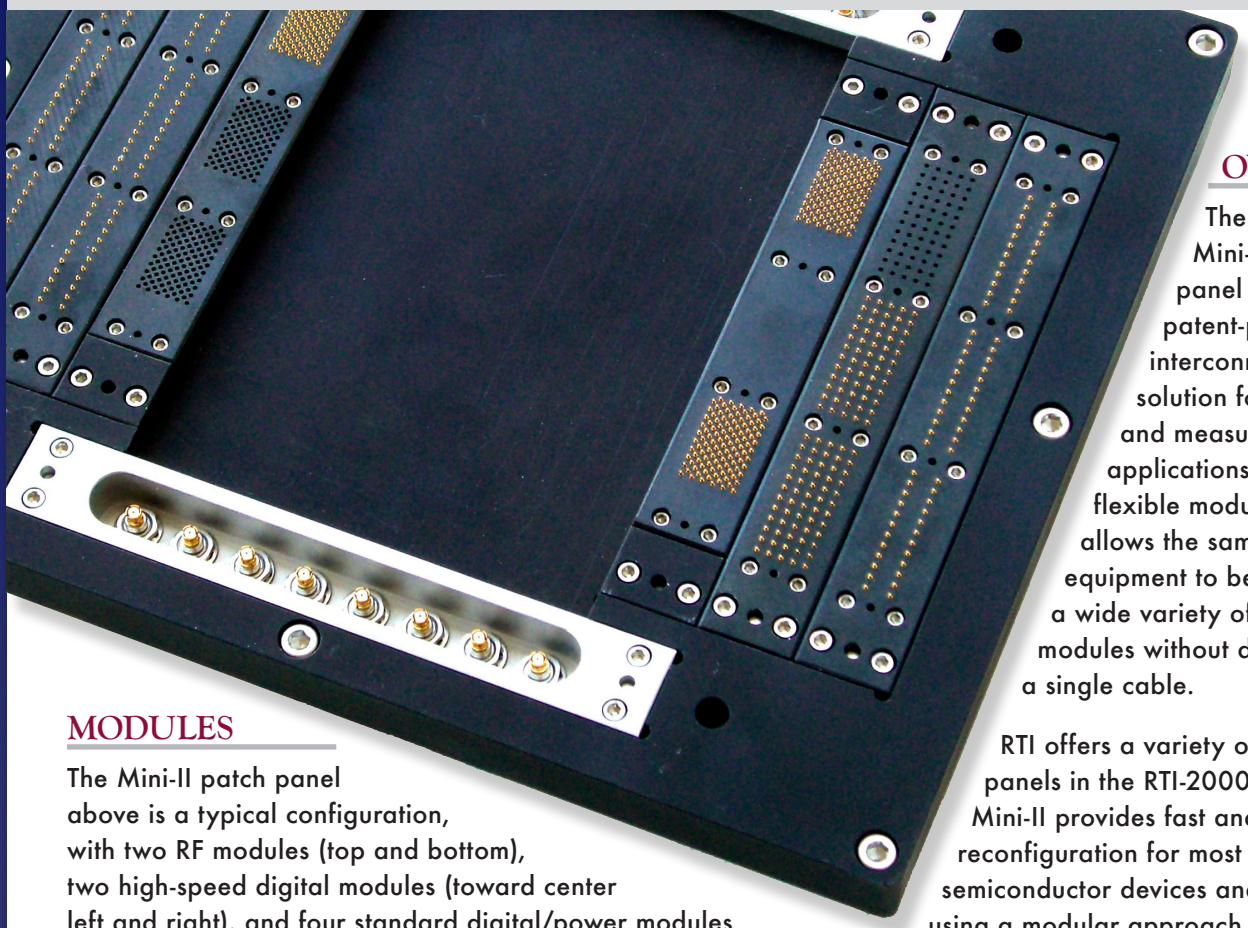
Results Through Innovation

Robson Technologies Inc.

RTI 2000 MINI-II PATCH PANELS

PRODUCT OVERVIEW



OVERVIEW

The RTI 2000 Mini-II patch panel is a unique patent-pending interconnect solution for test and measurement applications. Its highly flexible modular interface allows the same test equipment to be used for a wide variety of devices or modules without disconnecting a single cable.

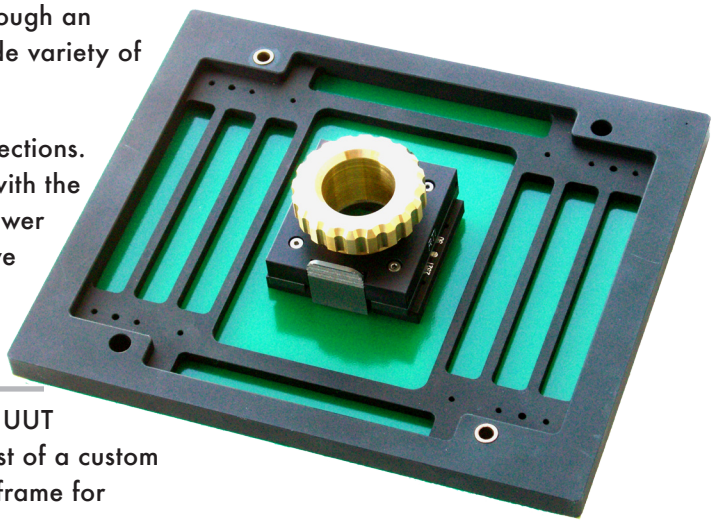
RTI offers a variety of patch panels in the RTI-2000 line. The Mini-II provides fast and reliable reconfiguration for most mixed-signal semiconductor devices and hybrids using a modular approach to mix RF, standard digital, high-speed digital, and power signals.

