for GBit LAN and USB 3.0 for average power for gang applications in a 19" housing (1 HU)

- maximum TCK frequency: 20 MHz / 50 MHz / 100 MHz
- Scan Data Buffer / SPACE™ III Architecture
- ADVCS™ 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)
- 3x2 SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)
- 3x4 JTAG / TAP slots (SFX II TIC or TEM modules must be ordered separately)
- 3x64 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 220 Ω in-line resistor
### Configuration overview: SCANFLEX II BLADE 4 RMx3

<table>
<thead>
<tr>
<th>Item number</th>
<th>SFX II BLADE 4 RMx3-A</th>
<th>SFX II BLADE 4 RMx3-B</th>
<th>SFX II BLADE 4 RMx3-C</th>
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</thead>
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<tr>
<td>number of controllers</td>
<td>3 (also available with 1 or 2)</td>
<td>3 (also available with 1 or 2)</td>
<td>3 (also available with 1 or 2)</td>
</tr>
<tr>
<td>max. TCK frequency</td>
<td>20 MHz</td>
<td>50 MHz</td>
<td>100 MHz</td>
</tr>
<tr>
<td>data processing</td>
<td>normal - Scan Data Buffer</td>
<td>fast - SPACE™ II architecture (up to 10 times faster)</td>
<td>fast - SPACE™ II architecture (up to 20 times faster)</td>
</tr>
<tr>
<td>upgrade</td>
<td>FASTSCALE™ (upgrade to B- or C-controller)</td>
<td>FASTSCALE™ (upgrade to C-controller)</td>
<td>-</td>
</tr>
</tbody>
</table>

### SCANFLEX controller for PXI

#### SFX / PXI 1149

**SCANFLEX JTAG/Boundary Scan Controller for PXI**
- 1 Slot / 3U PXI module
- maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
- Scan Data Buffer / SPACE™ II Architecture
- ADYCS™ II (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)
- 1 SFX interface (port for all SCANFLEX TAP transceivers)
- 2 SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)

### Configuration overview: SCANFLEX controller for PXI

<table>
<thead>
<tr>
<th>Item number</th>
<th>SFX PXI-A</th>
<th>SFX PXI-B</th>
<th>SFX PXI-C</th>
</tr>
</thead>
<tbody>
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<td>max. TCK frequency</td>
<td>20 MHz</td>
<td>50 MHz</td>
<td>80 MHz</td>
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<tr>
<td>data processing</td>
<td>normal - Scan Data Buffer</td>
<td>fast - SPACE™ II architecture (up to 10 times faster)</td>
<td>fast - SPACE™ II architecture (up to 10 times faster)</td>
</tr>
<tr>
<td>upgrade</td>
<td>FASTSCALE™ (upgrade to B- or C-controller)</td>
<td>FASTSCALE™ (upgrade to C-controller)</td>
<td>-</td>
</tr>
</tbody>
</table>

### SFX / PXI 1149 / C2

**SCANFLEX JTAG/Boundary Scan Controller for PXI**
- 1 Slot / 3U PXI module with integrated TAP transceiver
- maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
- Scan Data Buffer / SPACE™ II Architecture
- ADYCS™ II (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)
- 1 SFX / LS interface (for expansion with SFX carriers and SXF-I/O modules)
- 2 JTAG ports / TAPs with single-ended interface (built-in) and 8 TDIs (for gang applications)
- programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V) for each TAP
- programmable input and output impedance for each TAP
- relay-switched 5 V output signal for each TAP
• 32 bit PIP (Parallel Interface Port), the I/O voltage for the two 16-bit groups is programmable (1.8-4.5 V)
• 2 analogue I/O channels (10 bit, AD-DA)
• 3 digital I/O channels (3.3 V, max. 5.5 V VIN)
• ConPAC PXI / Cx-1 paddle card included (68-pin SCSI-3 plug connector)

Item no. SCO-12x

SFX / PXI 1149 / C4

SCANFLEX JTAG/Boundary Scan Controller for PXI
• 1 Slot / 3U PXI module with integrated TAP transceiver
• maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
• Scan Data Buffer / SPACE™ II Architecture
• ADYCS™ II (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)
• 1 SFX / LS interface (for expansion with SFX carriers and SXF-I/O modules)
• 4 JTAG ports / TAPs with single-ended interface (built-in)
• programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V) for each TAP
• programmable input and output impedance for each TAP
• relay-switched 5 V output signal for each TAP
• 32 bit PIP (Parallel Interface Port), the I/O voltage for the two 16-bit groups is programmable (1.8-4.5 V)
• 2 analogue I/O channels (10 bit, AD-DA)
• 3 digital I/O channels (3.3 V, max. 5.5 V VIN)
• ConPAC PXI / Cx-1 paddle card included (68-pin SCSI-3 plug connector)

Item no. SCO-22x

SCANFLEX controller for PXI Express

SFX / PXIe 1149

SCANFLEX JTAG/Boundary Scan Controller for PXI Express
• 1 Slot / 3U PXI module
• maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
• Scan Data Buffer / SPACE™ II Architecture
• ADYCS™ II (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)
• 1 SFX interface (port for all SCANFLEX TAP transceivers)
• 2 SFX / LS interfaces (for expansion with SFX carriers and SXF-I/O modules)

