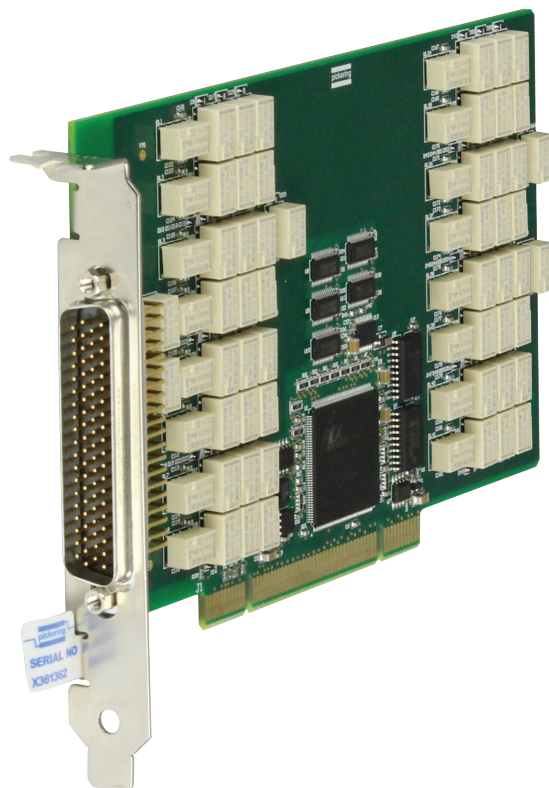


50-201 Ethernet/AFDX Fault Insertion Card

- Fault Insertion on 4 or 8 Channels of 2 Wire Connections
- Suited for Ethernet Fault Insertion
- Compatible With 1Gb Ethernet & AFDX
- Controlled Transmission Line Impedance
- Simple Insertion of Shorted Pair, Open and Battery/Ground Connection
- VISA, IVI & Kernel Drivers Supplied for Windows
- Supported by **eBIRST**
- 3 Year Warranty



The 50-201 is designed to simulate common faults on high speed two wire communication interfaces such as Ethernet.

The 50-201 supports 4 or 8 channels of two wire serial connections and can be used for simulating faults on Ethernet AFDX, 100BaseT and 1000BaseT interfaces. Any wire can be set to an open circuit, shorts can be applied across the wire pair, or to the adjacent pair. Fault connections can be made to one of four external signals via two fault buses, typically simulating connections to a supply voltage or ground.

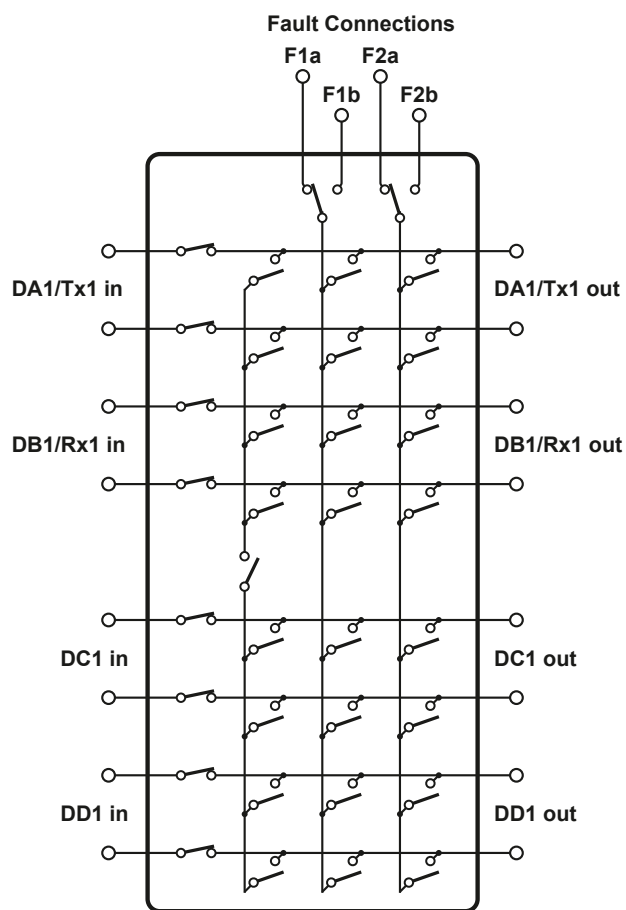
Each channel can support up to 0.3A and is rated to handle up to 100V between the wire pairs. The wire pairs have controlled transmission line impedance suited to most differential pair signalling systems, including 100BaseT, 1000BaseT, AFDX and automotive Ethernet systems.

