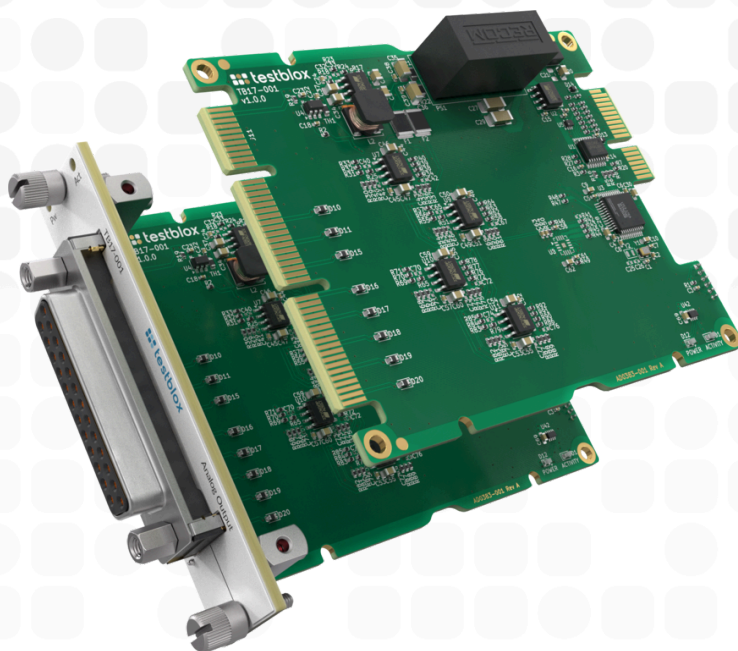




Testblox TB17-001

Analog Output ± 10 V, 16-bit, 8 channels



The TB17-001 is an 8-channel analog output module in the Testblox family. It generates ± 10 V stimulus signals inside the fixture, without a larger rack or custom DAC hardware.

Each output has 16-bit resolution and updates at up to 200 kS/s, with a 20 V/ μ s slew rate. The outputs are protected against short circuits, and are isolated from the backplane ground. The module is factory calibrated.

Functionality

- 8 analog outputs, ± 10 V, 16-bit
- Up to 200 kS/s update rate
- Up to 38 mA per channel pair
- Short circuit protected
- Isolated from backplane ground
- Factory calibrated



Specifications

Analog Outputs	
Number of channels	8
Output voltage range	± 10 V
Resolution	16 bits
Output accuracy (25°C)	TBD mV
Output accuracy (over temperature)	TBD mV
Output noise	TBD mVrms
Maximum update rate	200 kS/s
Maximum output current per channel	38 mA ¹
Short-circuit current per channel	65 mA ²
Output impedance	< 1 Ω (TBC)
Slew rate	20 V/ μ s
Output bandwidth	TBD kHz

Power supply	
Supply voltage	24 VDC $\pm 5\%$
Rated power	5 W

Isolation	
Channel-to-earth (backplane ground)	
Isolation working voltage	250 V continuous
Isolation Barrier Bleeder Resistance	10 M Ω

Environmental	
Operating temperature	0°C to +55°C
Indoor / Outdoor	Indoor use only
Altitude	< 5000 m over sea level (TBC)

Mechanical	
Size (w x d x h)	90 x 69 x 15.3 mm
Weight	30 g

Calibration	
Factory calibrated	Yes
Field recalibration	Not required

Compliance	
CE marked	
EMC compliant	
RoHS compliant	
REACH compliant	
WEEE compliant	

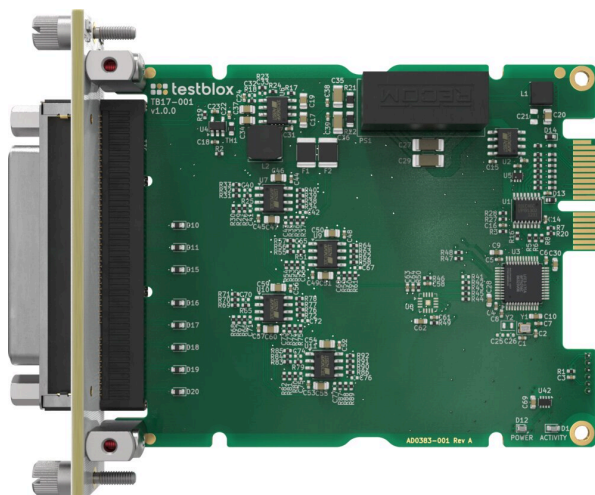
¹ shared between outputs 1-2, 3-4, 5-6 and 7-8