Configuration overview · SCANFLEX controller for PXI Express

<table>
<thead>
<tr>
<th>item number</th>
<th>SFX PXIe-A</th>
<th>SFX PXIe-B</th>
<th>SFX PXIe-C</th>
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<td>SFX PXIe-A</td>
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<td>SCO-052</td>
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<td>max. TCK frequency</td>
<td>20 MHz</td>
<td>50 MHz</td>
<td>80 MHz</td>
</tr>
<tr>
<td>data processing</td>
<td>normal - Scan Data Buffer</td>
<td>fast - SPACE™ II architecture (up to 10 times faster)</td>
<td>fast - SPACE™ II architecture (up to 10 times faster)</td>
</tr>
<tr>
<td>upgrade</td>
<td>FASTSCALE™ (upgrade to B- or C-controller)</td>
<td>FASTSCALE™ (upgrade to C-controller)</td>
<td>-</td>
</tr>
</tbody>
</table>

Item no. SCO-05x
SCANFLEX controller

SFX / PXIe 1149 / C2

SCANFLEX JTAG/Boundary Scan Controller for PXI Express
- 1 Slot / 3U PXI module with integrated TAP transceiver
- maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
- Scan Data Buffer / SPACE™ II Architecture
- ADYCS™ II (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)
- 1 SFX / LS interface (for expansion with SFX carriers and SXF-I/O modules)
- 4 JTAG ports / TAPs with differential interface (TEM, built-in)
- an external differential TIC module is required for each TAP used (not included)
- 32 bit PIP (Parallel Interface Port), the I/O voltage for the two 16-bit groups is programmable (1.8-4.5 V)
- 2 analogue I/O channels (10 bit, AD-DA)
- 3 digital I/O channels (3.3 V; max. 5.5 V VIN)
- ConPAC interface
- ConPAC PXI / Cx-3 paddle card included (4 x 40-pin IDC plug connector)

Item no. SCO-13x

SFX / PXIe 1149 / C4

SCANFLEX JTAG/Boundary Scan Controller for PXI Express
- 1 Slot / 3U PXI module with integrated TAP transceiver
- maximum TCK frequency: 20 MHz / 50 MHz / 80 MHz
- Scan Data Buffer / SPACE™ II Architecture
- ADYCS™ II (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)
- 1 SFX / LS interface (for expansion with SFX carriers and SXF-I/O modules)
- 4 JTAG ports / TAPs with differential interface (TEM, built-in)
- an external differential TIC module is required for each TAP used (not included)
- 32 bit PIP (Parallel Interface Port), the I/O voltage for the two 16-bit groups is programmable (1.8-4.5 V)
- 2 analogue I/O channels (10 bit, AD-DA)
- 3 digital I/O channels (3.3 V; max. 5.5 V VIN)
- ConPAC interface
- ConPAC PXI / Cx-3 paddle card included (4 x 40-pin IDC plug connector)

Item no. SCO-23x

SCANBOOSTER / USB

Low Cost JTAG/Boundary Scan Controller for USB 2.0
- 2 JTAG ports / TAPs with single-ended interface (TIC01)
- programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V) for each TAP
- programmable input and output impedance for each TAP
- relay-switched 5 V output signal for each TAP
- maximum TCK frequency: 16 MHz
- 32 bit PIP (Parallel Interface Port), the I/O voltage for the two 16-bit groups is programmable (1.8-4.5 V)
- 2 analogue I/O channels (10 bit, AD-DA)
- 3 digital I/O channels (3.3 V; max. 5.5 V VIN)
- Power supply via USB port

Item no. 111-200
**SCANFLEX for VPC (Virginia Panel Corporation)**

**SFX-TAP6 / VPC Adapter / ISO**

- Mass interconnect Interface for up to 6 TAPs and PIP / MPP signals (SFX-TAP6 / FXT / ISO or SCANFLEX II CUBE with 6 x SFX II TEM / 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

**Item no.** STT-500

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**SFX-TAP6 / VPC Adapter / Relay**

- Mass interconnect Interface for up to 6 TAPs and PIP / MPP signals (SFX-TAP6 / FXT / ISO or SCANFLEX II CUBE with 6 x SFX II TEM / ISO)
- based on the 192-pin receiver from Virginia Panel (P / N 510150152)
- including support for 2 x 60-pin and 1 x 40-pin

**Item no.** STT-501

---

**SFX / VPC-TAP16 / M1**

Fixture SCANFLEX TAP transceiver for gang applications

- also available as FXT variant (with differential transmission)
- Mass interconnect Interface for 8 x 2 TAPs (eight TAPs with two TDIs for each TAP)
- 16 built-in TIC020 with multi-bus interface for extended VarioTAP support
- programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V) for each TAP
- programmable input and output impedance for each TAP
- relay-switched 5 V output signal for each TAP when using the SFX / VPC-MPP / M1 card
- 1 SFX / LS interface (for expansion with SFX carriers and SXF-I/O modules)

*Note: more VPC modules on page 30

**Item no.** RPD-700

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**SFX / VPC-AMC128L**

SCANFLEX Analog Measurement Card

- 128 independent measuring channels (16 simultaneously)
- VPC interface with 192-pin receiver from Virginia Panel (P/N 510150152)
- 3 measuring ranges: +/-2.5 V, +/-5 V and +/-10 V
- for each of the 128 measuring channels independent, programmable voltage ranges in 3 steps
- control via Gigabit LAN and web interface
- no driver installation required

*Note: more VPC modules on page 30

**Item no.** RPD-760
**SFX / VPC-AMC128H**

SCANFLEX Analog Measurement Card
- 128 independent measuring channels (16 simultaneously)
- VPC interface with 192-pin receiver from Virginia Panel (P/N 510150152)
- 3 measuring ranges: +/-2.5 V, +/-5 V and +/-10 V
- for each of the 128 measuring channels independent, programmable voltage ranges in 3 steps
- control via Gigabit LAN and web interface
- no driver installation required

