AUREA TECHNOLOGY



ECHOXEA_DTS

High-Resolution Distributed Temperature Sensing

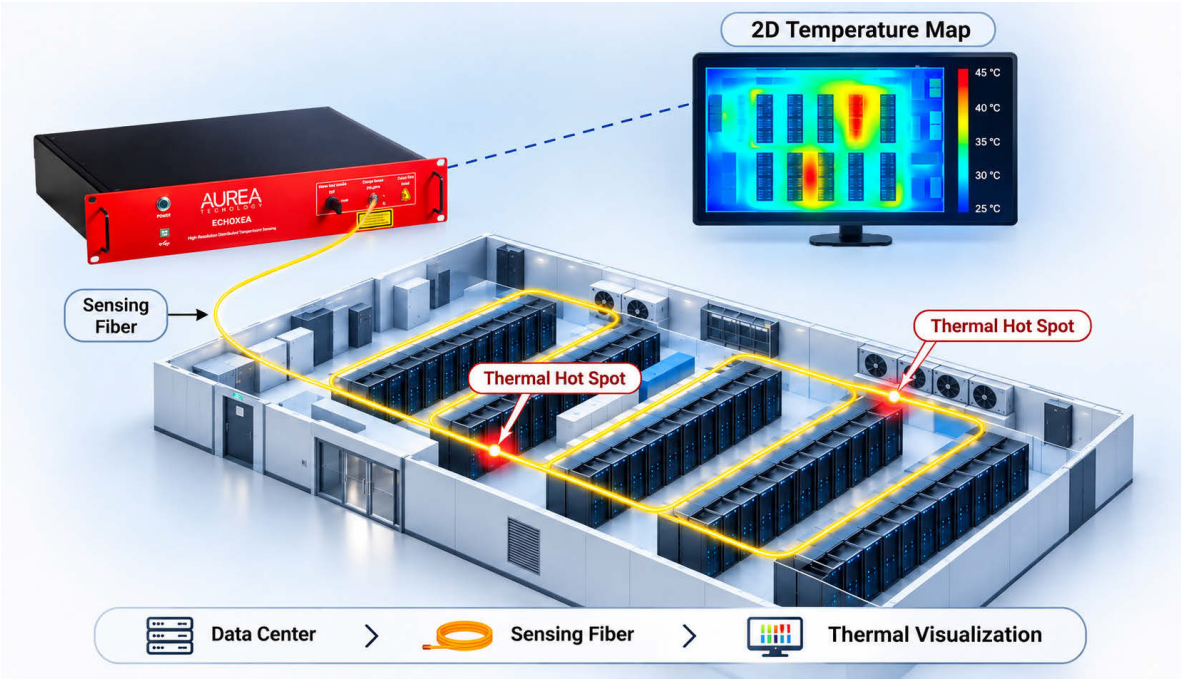
Detect Hot Spots. Optimize Cooling. Protect Critical Infrastructure.

AUREA Technology's **ECHOXEA_DTS** enables data center operators to **identify localized hot spots, detect thermal anomalies early, and improve cooling efficiency** across critical infrastructure.

Powered by Raman backscatter sensing and **single-photon detection**, it delivers **high-resolution, centimeter-scale temperature profiles** along optical fibers, reducing reliance on multiple discrete sensors while supporting **proactive thermal management** and straightforward integration.

Precision Thermal Monitoring Across Critical Infrastructure

- ✓ **Data Centers**
  Monitor server rack and cooling temperatures.
- ✓ **Industrial Systems**
  Detect equipment and process temperature changes.
- ✓ **Energy Infrastructure**
  Assess cable and critical asset temperatures.



Designed for evolving data center environments, including high-density and AI-driven computing infrastructure.