MODULES

The Mini-II patch panel above is a typical configuration, with two RF modules (top and bottom), two high-speed digital modules (toward center left and right), and four standard digital/power modules (toward edges left and right). Up to a total of eight modules can be used with a single base unit.

Cables attach to the bottom side of the patch panel, out of the way, and can be routed to the test equipment through an opening in the back side of the base. RTI offers a wide variety of connectors, including SCSI, VME, RJ11, and USB.

Digital and power modules can have up to 180 connections. Digital modules typically have up to 72 signal pins, with the rest of the pins connected to ground. High current power modules are also available. RF modules typically have one to eight high-frequency RF connectors.



PERFORMANCE BOARDS

Performance boards are configured for each type of UUT (unit under test), and are easy to replace. They consist of a custom printed circuit board (the DUT board) mounted on a frame for rigidity and plugged onto the patch panel base.

The example at right shows the rigid frame, DUT board, and a BGA socket. RTI can design your performance boards, or you can design them yourself.

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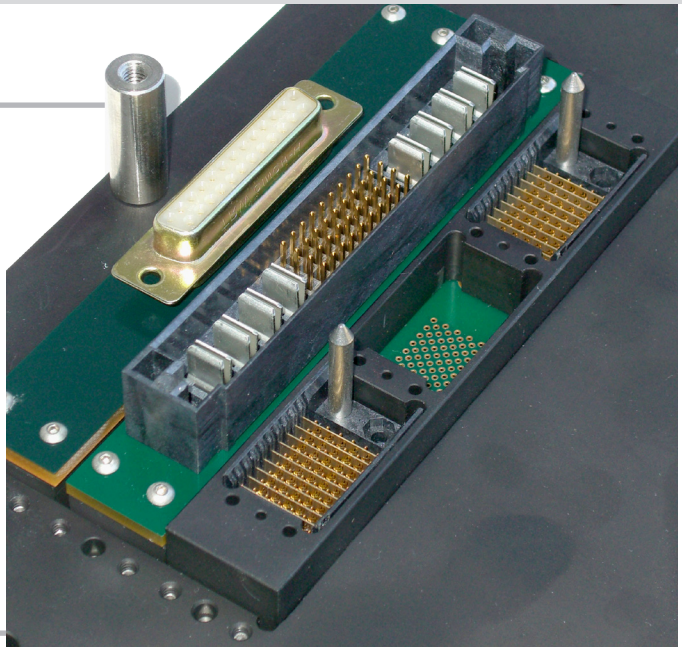
PATCH PANEL MODULES AND OPTIONS

RF MODULES

RF modules for the RTI 2000 Mini-II are available with from one to eight SMP female bulkhead to SMA female connectors. The mating unit can be either a male SMP unit mounted to the DUT board or a Personalization Fixture RF Module.

RF modules are aligned using two alignment pins and attached with four 4-40 socket-head screws.



DIGITAL MODULES (LOW-SPEED)

Standard digital patch panel modules are fully assembled, with connector and pogo pin block. Only the pogo pins required for connections will be loaded in the pogo pin block. The pogo pin block has three sections of 5 x 12 pins (60 pins) on 0.100 in centers. Dedicated ground pins are be used as required for performance.

The support block is anodized aluminum to prevent any flexing of the module. The interconnect is s rigid–flex PCB, gold plated (50 µin gold over 200 µin nickle), and controlled impedance when required. Maximum signal length is 1.5 inches.

Available Module Connectors:

- DB connectors 9, 15, 25, and 37
- SCSI
- Gore "Eye Opener" connector (48 and 96 signals)
- 96 Eurocard
- RTI high speed cable interface

Modules are aligned to the module support block using two alignment pins and held in place using four 4-40 socket head screws. The modules can be assembled from the topside of the patch panel.

DIGITAL MODULES (HIGH-PERFORMANCE)

The high speed Digital Module is designed to accept up to three Molex 74059 connectors. The connectors are pressed into a .125 thick gold plated PCB with plated through holes. High performance pogo pins contact the top of the PCB. Up to 60 signal pins per connector can be used for a total of 180 signal pins per module.

The anodized aluminum frame is designed to align and provide strain relief for the coaxial cable assembly.

Materials:

- Frame: Anodized aluminum
- PCB: FR4 .125 gold plated
- Pogo Pins: See detailed specifications

Connector:

- Molex 74057-1001 or 74059-1001
- Signal Pins: 10 rows x 6 pins = 60 total (Credence Diamond D10 system uses 48 signal pins per cable)

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