

Optical Module Trigger



AI Overview

An optical trigger module detects light pulses and converts them into electrical signals to trigger cameras, instruments, or electronic systems. How Optical Trigger Modules Work Optical trigger modules use photodiodes or fiber optic receivers to detect pulsed light from a source such as a laser flash, pick-off from a main laser beam, or other pulsed light sources. When the module senses a light pulse, it generates an electrical output signal that can trigger a camera, oscilloscope, or other measurement devices. The detection can be direct or indirect, depending on the setup. Types and Interfaces Camera Optical Triggers: Devices like the SP90408 use a silicon photodiode sensor and come with multiple mounting adapters (C-Mount, 1/4-20, M6-1.0, or through-hole) to attach to cameras or optical setups. Fiber Optic Trigger Modules: Modules such as the AT-2501-M distribute optical trigger signals between systems like CompactRIO chassis and other instruments, providing isolation and eliminating ground loops. Oscilloscope Optical Triggers: Some optical triggers interface directly with oscilloscopes, converting light pulses into 5V logic signals and providing visual feedback via LEDs for signal monitoring. Applications Scientific Research: Synchronizing cameras or instruments in physics experiments or laser diagnostics. Industrial and Test Labs: Triggering measurement devices while maintaining electrical isolation to prevent interference. Medical Physics and Energy Facilities: Coordinating high-speed measurements or monitoring pulsed systems. Advantages Electrical Isolation: Optical triggers prevent unwanted electrical interference and ground loops. High-Speed Response: Capable of detecting very short light pulses for precise timing. Versatile Mounting: Many modules offer multiple adapters for flexible integration into experimental setups. Visual Feedback: Some modules provide LED indicators to confirm trigger detection and signal integrity. Optical trigger modules are essential in setups where precise timing and electrical i...

Article Content

HARDWARE TRIGGERING OF OPTICAL PXI MODULES

This application note explains how to make the best use of hardware triggering capability present in many of Coherent Solutions' PXIe photonics modules and assumes the reader has some familiarity

Fiber-optic controlled high voltage trigger generator for a ten-stage ...

Request PDF | Fiber-optic controlled high voltage trigger generator for a ten-stage linear transformer driver module | Synchronously triggering is one of the challenges in building large-scale ...

SCR Trigger PCB Assy BT414

The Trigger PCB Assy BT414 is a ready-to-connection assembly with signal input for optical fibre cable receiver device specially for optical control of a single thyristor with up to 25m fibre-optic cable

Relay Control Module, Optical coupler Isolated, H/L

The module uses the Songle relay for control, AC voltage max at 250V, AC current max at 10A, DC voltage 30V DC current maximum 10A; Bi-directional optical

I/O Control: Hardware Triggering for Machine Vision

Industrial machine vision cameras are designed for precision, speed, and reliability. To maximize performance, the external triggering system must be

Optical Triggering Devices

Optical Triggering Devices - Automotive_Ignition_Systems So far, you've learned about two electronic triggering devices that use the forces of electromagnetism to signal the ignition module as to the

Fiber-optic controlled high voltage trigger generator for a ten-stage ...

Synchronously triggering is one of the challenges in building large-scale linear transformer drivers (LTD). To obtain multiple high voltage trigger pulses with short rise time and low jitter, a

Understanding Optical Modules: Types and

Explore the essential principles and types of optical modules for fiber optic communication systems.

Triggering Light Triggered Thyristors (LTTs)

The ceramic disc facilitates an easy way of triggering by using optical fibers to avoid insulation problems between the load and trigger units. This disc increases reliability by reducing high voltage electronic

Distributor Trigger Style

Definition & Description The trigger style is the way the distributor signals the Ignition Coil to fire. An optical trigger is one style. (The Mallory Unilite is a

The Most Comprehensive Guide Of Optical Modules

Explore the ultimate guide to optical modules. Learn types, functions, performance metrics & how to choose the right module for your fiber network.

Optical Trigger Module circuit | Next Electronics

Description: This optical trigger is a general-purpose module designed for use with standard 3mm package infrared diode emitters and corresponding matched

Near-Infrared Electro-Optics Modulation Coding Technology Using

In this paper we demonstrate a new technology in which we use the spatial optical modulation with trigger pulse width and pulse width modulation of light source (LED,LD) to build the near-infrared

How to Use Optical Sensor: Examples, Pinouts, and Specs

Learn how to use the Optical Sensor with detailed documentation, including pinouts, usage guides, and example projects. Perfect for students, hobbyists, and

Products

AT-2501 Optical Trigger Distribution Module Please contact us for specification options and ordering information. The AT-2501 is a CompactRIO module for distributing electrical and optical trigger

Open Source Optical Flash Trigger That Works with Any

Open Source Optical Flash Trigger That Works with Any Camera Normally, you can't use a camera without a hot shoe with an external flash unit.

Backup_of_CAT

High-Voltage Module with fibre-optic input for triggering a single thyristor The AT 416 EZYTrigger converts high-voltage thyristors (up to 8KV) into optically controlled devices The unit triggers with

Training an Optical Trigger Sensor

No Trigger The optical triggers require a high enough contrast difference between the on-the-label and off-the-label positions. white label on a white liner is thus problematic for a contrast sensor. through

Camera Trigger Optical Sensor | Optical Camera

The Optical Camera Trigger is an optical sensor that detects pulsed light sources and generates outputs to trigger a camera. The front aperture of the Optical

AT-2501-M product | Angara Technology

The AT 2501 Fibre Trigger Module for CompactRIO was developed to distribute optical trigger and communication signals between the cRIO chassis and other instruments.

SP90408 Camera Trigger

Camera Trigger, Silicon Photodiode The SP90408 optical camera trigger is a silicon photodiode sensor that detects pulsed light sources and generates outputs to

Optical Trigger

The Optical Monitor Board is an optically transparent 4-channel repeater. It converts digital light signals into electrical 5V logic level, and additionally visualizes by LEDs and parallel fiber optic channels.

Optical module design resources | TI

View the TI Optical module block diagram, product recommendations, reference designs and start designing.

SCR Thyristor Trigger Units

Power factor correction Trigger control for single SCR with μ Controller or logical electronic circuits Optical control of a single thyristor with up to 25m fibre-optic cable Optical control of any thyristor

SCR Thyristor Trigger Units

Are you interested in testing these trigger modules on your electronic application? Please contact us and quote the number of desired type of modules and we will send you an introductory price for this test

Contact Us

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