² output is disconnected when thermal protection of output opamp is triggered



Product Order Codes

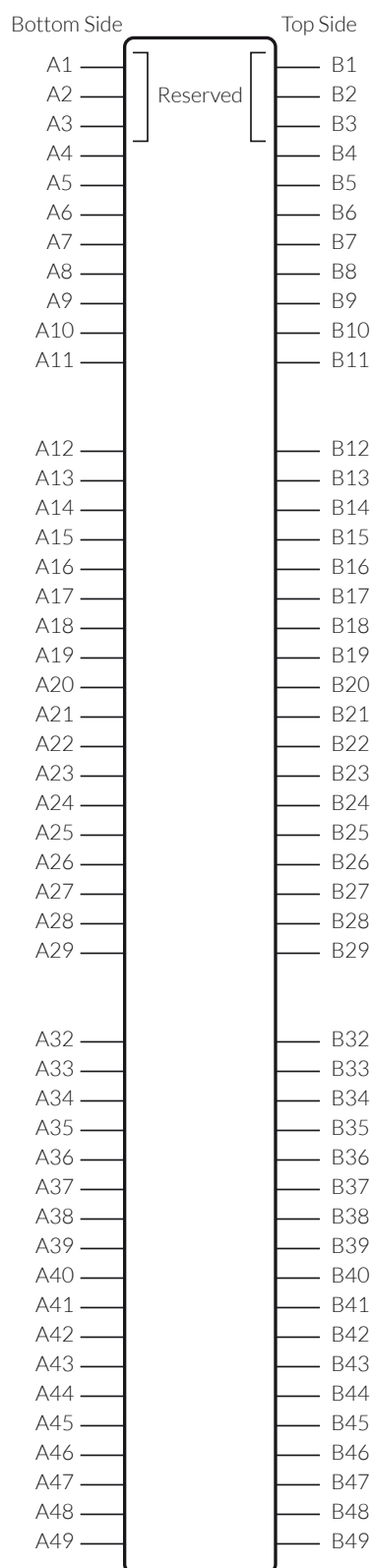
Testblox AO $\pm 10V$ 8-channel	TB17-001
Single-Module USB-C Backplane	TB92-001
Three-Module Horizontal USB-C Backplane	TB94-003-001
Four-Module Vertical USB-C Backplane	TB94-004-001





Pinout - Front Edge Connector

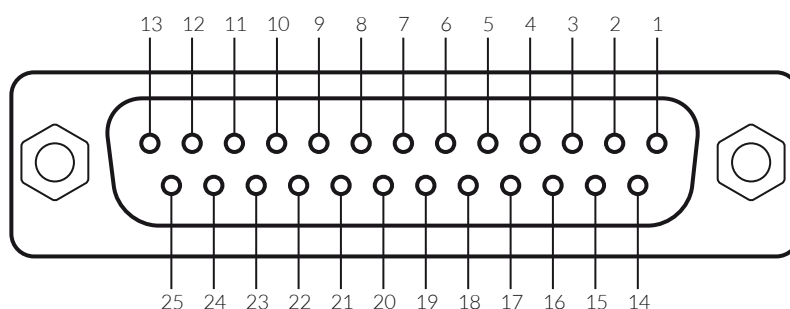
Pinout for Front Edge Connector - TB17-001	
Pin A1 - RESERVED	Pin B1 - RESERVED
Pin A2 - RESERVED	Pin B2 - RESERVED
Pin A3 - RESERVED	Pin B3 - RESERVED
Pin A4 - GND	Pin B4 - GND
Pin A5 - GND	Pin B5 - GND
Pin A6 - GND	Pin B6 - GND
Pin A7 - GND	Pin B7 - GND
Pin A8 - GND	Pin B8 - GND
Pin A9 - GND	Pin B9 - GND
Pin A10 - GND	Pin B10 - GND
Pin A11 - GND	Pin B11 - GND
Pin A12 - GND	Pin B12 - GND
Pin A13 - GND	Pin B13 - GND
Pin A14 - GND	Pin B14 - GND
Pin A15 - GND	Pin B15 - GND
Pin A16 - GND	Pin B16 - GND
Pin A17 - GND	Pin B17 - GND
Pin A18 - GND	Pin B18 - AOUT1
Pin A19 - GND	Pin B19 - AOUT1
Pin A20 - GND	Pin B20 - GND
Pin A21 - GND	Pin B21 - GND
Pin A22 - GND	Pin B22 - AOUT2
Pin A23 - GND	Pin B23 - AOUT2
Pin A24 - GND	Pin B24 - GND
Pin A25 - GND	Pin B25 - GND
Pin A26 - GND	Pin B26 - AOUT3
Pin A27 - GND	Pin B27 - AOUT3
Pin A28 - GND	Pin B28 - GND
Pin A29 - GND	Pin B29 - GND
Pin A32 - GND	Pin B32 - AOUT4
Pin A33 - GND	Pin B33 - AOUT4
Pin A34 - GND	Pin B34 - GND
Pin A35 - GND	Pin B35 - GND
Pin A36 - GND	Pin B36 - AOUT5
Pin A37 - GND	Pin B37 - AOUT5
Pin A38 - GND	Pin B38 - GND
Pin A39 - GND	Pin B39 - GND
Pin A40 - GND	Pin B40 - AOUT6
Pin A41 - GND	Pin B41 - AOUT6
Pin A42 - GND	Pin B42 - GND
Pin A43 - GND	Pin B43 - GND
Pin A44 - GND	Pin B44 - AOUT7
Pin A45 - GND	Pin B45 - AOUT7
Pin A46 - GND	Pin B46 - GND
Pin A47 - GND	Pin B47 - GND
Pin A48 - GND	Pin B48 - AOUT8
Pin A49 - GND	Pin B49 - AOUT8



