AUREA TECHNOLOGY



ECHOXEA_QBR

High-Resolution Quantum Backscatter Reflectometry

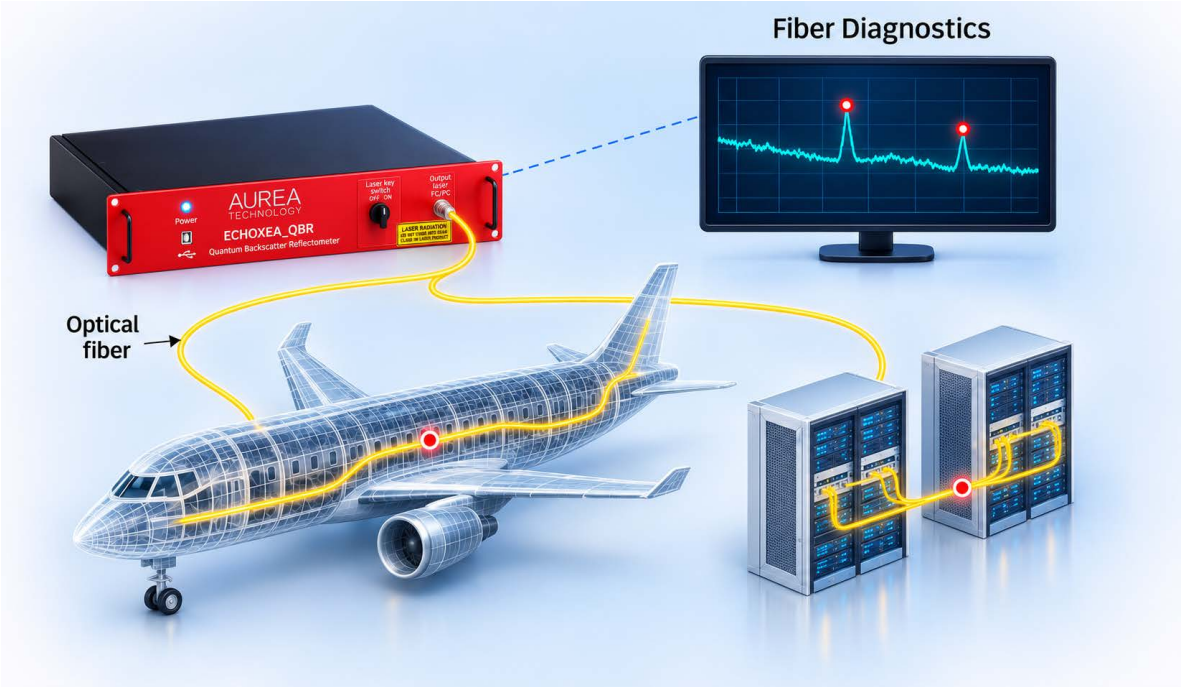
Reveal Hidden Faults. Pinpoint Losses. Ensure Fiber Integrity.

AUREA Technology's **ECHOXEA_QBR** helps engineers **pinpoint fiber faults, characterize optical losses, and assess fiber integrity** across critical infrastructure.

Combining **picosecond laser pulses** with **single-photon detection**, it delivers high-resolution diagnostics that go **beyond conventional fiber sensing**, supporting precise testing across demanding industries and applications.

Precision Diagnostics Across Critical Fiber Networks

- ✓ **Aerospace & Space**
  Inspect optical fiber harnesses and locate connection faults.
- ✓ **Telecom & Datacom**
  Identify reflections and losses across optical links.
- ✓ **Fiber-Optic Assembly**
  Characterize connectors, splices, and short fiber assemblies.



Designed for advanced optical fiber sensing, including plastic optical fibers (POF) and ultra-short fiber networks.