Each fault bus is capable of carrying 2A allowing multiple channels to be connected to the same fault condition. Additionally, each fault bus features a changeover relay to allow the user to connect alternative fault conditions to the fault buses.

The front panel signal connector is an easy to use 78-way D-type which is fully supported by Pickering Interfaces range of connector accessories. Relays used are high quality EMR relays designed for telecommunications use with a long service life.

Supported by **eBIRST**

This product is supported by eBIRST which tests the switching system using an external tool. eBIRST provides a graphical output of its tests which includes an image showing the location of any defective relay. For more information on eBIRST see [93-000D.pdf](#)



50-201-004 2-Wire, 4-Channel Fault Insertion Switch Schematic Diagram

Data Path Specification

Configuration:	4 or 8 pairs of two wire connections designed for use on high speed differential serial interfaces including Ethernet 1000BaseT.
Faults Simulated:	Open on either wire or both, short between wires or to adjacent wire pair, short to one of four fault connections via two fault buses.
Differential Line Impedance:	100Ω
Voltage Rating:	100V
Current Rating:	0.3A
Max Hot Switch Power:	30W
Path Resistance:	<2Ω data input to output
Typical Bandwidth:	>400MHz differential
Typical Operate Time:	3.5ms

Fault Bus Specification

Configuration:	Two fault buses each with a changeover relay for selecting one of two fault conditions.
Voltage Rating:	100V
Current Rating:	2A
Max Hot Switch Power:	60W

Power Requirements

+3.3V	+5V	+12V	-12V
150mA	700mA	0	0

Physical Parameters

Physical Characteristics:	Single slot short PCI format
Signalling Environment:	33MHz, 32-bit, Universal (+3.3V & +5V).
Front Panel Connector:	78-way male D-Type

Relay Type

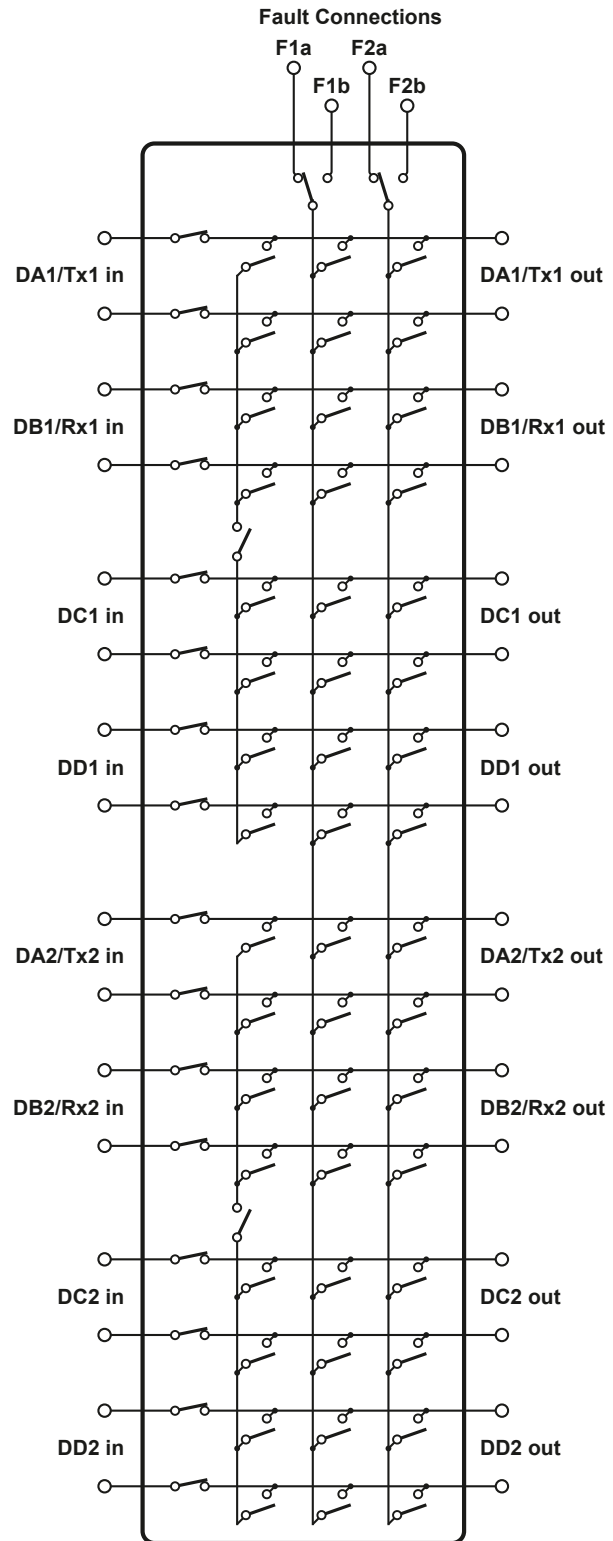
The 50-201 is fitted with high quality electro-mechanical relays, Palladium-Ruthenium Gold covered contacts. A **Spare Relay** is built onto the circuit board to facilitate easy maintenance with minimum downtime.