*Note: more VPC modules on page 30*

Item no. RPD-761

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**Options for SCANFLEX TAP transceiver**

**TIC Extension Module (TEM)**

TIC extension module as a plug-in module for Desktop SCANFLEX TAP transceiver 2 / 4 / 6 / 7 / 8S and SCANBOOSTER
- with differential interface for connecting all external TIC modules
- TEM (TIC) cable 0.5 m included

Item no. STT-130

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**TEM Splitter**

Adapter from a 20-pin high-density socket to two 10-pin low-density plug connectors
- plug-on module on SCANFLEX TEM or TEM / ISO
- for IDC socket assemblies or wire-wrap connections

Item no. STT-131

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**TIC Extension Module / Isolated (TEM / ISO)**

TIC extension module / isolated as a plug-in module for Desktop SCANFLEX TAP transceiver 2 / 4 / 6 / 7 / 8S
- 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. STT-132
TAP Interface Card (TIC) Type 02 / SR

TAP Interface Card as a fixture assembly module for connection to replaceable or built-in TEM or TEM/ISO
- suitable for all SCANFLEX TAP transceivers, SCANBOOSTER and SCANFLEX II Controller with differential interface (FXT)
- 1 JTAG port / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset to 1.0 V or external) and output voltage (1.65-3.6 V, preset to 3.3 V or external)
- relay-switched 5 V output signal
- cut-off relay for TAP and AUX signals

Item no. STT-121

TAP Interface Card (TIC) Type 03 / SR

TAP Interface Card as a fixture assembly module in a climatic chamber for connection to replaceable or built-in TEM or TEM/ISO
- suitable for all SCANFLEX TAP transceivers, SCANBOOSTER and SCANFLEX II Controller with differential interface (FXT)
- 1 JTAG port / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset to 1.0 V or external) and output voltage (1.65-3.6 V, preset to 3.3 V or external)
- relay-switched 5 V output signal
- cut-off relay for TAP and AUX signals
- temperature range from -40 °C to 80 °C

Item no. STT-123

TAP Interface Card (TIC) Type 02 / PMU

TAP Interface Card as a fixture assembly module for connection to replaceable or built-in TEM or TEM / ISO
- suitable for all SCANFLEX TAP transceivers and SCANFLEX II Controller with differential interface (FXT)
- 1 JTAG port / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset to 1.0 V or external) and output voltage (1.65-3.6 V, preset to 3.3 V or external)
- relay-switched 5 V output signal
- cut-off relay for TAP and AUX signals
- additionally built-in precision-measuring unit (PMU) for unpowered open / short tests
- can be used with PXI or SCANFLEX I/O modules

Item no. STT-124

TAP Interface Card (TIC) Type 022 / SR

TAP Interface Card as a fixture assembly module for connection to replaceable or built-in TEM or TEM / ISO
- suitable for all SCANFLEX TAP transceivers and SCANFLEX II Controller with differential interface (FXT)
- 1 JTAG port / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset to 1.0 V or external) and output voltage (1.65-3.6 V, preset to 3.3 V or external)
- relay-switched 5 V output signal
- cut-off relay for TAP and AUX signals
- with multi-bus interface for extended VarioTAP support

Item no. STT-126
TAP Interface Card (TIC) Type 122 / SR

TAP Interface Card as a fixture assembly module for connection to replaceable or built-in TEM or TEM / ISO

- suitable for all SCANFLEX TAP transceivers und SCANFLEX II Controller with differential interface (FXT)
- 1 JTAG port / TAP with single-ended interface
- adjustable input (0.0-3.3 V, preset to VOUT / 2 or external) and output voltage (0.9-3.6 V, fixed at 3.3 V or external, present to external)
- relay-switched 5 V output signal
- cut-off relay for TAP and AUX signals
- with multi-bus interface for extended VarioTAP support
- support for Intel architecture

Item no. 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 plug connector

Item no. STT-135

TIC Self Test Board

Self-testing module for JTAG / TAP signals

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

Item no. STT-115

TIC / FXT Self Test Board

Self-testing module for JTAG / TAP signals

- for fixture applications
- 7 cables with female connectors, with terminals for contacting the transceiver contacts or ICT pins included

Item no. STT-116
**TAP Interface Card (TIC) Type 020**

- TAP Interface Card as a plug-in module for Desktop SCANFLEX TAP transceiver 2 / 4 / 6 / 7 / 8
- 1 JTAG port / 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
- Relay-switched 5 V output signal
- TIC cable 0.5 m included
- With multi-bus interface for extended VarioTAP support

**Item no.** STT-310

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**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

**Item no.** STT-910

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**SCANFLEX TAP transceiver for gang testing and programming**

**SFX-TAP16 / G-RM**

- SCANFLEX TAP transceiver for gang applications in a 19” housing (1U)
- 8 x 2 TAPs (eight TAPs with two TDIs for each TAP)
- 16 built-in TIC020 with multi-bus interface for extended VarioTAP support
- Programmable input (0.0-3.0 V) and output voltage (1.8-4.5 V)

**Item no.** STT-700

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**SFX-TAP16 / G-RM-FXT**

- SCANFLEX TAP transceiver for gang applications in a 19” housing (1U)
- 8 x 2 differential TAPs (eight TAPs with two TDIs for each TAP)
- 16 built-in TEM modules
- An external differential TIC module is required for each TAP used (not included)