Engineered for Next-Gen High-Density Thermal Management

PRECISION
Centimeter-scale resolution

INTEGRATION
Designed for simple deployment

EFFICIENCY
Reduce energy & operating costs

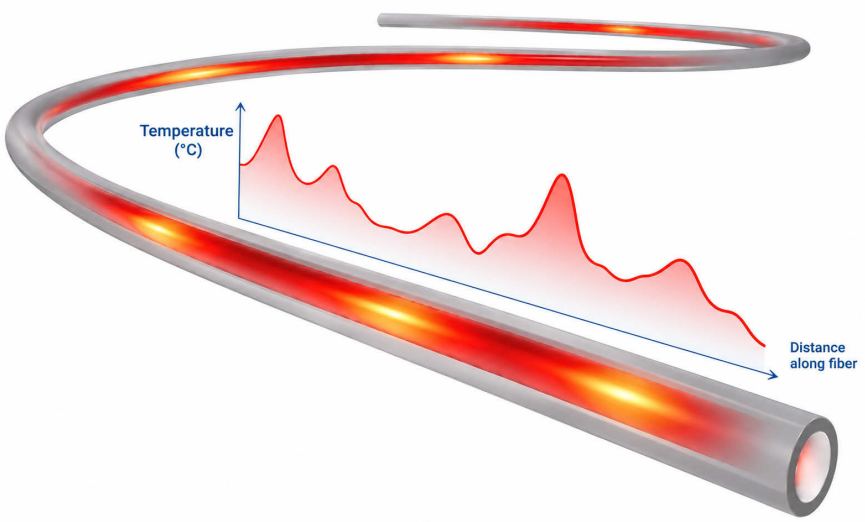
RoHS compliant

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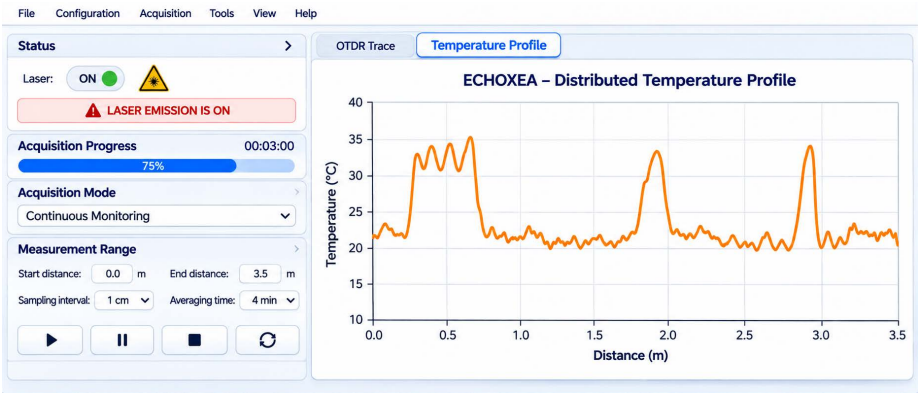
Seamless Thermal Monitoring Across Data Center Infrastructure

- ✓ **Deploy** sensing fibers into new or existing installations.
- ✓ **Connect** through straightforward optical interfaces.
- ✓ **Anticipate** thermal risks to support preventive maintenance and faster intervention.



Transform Temperature Data into Actionable Insight

1. **Visualize Thermal Conditions**
   Pinpoint temperature variations through intuitive 2D graphical displays.
2. **Streamline Monitoring Workflows**
   Review measurements and automate testing through Python/C++ APIs.



Technical Specifications

Spatial Resolution [1]	5 cm
Measurement Range	Up to 500 m
Temperature Accuracy	± 3 °C
Temperature Update Time	3 to 10 minutes
Max. Measurement Temperature	180 °C
Sampling Interval	Down to 1.33 mm
Center Wavelength	1540 nm
Peak Power [2]	< 20 mW
Optical Connectors	FC/PC | FC/APC | Customized
Fiber Compatibility	9/125 µm Single-Mode (SMF)
Software & Control	Python, C++ APIs | Dedicated GUI
Form Factor	19-inch, 2U Rackmount

[1] Typical spatial resolution; configuration-dependent.
[2] Peak optical power is user-adjustable via software to avoid non-linear fiber effects.

Let's Discuss Your Thermal Sensing Needs Today

Explore ECHOXEA_DTS options for your next thermal management project.

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