PCI Compliance

The 50-201 complies with the PCI Specification 2.0 (issued Feb 2004).

Safety & CE Compliance

All cards are fully CE compliant and meet applicable EU directives: Low-voltage safety EN61010-1:2001, EMC Immunity EN61000-6-1:2001, Emissions EN55011:1998.



50-201-008 2-Wire, 8-Channel Fault Insertion Switch Schematic Diagram

Product Order Codes

PCI Ethernet/AFDX Fault Insertion Switch, 4-Channel: 50-201-004

PCI Ethernet/AFDX Fault Insertion Switch, 8-Channel: 50-201-008

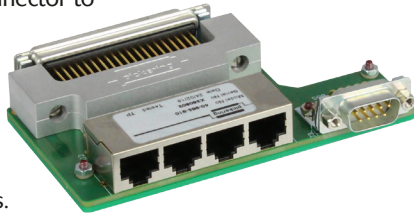
Accessories:

Interface Board for Gigabit Ethernet, 78-way D-type to 4xRJ45 & 9-way D-type fault connector 40-965-910

Interface Board for 100-BaseT, 78-way D-type to 8xRJ45 & 9-way D-type fault connector 40-965-911

Interface Boards

Pickering Interfaces is able to design and supply interface boards, such as the 40-965-910 and 40-965-911, that adapt the 78-way D-type connector to other connector types, including RJ45. For further information contact your local Pickering Interfaces sales representative with your requirements.



Mating Connectors & Cabling

For general purpose (non-differential) connection accessories for the 50-201 card please refer to the [90-006D](#) 78-way D-type connector data sheet where a complete list and documentation can be found for accessories, or refer to the Connection Solutions catalog.

Note: To use the 50-201 up to its full operating frequency, cables with twisted pairs must be used.

Support Products

eBIRST Switching System Test Tool

This product is supported by the eBIRST test tools which simplify the identification of failed relays, the required eBIRST tools are below. For more information see [eBIRST](#).

Product	Test Tool	Adapter
All Types	93-006-001	Not Required

Spare Relay Kits

Kits of replacement relays are available for the majority of Pickering's PXI switching products, simplifying servicing and reducing down-time.

Product	Relay Kit
All Types	91-100-001

For further assistance, please contact your local Pickering sales office.

Programming

Pickering provide kernel, IVI and VISA (NI and Agilent) drivers which are compatible with all Microsoft supported versions of Windows and popular older versions. The VISA driver is also compatible with Real-Time Operating Systems such as LabVIEW RT. For other RTOS support contact Pickering.

These drivers may be used with a variety of programming environments and applications including:

- **National Instruments** products (LabVIEW, LabWindows/CVI, Switch Executive, MAX, TestStand, etc.)
- **Microsoft Visual Studio** products (Visual Basic, Visual C++)
- **Agilent VEE**
- **Mathworks** Matlab
- **Marvin ATE Easy**
- **MTO Testsolutions** Tecap

Drivers for popular Linux distributions are available, other environments are also supported, please contact Pickering with specific enquiries.

Operating/Storage Conditions

Operating Conditions

Operating Temperature:	0°C to 55°C
Humidity:	Up to 90% non-condensing
Altitude:	5000m

Storage and Transport Conditions

Storage Temperature:	-20°C to +75°C
Humidity:	Up to 90% non-condensing
Altitude:	15000m

需要详细资料? 请现在联系我们: sales@hkaco.com

北京: 010-5781 5068 上海: 021-6728 3703
广州: 020-3874 3032 西安: 029-8187 3816

HongKe

虹科
测试测量与控制 | 培训

广州虹科电子科技有限公司
华南理工大学国家大学科技园



hkaco.com



pickeringtest.com