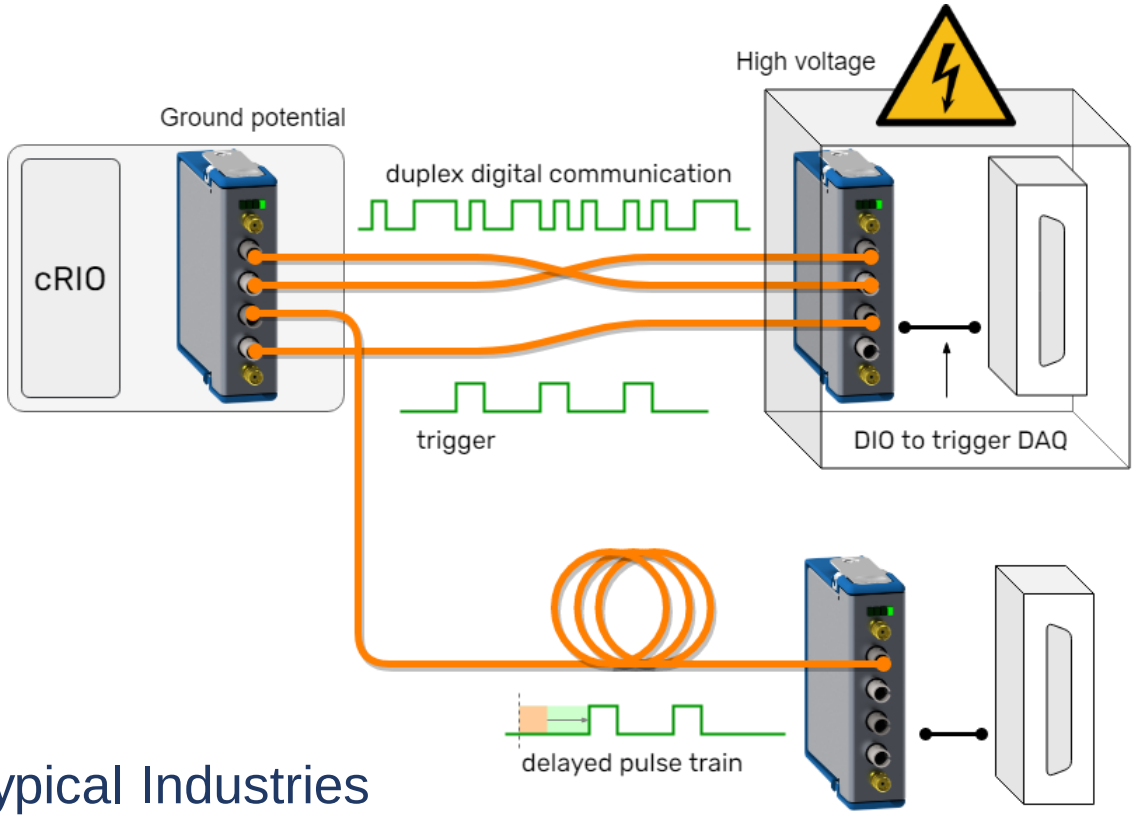
AT-2501 Fibre Trigger Module

The AT-2501 Optical Trigger Module for CompactRIO has been developed for distributing optical trigger and communication signals between cRIO chassis and other instruments. It solves problems such as:

- Synchronisation of cRIO chassis
- Elimination of digital ground loops
- Isolation of cRIO chassis at different potentials
- Generation of delays and pulse trains with simple coding



Typical Industries

- Scientific research labs
- Large physics facilities
- Energy/electrical network infrastructure
- Test and measurement labs
- Medical physics installations
- Materials testing labs

AT-2501 Specifications

Inputs
· TTL (50 Ohm)
· Optical x2 - 820 nm
· cRIO FPGA (via DIO)

Outputs
· TTL (can drive 50 Ohm)
· Optical x2 - 820 nm
· cRIO FPGA (via DIO)

Maximum Symbol Rate
· 20 MBd (FPGA-controlled)

Pulse Parameters
· Width: 10 ns min, 42s max
· Width step size: 10 ns
· Delay: 10 ns min, 42s max
· Delay step size: 10 ns
· Jitter: 2.5 ns rms
· Train: 2 to 65534 pulses

Fibre Receiver
· Sensitivity better than -30 dBm

Fibre Transmitter
· 200 µm fibre typ. -6.4 dBm
· OM2 fibre (50 µm) typ. -14 dBm

Polarity
· Rising or falling edge triggered

Electrical connectors
· SMA

Fibre connectors
· ST

Programming
· LabVIEW libraries for FPGA containing both high and low-level functions

ANGARA Technology

ANGARA Technology produces high performance control and automation systems for a variety of scientific and engineering industries.
The company was created in 2019 by former CERN employees with more than 50 years of combined engineering and science experience.

ANGARA Technology Sàrl
Rampe de Choully 2
CH-1242 Satigny
SUISSE

info@angaratech.ch
www.angaratech.ch
+41 78 694 64 57

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