Pinout Diagram for Front Edge Connector

Pinout - Using 25-pin D-type Interface Board

Pinout for 25-pin D-type Interface Connector - TB73-201	
Pin 1 - AOUT8	Pin 14 - GND
Pin 2 - AOUT7	Pin 15 - GND
Pin 3 - AOUT6	Pin 16 - GND
Pin 4 - AOUT5	Pin 17 - GND
Pin 5 - AOUT4	Pin 18 - GND
Pin 6 - AOUT3	Pin 19 - GND
Pin 7 - AOUT2	Pin 20 - GND
Pin 8 - AOUT1	Pin 21 - GND
Pin 9 - GND	Pin 22 - GND
Pin 10 - GND	Pin 23 - GND
Pin 11 - GND	Pin 24 - GND
Pin 12 - GND	Pin 25 - GND
Pin 13 - GND	

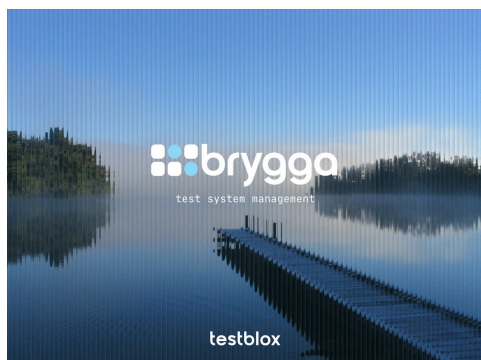


**25-pin Female D-type Connector
as viewed from front of module**



About Testblox

Testblox is an integrated, modular instrumentation platform designed specifically for automated functional test. Its playing-card-sized modules can be embedded inside standard test fixtures, bringing measurement, switching, power, and I/O closer to the device under test. This reduces rack space, cabling, and overall system complexity while providing the reliability and support expected in production ATE.



The Testblox portfolio includes analog and digital I/O, digital multimeters, power supplies, DUT communication, and a broad selection of switching modules, including multiplexers, matrices and general-purpose relays. Electrically isolated modules help prevent ground loops and simplify integration. Engineers can control Testblox systems using Brygga Test Management Software, Python, LabVIEW or C#, with a consistent software model across the platform.

Modules can be used individually with a single-module backplane or combined together with three- or four-module backplanes to create a test system tailored to the application. DUT signals are available directly from each module's front-edge connector or through standard D-sub cabling.

Testblox is a multi-vendor platform developed through complementary expertise. Testblox AB provides the core architecture, backplanes, system software and selected I/O; Wireflow contributes multifunction I/O and power-supply technology; and Pickering Interfaces contributes switching and measurement expertise. Together, they deliver specialist instrumentation through a common form factor, electrical interface and software workflow.

Designed and manufactured in Europe, Testblox modules are backed by a three-year warranty and a commitment to more than 20 years of hardware availability — providing a compact, cost-effective platform built for long-term automated test.

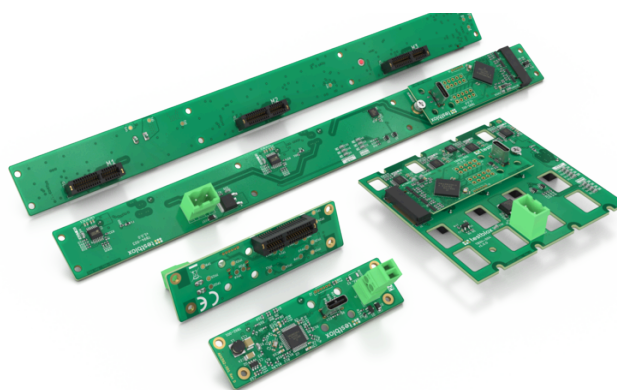
For more information, visit: www.testblox.com





Testblox Backplanes

Every Testblox system requires a backplane. Choose a one-, three- or four-module backplane to bring compact measurement, switching, power and I/O into your test fixture, with a USB-C connection to the host computer.