**Item no.** STT-710
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; driver capability of the channels: +/- 24 mA
- I/O voltage is programmable for any group
- each channel can be configured independently (input, output, bi-directional) and supports the unstress function
- extended test resources at the I/O pins (SE):
  - 12-bit ADC + 1k RAM (signal recorder)
  - 10-bit DAC + 1k RAM (arbitrary waveform generator)
  - event detector
  - frequency meter
  - connectable pull-up and pull-down resistors (each 10k)
  - setting for the drive 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: 0.9-3.6 V; driver capability of the channels: +/- 24 mA
- each channel can be configured independently (input, output, bi-directional and tri-state)
- I/O voltage is programmable for any group

Item no. SMO-000

SFX-5350

SCANFLEX digital I/O module
- 50 differential test channels
- standard interface LVDS (can be changed by a module update)
- driver capability of the channels is dependent on the I/O standard
- each channel can be configured independently (input, output, bi-directional and tri-state)

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; driver capability of the channels: +/- 150 mA (@ external)
- I/O voltage is programmable for any group
- each channel can be configured independently (input, output, bi-directional and tri-state)

Item no. SMO-008
SFX-5364

SCANFLEX digital I/O module
• 2 operating modes: JTAG mode (SFX-5296) and burst mode
• 64 single-ended (SE) test channels in 2 x 32-bit groups; I/O voltage per group: 1.8-4.5 V; driver capability of the channels: +/- 24 mA
• I/O voltage is programmable for any group

Item no. SMO-010

SFX-9305

SCANFLEX multi port bus I/O module
• 5 ports which can be freely assigned for connecting BAC I/O interface cables (Bus Access Cable)
• automatic detection and configuration of the BAC I/O interface cables
• 3 serial I/O standard interfaces that are independent of one another

Item no. SMO-006

SFX-9305 / R

SCANFLEX multi port bus I/O module
• 5 ports which can be freely assigned for connecting BAC I/O interface cables (Bus Access Cable), with cut-off relay
• automatic detection and configuration of the BAC I/O interface cables
• 3 serial I/O standard interfaces that are independent of one another

Item no. SMO-007

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; driver capability of the channels: +/- 300 mA
• I/O voltage is programmable for any group
• each channel consists of a driver / sensor stage
• 12-bit ADC for discrete recording of measurement values
• cut-off relay for galvanic 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 48 V power supply (P / N STT-900) required

Item no. SMO-011
SFX-6216

SCANFLEX analogue measuring module
- 16 analogue measurement channels with cut-off relay for galvanic isolation
- 12-bit ADC with 4 channels (250 kSPS) enables simultaneous measurement of 4 of the 16 channels
- Programmable ±50 V and ±5 V voltage range per channel
- Input impedance > 1 MOhm

Item no.  SMO-026

SFX-6308

SCANFLEX analogue I/O module, operation only with SFX carriers and SFX-TAP8
- 4 analogue measurement and driver channels with cut-off relay for galvanic isolation
- Output voltage channels and measurement inputs have a voltage resolution of 12 bit in a range between –10 V and +10 V
- Input impedance > 1 MOhm
- 8 digital I/O pins can be used as external trigger inputs

Item no.  SMO-121

BAC options

Bus Access Cable (BAC) 9305-USB 2.0 / S
Single-port SFX-9305 bus access cable with USB 2.0 (Slave) installed in a mini desktop box
- Signal conditioning (B-type connection) for testing USB 2.0 host interfaces
- Support for USB low-speed and full-speed mode
- Cable length 0.5 m, other lengths available on request

Item no.  BAC-004

Bus Access Cable (BAC) 9305-USB 2.0 / H
Single-port SFX-9305 bus access cable with USB 2.0 (host) installed in a mini desktop box
- Signal conditioning (A-type connection) for testing USB 2.0 device interfaces (slave)
- Cable length 0.5 m, other lengths available on request

Item no.  BAC-001
Bus Access Cable (BAC) 9305-Bluetooth

Single-port SFX-9305 bus access cable with Bluetooth installed in a mini desktop box
- Bluetooth interface for establishing a Bluetooth connection with the unit under test
- cable length 0.5 m, other lengths available on request

Item no. BAC-002

Bus Access Cable (BAC) 9305-LAN10 / 100

Single-port SFX-9305 bus access cable with Ethernet 10 / 100 MBit installed in a mini desktop box
- for Ethernet connections with 10 / 100 MBit
- signal conditioning (RJ45 Socket)
- cable length 0.5 m, other lengths available on request

Item no. BAC-003

Bus Access Cable (BAC) 9305-LAN1G

Single-port SFX-9305 bus access cable with Ethernet 1Gbit installed in a mini desktop box
- for Ethernet connections with 10 / 100 / 1000 MBit
- signal conditioning (RJ45 Socket)
- cable length 0.5 m, other lengths available on request

Item no. BAC-010

Bus Access Cable (BAC) 9305-RS232

Single-port SFX-9305 bus access cable with RS232 installed in a mini desktop box
- signal conditioning (DB9 pin socket)
- cable length 0.5 m, other lengths available on request

Item no. BAC-005

Bus Access Cable (BAC) 9305-RS422 / 485

Single-port SFX-9305 bus access cable with RS422 / RS485 installed in a mini desktop box
- signal conditioning (DB9 pin socket)
- cable length 0.5 m, other lengths available on request

Item no. BAC-006
**Bus Access Cable (BAC) 9305-CAN / HS**

Single-port SFX-9305 bus access cable with CAN / HS installed in a mini desktop box

