The future is bright

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Modulo Octo

Multi-Point MCRQ Laser Ultrasonic Receiver

Sound & bright

MULTI-POINT MCRQ

Multi-Point Laser Interferometry

The Modulo Octo extends the benefits of MCRQ technology to a flexible, multi-point system optimized for more advanced non-destructive testing applications. With the option to either route **eight *closely-spaced* detection points** through a single optical head for rapid scanning, synthetic aperture focusing or power spreading, or to use **eight independent optical heads** to allow for simultaneous measurements from different angles or multiple points widely spaced across a sample, the Octo platform allows us to tailor your instrument to complex and specific testing scenarios.

The Modulo Octo's connects directly to a computer, streamlining the measurement process. No external oscilloscope or A/D card is required, making it a versatile and efficient solution for ultrasonic measurements, maintains precision and ease of use.

Multi-Detector Technology

The Modulo Octo is based on a streamlined variant of our proprietary **multi-channel random quadrature technology (MCRQ)** and features the same benefits as our field-proven Quartet:

- Multi-mode fiber design for large collection efficiency on any type of surface.
- Detector array and parallel processing for efficient processing of multi-speckled light.
- Patented signal processing based on 'random quadrature' demodulation scheme.

Analog Specs:

- Internal laser wavelength of 532nm or 1064nm
- Laser power: 500mW to 3W
- Detection bandwidth: up to 60MHz

Digital Specs:

- 14-bit resolution and 125 Ms/S sampling rate
- Continuous acquisition and recording of 8 signals at kHz repetition rate.

Powerful & Flexible Optical Configuration

8 simultaneous, independent measurements powered by our robust and highly sensitive Multi-Channel Random Quadrature (MCRQ) technology.

Wide variety of measurement configurations.

- **Single head** with 2-inch light collection aperture and multiple, closely-spaced detection points (1-5mm)
  - ✓ 2x4 layout
  - ✓ Custom design available
- **Multiple single-point heads** for wider spacing
  - ✓ Widely spaced measurement points for **broader measurement range.**
  - ✓ Measure at different angles to extract **3D component.**

Tailored instrument.

- **Less localized heating** as laser power is distributed among multiple measurement points.
- **Faster scanning** (x8).
- Enables **localization of transient events** as in acoustic emission monitoring.
- **Improving Detection Selectivity Through Synthetic Aperture Focusing Techniques**