Engineered for Demanding Optical Analysis

PRECISION
Centimeter-scale resolution

SENSITIVITY
Single-photon detection

VERSATILITY
Built for diverse applications

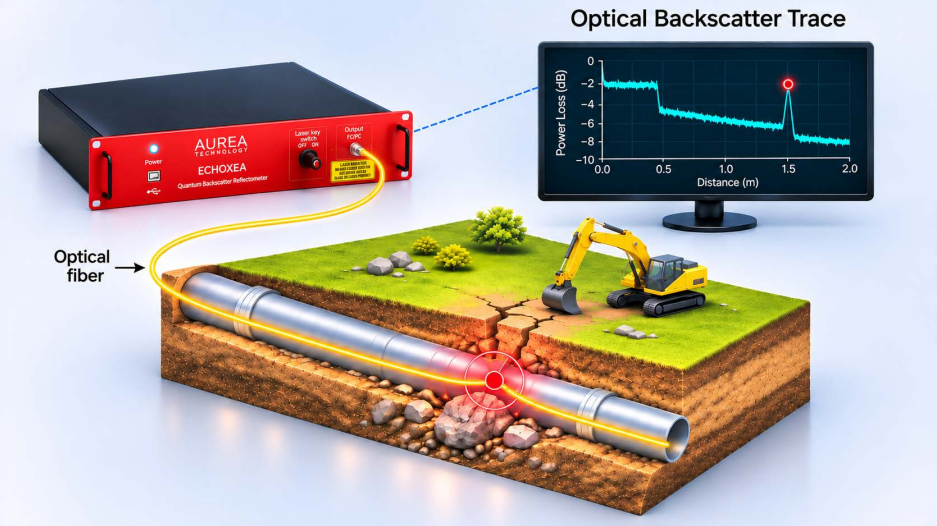
RoHS compliant

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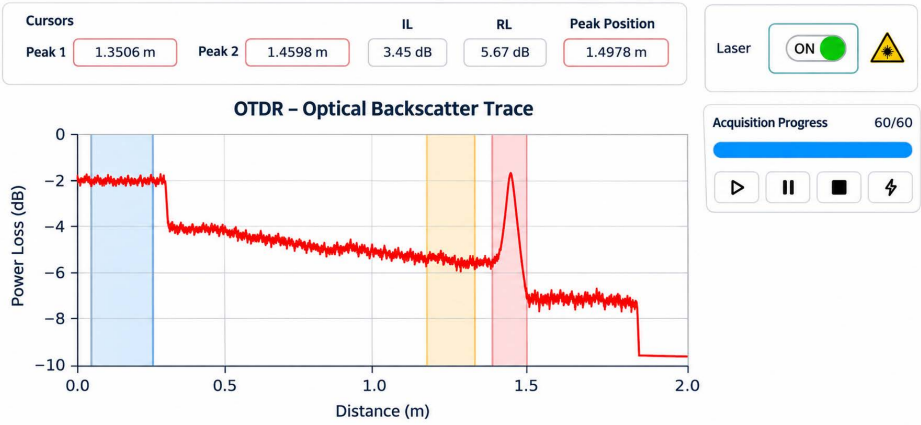
Fiber Diagnostics Across Vital Infrastructure

- ✓ **Inspect** fiber routes along pipelines and infrastructure.
- ✓ **Locate** reflections, losses, and discontinuities.
- ✓ **Support** targeted inspection and maintenance.



Transform Backscatter into Actionable Insight

1. **Visualize Measurement Data**
   Explore detailed backscatter traces through an intuitive GUI.
2. **Streamline Testing Workflows**
   Review results and automate measurements with Python/C++ APIs.



Technical Specifications

Spatial Resolution [1]	2 to 10 cm
Measurement Range	Up to 500 m
Dynamic Range [2]	16 to 23 dB
Measurement Time	20 to 120 seconds
Sampling Interval	< 1.33 mm
Center Wavelength [3]	1310 nm | 1550 nm
Pulse Repetition Rate	3.5 kHz to 500 kHz
Peak Optical Output Power [4]	< 10 mW
Optical Connectors	FC/PC | FC/APC | Customized
Fiber Compatibility [5]	Single-Mode (SMF) & Multi-Mode (MMF)
Software & Control	Python, C++ APIs | Dedicated GUI
Form Factor	19-inch, 2U Rackmount

[1] Typical spatial event resolution; configuration-dependent.
[2] Dynamic range varies with fiber configuration and measurement conditions.
[3] Factory-configured wavelength; specify 1310 nm or 1550 nm when ordering.
[4] Peak optical output power is adjustable via software.
[5] Factory-configured optical fiber type; specify when ordering. Compatible with either 9/125 µm (SMF), 50/125 µm (MMF), or 105/125 µm (MMF) fibers.

Let's Discuss Your Fiber Testing Needs Today

Explore ECHOXEA_QBR configurations for your next fiber testing application.

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