Backplane	Part Number	Typical Use
Single-Module USB-C Backplane	TB92-001	A single instrument in a compact fixture
Three-Module Horizontal USB-C Backplane	TB94-003-001	A low-profile arrangement of instruments
Four-Module Vertical USB-C Backplane	TB94-004-001	More instruments within a small footprint

USB communication and system power

Control the system using USB Full Speed at 12 Mbit/s through a USB Type-C connector. All backplanes use an external 24 V supply through a pluggable screw terminal. Check the selected backplane datasheet for power requirements; the system is not powered by the USB-C connection.

Mounting inside the fixture

Testblox mounting accessories support and retain modules while allowing individual modules to be removed for maintenance. Choose the mounting accessory to suit the backplane and the fixture connection method. You are also free to print your own with the files available on testblox.com. DUT signals connect through each module's front-edge connector or an available D-sub front panel.

Accessory	Application
TB82-003	Module guides for the Three-Module Horizontal Backplane
TB82-001	Module guides for one module in the Four-Module Vertical Backplane
TB82-002	Module guides for four modules in the Four-Module Vertical Backplane



Before ordering, check module count, fixture clearance, DUT connectors, power budget and required mounting accessories. Refer to the individual module specifications for module-to-backplane isolation ratings.

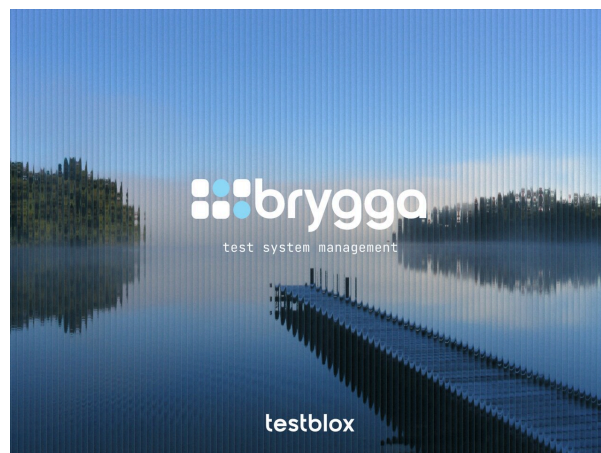


Testblox Software

Use Brygga Test Management Software to discover, configure and interactively test your Testblox system, then use the APIs and module simulation to develop your automated test application.

Brygga system setup and interactive control

Bring up hardware without writing code. Brygga Test Management Software combines system discovery, configuration, module test panels and firmware management in one test system management interface, helping you check connections and exercise instruments before automating a test.



Task	What you can do with Brygga
Discover and locate	Automatically discover connected backplanes and modules. Activate module front panel LEDs to match software entries to physical hardware.
View the system	See backplanes, installed modules, slot positions and connection status together.
Name and configure	Assign hardware and channel aliases shared with the API. Set module ranges, channels, limits and start-up states where supported.
Measure and control	Use module-specific test panels to take measurements, control outputs and operate switches without writing software.
Update firmware	Identify available firmware updates and install them on selected systems or modules.

APIs for automated test development

Integrate Testblox into your own test software using drivers, APIs and example programs. Windows and Linux support, together with Python, NI LabVIEW and C# integration, lets you use familiar development tools. Hardware and channel aliases assigned in Brygga carry through to the API, helping you use recognizable names in your test code. Refer to the software documentation for supported operating-system versions and module-specific functionality.

Module simulation

Configure simulated modules offline and develop your application before the hardware arrives. Simulation is intended to provide representative signal data, so you can exercise configuration, API calls and application logic while fixture development continues.

Software downloads and documentation: testblox.com/software



Testblox Support & Services

Testblox combines a three-year warranty, long-term hardware availability and technical support to help you build and maintain production test systems throughout their working life.

Three year warranty and long term availability

Testblox modules are backed by a three-year warranty and a commitment to more than 20 years of hardware availability. This helps protect your test system investment and reduces the disruption associated with premature product obsolescence.

Contact Testblox to discuss lifecycle requirements, product availability and support for your application. Refer to the published warranty terms for coverage and the process for arranging service.



Technical help from setup to troubleshooting

Use the Testblox technical support forums to ask questions, share solutions and discuss hardware, software and system integration. For an issue that needs direct assistance, or includes confidential application information, contact the support team by email.

Contact or resource	Where to go
Technical support forums	https://forum.testblox.com/
Technical support and service enquiries	support@testblox.com
Product information	https://testblox.com/

Help us resolve your issue

Include the module and backplane order codes, serial numbers, software and firmware versions, host operating system, and a short description of the problem. Attach relevant error messages, logs and a simple example that reproduces the issue. Keep confidential data out of public forum posts.