- for CAN Bus - High Speed
- terminated signal conditioning (DB9 pin male)
- cable length 0.5 m, other lengths available on request

**Item no.** BAC-007

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**Bus Access Cable (BAC) 9305-CAN / LS**

Single-port SFX-9305 bus access cable with CAN / LS installed in a mini desktop box

- for CAN Bus - Low Speed
- terminated signal conditioning (DB9 pin male)
- cable length 0.5 m, other lengths available on request

**Item no.** BAC-008

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**Bus Access Cable (BAC) 9305-LIN**

Single-port SFX-9305 bus access cable with LIN installed in a mini desktop box

- signal conditioning (DB9 pin male)
- cable length 0.5 m, other lengths available on request

**Item no.** BAC-009

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**CION Module / FXT48A**

JTAG/Boundary Scan I/O module (mixed signal)

- 48 single-ended (SE) Boundary Scan test channels in 2 x 8-bit groups and 2 x 16-bit groups; I/O voltage per group: 1.8-5.0 V; driver capability of the channels: +/- 24 mA
- I/O voltage fixed on the board: 3.3 V
- I/O voltage is adjustable for any group
- each channel can be configured independently (input, output, bidirectional) and supports the unstress function
- maximum TCK frequency: 33 MHz
- 4 ADC channels (0-5 V) / 2 ADC channels (0-10 V) / 2 ADC channels (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
- cascaddable

**Item no.** 340-023
Embedded JTAG Solutions

CION-LX Module / FXT48AJ

JTAG/Boundary Scan I/O module
- 48 Boundary Scan test channels, provided by CION-LX ICs
- Logic level adjustable from 0.9 V to 3.6 V in four groups (2x16 and 2x8 bit)
- Driver capability of the channels: ±24 mA at 3.3 V
- CION-LX has extended test resources that are available at the 48 I/O pins:
  - 12-bit ADC (signal recorder)
  - 10-bit DAC (arbitrary waveform editor)
  - Event detector
  - Frequency meter
  - Connectable pull-up and pull-down resistors of 10 kOhm each
  - Setting for the drive strength
- Driver capability of the channels: ±24 mA
- A 12-bit AD converter LTC2309
- 4 ADC channels (0-5 V) / 2 ADC channels (0-10 V) / 2 ADC channels (0-30 V)
- 2 10-bit DA converters / 2 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. CLXM-003

CION-LX Module / FXT96

JTAG/Boundary 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: 0.9-3.6 V; driver capability of the channels: ±/−24 mA
- 12 high-current (HC) Boundary Scan test channels in 1 x 12-bit group; I/O voltage per group: 0.9-2.0 V; driver capability of the channels: ±/−40 mA
- 24 differential (DE) Boundary Scan test channels in 1 x 24-bit group; 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 is adjustable for any group
- Each channel can be configured independently (input, output, bidirectional) and supports the unstress function
- Maximum TCK frequency: 100 MHz
- Extended test resources at the I/O pins:
  - 12-bit ADC + 1k RAM (signal recorder) at SE and HC pins
  - 10-bit DAC + 1k RAM (arbitrary waveform generator) at SE and HC pins
  - Event detector at all pins
  - Frequency meter at all pins
  - Connectable pull-up and pull-down resistors (each 10k) at SE and HC pins
  - Setting for the drive strength at SE and HC pins

Item no. CLXM-000

CION-LX Module / FXT192

JTAG/Boundary Scan I/O module (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; driver capability 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; driver capability of the channels: ±/−40 mA
- 48 differential (DE) Boundary Scan test channels in 2 x 24-bit groups; LVDS or CML; with full support for IEEE1149.6
- I/O voltage fixed on the board: 3.3 V, 2.5 V, W/O (default 1.2 V)
- I/O voltage is adjustable for any group
Embedded JTAG Solutions

- each channel can be configured independently (input, output, bidirectional) and supports the unstress function
- maximum TCK frequency: 100 MHz
- extended test resources at the I/O pins:
  - 12-bit ADC + 1k RAM (signal recorder) at SE and HC pins
  - 10-bit DAC + 1k RAM (arbitrary waveform generator) at SE and HC pins
  - event detector at all pins
  - frequency meter at all pins
  - connectable pull-up and pull-down resistors (each 10k) at SE and HC pins
  - setting for the drive strength at SE and HC pins

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**Item no. CLXM-002**

**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), each with 2 serial high-speed transceivers with maximum 6.6 Gbit/s
- 32 Boundary 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 channels max. ±16 mA
- universal 32 MHz and 100 MHz clock generators
- special support for ChipVORX technology
- additional four SPI configuration memories

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**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)
- the data transmission direction of each test channel can be freely programmed
- driver capability of the channels max. ±24 mA
- universal 32 MHz clock generator
- special support for ChipVORX technology

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**Item no. CXIO-010**

**SFX-Carrier 5**

Desktop SCANFLEX Carrier for 5 x SFX-I/O module

- installed in a box
- 5 SFX-I/O slots for expansion with SFX-I/O modules
- cascaddable SFX/LS bus interface (1 x SFX / LS-In, 1 x SFX / LS-Out) for connecting additional SFX desktop carrier
- 3 power relays
- also available as SFX-Carrier 10 and as SFX-Carrier 15

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**Desktop SCANFLEX carrier**
Solutions & systems

Embedded JTAG Solutions

Studio versions

SCANBOOSTER / USB Designer Studio Base

System components in the hardware / software bundle:

- SCANBOOSTER / USB (2 TAP Version)
- portable licence via USB, no floating licence
- software maintenance contract for one year (SMC)

Item no. SHB-020

SCANBOOSTER / USB Designer Studio Standard

System components in the hardware / software bundle:

- SCANBOOSTER / USB (2 TAP Version)
- portable license via USB
- software maintenance contract for one year (SMC)

Item no. SHB-021

SFX II Studio Base

SCANFLEX II Designer Studio Base

- SFX II CUBE Controller - Speedgrade A incl. 2 x multi-bus connections (JTAG, SWD, etc.)
- goJTAG Demo Board
- CASCON GALAXY Development Station Base
- licence via USB dongle
- software maintenance contract for one year (SMC)

Item no. SHB-040

SFX II Studio Standard

SCANFLEX II Designer Studio Base

- SFX II CUBE Controller - Speedgrade A incl. 2 x multi-bus connections (JTAG, SWD, etc.)
- goJTAG Demo Board
- CASCON GALAXY Development Station Standard / SX
- licence via USB dongle
- software maintenance contract for one year (SMC)

Item no. SHB-041
SFX II Studio Comfort

SCANFLEX II Designer Studio Standard Comfort
- SFX II CUBE Controller - Speedgrade A incl. 4 x multi-bus connections (JTAG, SWD, etc.)
- goJTAG Demo Board
- CASCON GALAXY Development Station Standard / SX
- layout Data Import (1 format) and visualisation
- licence via USB dongle
- software maintenance contract for one year (SMC)

Item no. SHB-042

JULIET Series 3

Compact Embedded JTAG Solutions tester as a desktop system. Suitable for development and production, with integrated system electronics. Controlled from an external PC or laptop via USB 3.0 or Gbit LAN.

Mechanics
- compact, portable desktop model
- solid mechanics with manual loading and unloading
- Bed of nails as interchangeable cassette
- two-sided adaptation to test points and plug connectors
- LED display for test results
- controlled via operator panel on the device
- extended access protection
- access to all test resources via front interface during testing
- Tester Link Software
- online PASS / FAIL statistics
- optional MES interface

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 / 84 RS485 interfaces
- adapter coding 7 bit / I²C EEPROM
- cover monitoring
- power management
- 4 controllable power rails
- internal fixed voltages of 3.5 V, 5 V and 12 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
- SFX II TIC020 / LX (x4)

PCB handling
- max. board dimensions: 340 mm x 230 mm
- max. number of pins: 600 (1N)
## Configuration overview · JULIET Series 3

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<td>4 (max. 50 MHz)</td>
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<td>yes - full</td>
<td>yes - full</td>
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### JULIET accessories

#### JULIET / Fixture Set

Original adapter including hold-down panel, pin support, moving plate, sleeve protector plate, hold-down device, board rests and interface labels.

#### JULIET / Barcode Reader Type A

Manual barcode reader for 1D codes (Datalogic Gryphon GD4130-BK), others available on request.
JULIET / Barcode Reader Type B

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

Item no. JLT-102

JULIET / Self-testing fixture

Self-testing adapter with active self-testing electronics, including adapter box. Can also be used with restrictions for JULIET Series 2.

Item no. JLT-004

JULIET / Universal Fixture

Self-testing adapter with active self-testing electronics, including adapter box. Can also be used with restrictions for JULIET Series 2.

Item no. JLT-005

JULIET / Toolset

Tool kit for JULIET, including CION module and wearing parts package.

Item no. JLT-009
**JULIET / Cover Lift**

Pneumatic cylinder for automatically opening the cover once the test procedure is finished. (This option serves exclusively for opening the cover and cannot be retrofitted.)

Item no. JLT-100

**JULIET / Cover Lock**

Pneumatic cylinder for automatically locking the cover during the test procedure. (This option cannot be retrofitted and serves exclusively to protect the test system and the assembly. Not suitable as a safety lock.)

Item no. JLT-101

**RAPIDO**

**RPS910-S16**

In-line 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
- SPX / PCI-1149-B Controller Card
- SPX / VPC tranciever card for 16 TAPs
- SPX / VPC multipurpose card with 128 channels
- SPX / 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 SFT

Interchangeable self-testing adapter for all RAPIDO models with active self-testing electronics and FID (recommended).

Item no. RPD-005

FID (TOP or 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

Acculogic

ATE integration for Acculogic Flying Probe

ATE integration packages advanced for Acculogic Flying Probe

Item no. IP-ACxxx-x

Cobham

ATE integration for Cobham MDA/ICT/FKT

ATE integration packages for Cobham 42xx / 52xx and 58xx

Item no. IP-CBxx-x

digitaltest

ATE integration for digitaltest Condor Flying Probe

ATE integration packages 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-DRxx-x

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**ATE integration for Eiger Design**

ATE integration package for Eiger Design J-tester

Item no. IP-EDJxx-x

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**ATE integration for Keysight 3070 ICT**

ATE integration packages for Keysight HP3070 / 3070 / i3070/i5000/ Utility Card / Slot / Performance Port

Item no. IP-KExxx-x

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**ATE integration for LXinstruments FCT**

ATE integration package for LXinstruments function tester

Item no. IP-LXxxx-x
Embedded JTAG Solutions

Integration packages

**Polar Instruments**

**ATE integration for Polar Instruments**

ATE integration package for Polar Instruments (GRS500) / GRS550

Item no. IP-PIxx-x

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**Reinhardt**

**ATE integration for Reinhardt**

ATE integration package for Reinhardt ATS-(U)KMFT

Item no. IP-RHAxx-1

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**Rohde & Schwarz**

**ATE integration for Rohde & Schwarz TSVP**

ATE integration package for Rohde & Schwarz TSVP

Item no. IP-RSTxx-1

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**Seica**

**ATE integration for Seica Flying Probe**

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

Item no. IP-SECxx-1
## ATE integration for Seica ICT

ATE integration Base for Seica Compact SL / TK / Multi

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-SECxx-1</th>
</tr>
</thead>
</table>

## ATE integration for SPEA ICT

ATE integration for SPEA ICT

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-SPxx-x</th>
</tr>
</thead>
</table>

## ATE integration for SPEA Flying Probe

ATE integration for SPEA Flying Prober 4020 / 4040 / 4050 / 4060 / 4080

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-SPxxx-x</th>
</tr>
</thead>
</table>

## ATE integration for Takaya APT - Flying Probe

ATE integration for Takaya APT9xx / 96xx / 1400F

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-TKxxx-x</th>
</tr>
</thead>
</table>
## Embedded JTAG Solutions

### Teradyne

**ATE integration for Teradyne Spectrum ICT**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-TD8xx-x</th>
</tr>
</thead>
</table>

ATE integration package for Teradyne Spectrum / 88xx / TSSE

**ATE integration for Teradyne Teststation ICT**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-TD8xx-x</th>
</tr>
</thead>
</table>

ATE integration package for Teradyne Teststation TS / 12x / TSLH / TSLX / TSI052 / GR228x

### TEST-OK

**ATE integration for TEST-OK**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-TOKxx-1</th>
</tr>
</thead>
</table>

ATE integration package for TEST-OK UCM Expansion Board

### TRI

**ATE integration for TRI TR5001**

<table>
<thead>
<tr>
<th>Item no.</th>
<th>IP-TR5xx-x</th>
</tr>
</thead>
</table>

ATE integration package for TRI TR5001
SYSTEM CASCON Demo Kit

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

Item no. TAS-011

ChipVORX Module / GCaT

Gigabit cable tester based on the Xilinx Kintex-7
- 4 slots (each with 2 GTX transceivers) for bit error rate tests and eye diagram display for testing high-speed cables
- transmission speeds of up to 6.6 Gbit/s.
- integrated testing software

Item no. CXIO-040

SFX / VPC-MPP / M1

Fixture SCANFLEX digital I/O module for gang applications
- Mass interconnect interface for 128 MPP (Multi Purpose Port) signals (16 groups x 8 MPP signals) to support 16 TAPs
- each channel can be configured independently (input, output, bi-directional)
- I/O voltage can be programmed in 16 groups, each with 8 channels (1.8-4.5 V)
- driver capability of the channels +/- 24 mA
- use as generic I/Os, test channels, PIP replacement and as control lines in the AFPG (FLASH)
- each signal has a 22Ω in-line resistor

Item no. RPD-720

SFX / VPC-TPC128

SCANFLEX Test Pattern Card
- 128 I/O channels (16 groups of 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
## SFX / VPC-PWR16-M1

Fixture SCANFLEX power control for gang applications
- Mass interconnect interface with support for eight UUTs with four (4 x 4) voltages or 16 UUTs with two (16 x 2) voltages
- Based on the 192-pin receiver from Virginia Panel (P/N 510150152)
- Voltage range max. +/-20 V with 2A based on mass (for each voltage of a UUT)
- Arranged in a 2 x 2 x 8 matrix (8 times 2 relays, each with 2 voltages, one relay therefore always switching 2 voltages)
- Measurement of the input voltages
- Excess current detection and automatic shutdown possible on every UUT
- Output voltages are defined by external power supply
- Controlled via SFX/L5 power bus when using an SFX/VPC-TAP16/M1
  - Controlled via USB (mini USB socket) when using other SFX transceivers
- External power supply required

### CION ICs & accessories

#### CION

**Configurable PIO module**
- With extended IEEE1149.1 architecture
- 4 operating modes (Boundary Scan, PIO, PXI, driver)
- 32 single-ended (SE) Boundary Scan test channels in 4 x 8-bit ports; I/O voltage per port: 1.8-5.0 V; driver capability of the channels: +/- 24 mA

### CION-LX

**Configurable PIO module**
- 11 operating modes (Boundary Scan, PIO, PXI, driver)
- 32 single-ended (SE) Boundary Scan test channels in 4 x 8-bit ports; I/O voltage per port: 0.9-3.6 V; driver capability of the channels: +/- 24 mA
- 4 high-current (HC) Boundary Scan test channels in 1 x 4-bit port; I/O voltage: 0.9-2.0 V; driver capability of the channels: +/- 40 mA
- 8 differential (DE) Boundary Scan test channels in 1 x 8-bit group; LVDS or CML; with full support for IEEE1149.6
- Each channel can be configured independently (input, output, bidirectional) and supports the unstress function
- Simultaneous driving and measurement of all I/Os
- Maximum TCK frequency: 100 MHz
- Extended test resources at the I/O pins:
  - 12-bit ADC + 1k RAM (signal recorder) at SE and HC pins
  - 10-bit DAC + 1k RAM (arbitrary waveform generator) at SE and HC pins
  - Event detector at all pins
  - Frequency meter at all pins
  - Connectable pull-up and pull-down resistors (each 10k) at SE and HC pins
  - Setting for the drive strength at SE and HC pins
- 116-pin LGA housing 11 mm x 11 mm

**Item no.** RPD-740

**Item no.** 331-001

**Item no.** CLX-001
Boundary 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

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
<table>
<thead>
<tr>
<th>Item no.</th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUF-001</td>
<td>BG-Access Kit / 5</td>
<td>BG-Access Kit / 5 for board grabbers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 5 pins (each with a different colour)</td>
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<td></td>
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<td>• 550 mm cable</td>
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<td>• includes 2 rails</td>
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<tr>
<td></td>
<td></td>
<td>• 4 board holders</td>
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<tr>
<td>SUF-002</td>
<td>BG-Access Kit / 10</td>
<td>BG-Access Kit / 10 for board grabbers</td>
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<tr>
<td></td>
<td></td>
<td>• 10 pins (5 black and 5 in various colours)</td>
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<tr>
<td></td>
<td></td>
<td>• 550 mm cable</td>
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<tr>
<td></td>
<td></td>
<td>• includes 2 rails</td>
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<td>• 4 board holders</td>
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<tr>
<td>SUF-003</td>
<td>BG-Nail Holders</td>
<td>BG-Nail Holders</td>
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<tr>
<td></td>
<td></td>
<td>• BG / Nail Holders for board grabber</td>
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<tr>
<td></td>
<td></td>
<td>• rails and magnetic holders for additional pins</td>
</tr>
<tr>
<td>325-001</td>
<td>Demo boards</td>
<td>Boundary Scan Coach / EZScan</td>
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<tr>
<td></td>
<td></td>
<td>Simple training board for mastering Boundary Scan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>technology</td>
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<tr>
<td></td>
<td></td>
<td>• 2 Boundary Scan ICs (CPLD)</td>
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<tr>
<td></td>
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<td>• Fault switch</td>
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<tr>
<td></td>
<td></td>
<td>• LED</td>
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<td></td>
<td></td>
<td>• Buffer</td>
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<td></td>
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<td>• Logic</td>
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<tr>
<td></td>
<td></td>
<td>• RAM</td>
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<tr>
<td></td>
<td></td>
<td>• Flash</td>
</tr>
</tbody>
</table>
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

ESA Coach

Complex "Embedded System Access (ESA)" training board for JTAG / Boundary Scan, VarioTAP and ChipVORX applications
- Atmel AT91SAM9G45 MCU (ARM)
- Xilinx FPGA
- I2C flash
- NOR and NAND flash
- SD-DDR2 RAM
- graphic display
- analogue potentiometer
- digital I/Os

Item no. TAS-004

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

JTAG/Boundary 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, Visualisation 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 und 1149.6
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - Test / ISP (Batch) Execution
  - SX Upgrade / TAP Limit
  - 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

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

Item no. 224-001
Embedded JTAG Solutions

CASCON GALAXY-DS Classic Edition

JTAG/Boundary 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 (Waveform)
  - ATPG Memory Access
  - ATPG Logic Components
  - ATPG Device Model
  - Basic Test Generation
  - TP Generation 1149.4
  - Basic VarioTap Test Generation
- In-System Programming
  - Basic Flash Programming
  - Automated Flash Programming (AFPG)
  - Automated VarioTAP Flash ISP
  - PLD Program Generator
  - Data Import Processor
- Data Analysis, Visualization and Debugging
  - Netlist Merger
  - Test Coverage Analyser
  - Scan Vision III Layout Reader
  - Scan Vision III Layout
  - Advanced Vector Browser
  - Scan Assist Multi Mode Debugger
  - Scan Assist Interactive Pin Toggler
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 und 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

CASCON GALAXY-DS Advanced Edition

JTAG/Boundary Scan software package with tools for

- Program Generation
  - ATPG Infrastructure Test
  - ATPG Interconnection Test 1149.1, 1149.6
  - ATPG Clusters (True Table)
  - ATPG Clusters (Waveform)
  - 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
Embedded JTAG Solutions

Software

- Data import Processor Data Analyzing, Visualisation 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 und 1149.6
  - PFD Memory Access
  - PFD Logic Components
  - PFD Clusters (Truth Table)
  - PFD Flying Probe
  - Universal Pin Failure Detection
  - Failure Diagnostics 1149.4
- SYSTEM CASCON Platform Module
  - SX Upgrade / TAP Limit (>2)
  - VarioCore Handler
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler
  - Multi User Manager
  - Floating Licence Manager
  - CASCON Device Library
- Demo Board

**CASCON GALAXY-TS Run Time Edition**

JTAG/Boundary Scan software package with tools for

- Data Analyzing, Visualising 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

**CASCON GALAXY-TS Failure Diagnostic Edition**

JTAG/Boundary Scan software package with tools for

- Data Analysis, Visualisation and Debugging
- Pin Failure Diagnostic Tools (PFD)
  - PFD Infrastructure
  - PFD Interconnection 1149.1 und 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 Limit (>2)
  - VarioCore Handler
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler
  - Multi User Manager
  - Floating Licence Manager

**Item no. 222-001**

**CASCON GALAXY-TS Run Time Edition**

**Item no. 211-011**

**CASCON GALAXY-TS Failure Diagnostic Edition**

**Item no. 225-011**
CASCON GALAXY-TS Diagnostic & Repair Edition

JTAG/Boundary Scan software package with tools for

- Data Analysis, Visualisation 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 und 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 Limit (>2)
  - VarioCore Handler
  - SX Upgrade / Scan Router Handler
  - SX Upgrade / Scan Gang Handler
  - Multi User Manager
  - Floating Licence Manager

Item no. 225-020