

QMini™ LDV Station: High Performance LDV Made Simple and Affordable

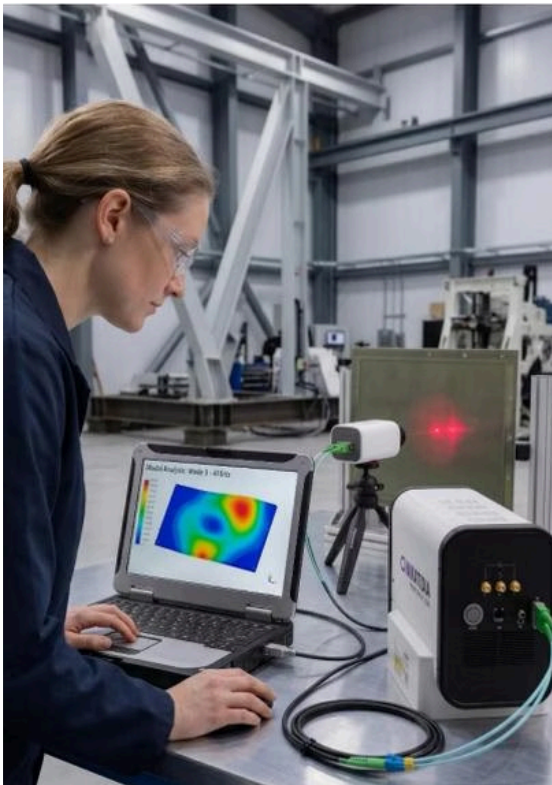
Versatile Single-Beam LDV Station for High-Speed, High-Frequency and Long-Range Measurements

What is QMini™?

A practical LDV readout station designed for engineers and test teams who need a simple, high-performance way to capture vibration data from a single location on a structure or component.

Ideal For

- Single-point vibration measurement
- Bench testing and lab setups
- Educational and R&D environments
- Cost-sensitive industrial diagnostics
- First-step adoption of non-contact vibration measurement



QMini™ is Ommatidia's single-beam laser vibrometer readout station for single-point measurement setups — delivering **professional-grade vibration data** without the complexity or cost of a full multi-beam system.

Together with SpeedSync™ it creates a modular single-beam system. Using different SpeedSync™ units, it allows covering **ranges from <1m to 300m**.

QMini™ can be expanded for **multi-axis velocity measurements** by daisy chaining the units, producing synchronous acquisition from multiple directions for 3D vector reconstruction. Additionally, it can interface with Q2 to add extra analog/optical channels to a setup.

The QMini™ station has an analog input and output, and a digital output that can be used to **interface with traditional data acquisition systems**.

Non-Contact Measurement

No mass loading, no wiring, no surface preparation required.

Fast Setup

Deploy quickly in lab, field, or production environments.

High Sensitivity

Capture fine vibration detail at a single critical measurement point.



48 m/s

Max Velocity

Single-point velocity capability

62 MHz

Frequency Range

Bandwidth for high-frequency capture

300 m

Measurement Range

Long-range capability with SpeedSync™

QMini™'s Strengths & Scalability

Start With QMini™

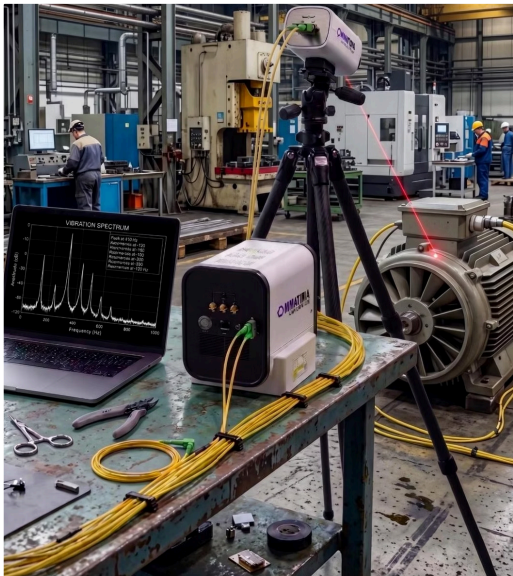
- **Single-point validation**
Confirm performance at one location.
- **Proof-of-concept testing**
Validate ideas before scaling up.
- **Educational use**
Accessible LDV for academic labs.
- **Field vibration diagnostics**
On-site machine and structure checks.

Grow Into Advanced Solutions

- **Multi-point vibrometry**
Scale to scanning and multi-beam setups.
- **Operational modal analysis**
Measure dynamics in real conditions.
- **Deflection measurement**
Capture deformation & deflection shapes.
- **3D metrology & vibration**
Combine geometry and dynamics.

Ideal Applications

Many users are interested in laser vibrometry, but the jump to a more advanced multi-beam system can feel too large at the beginning. **QMini™ closes that gap without compromises.**



i QMini™ is a first step into the Ommatidia ecosystem. Modular hardware and software compatibility let your setup grow with your needs.



Component Vibration Testing

Measure the response of a single critical point on a part, assembly, or prototype.



Modal Testing Support

Capture vibration response at selected points during experimental modal testing campaigns.



Machine Diagnostics

Monitor vibration on motors, housings, fixtures, or rotating systems without contact.



Academic & Teaching Labs

Introduce laser vibrometry in a more accessible and budget-conscious educational format.



R&D and Validation

Quickly test hypotheses and compare structural responses across design iterations.



Entry-Level Non-Contact Sensing


Replace or complement contact sensors where wiring, mass loading, or access is a limitation.

Technical Datasheet

Parameter	Value
Measurement Principle	Absolute interferometry
Bandwidth	62 MHz
Max In-Band Velocity	± 48 m/s
Distance Range	1–300 m
Optical Focus	Manual/Fixed (*)
Focus Range	1.0 to ∞ (*)
Peak Power Consumption	40 W
Network Interfaces	Gigabit Ethernet
Synchronization	GPS Antenna, 1 Analog In, 1 Analog Out, 1 Digital Out
Mount (Head)	Photography tripod standard 3/8-16 UNC

Parameter	Value
Dimensions (w/o battery)	Station: 220×220×180 mm / Head: 220×50×60 mm
Weight (w/o battery)	~4 kg
Pointing Aid	RGB Camera, Full HD
Atmospheric Compensation	Pressure, Temperature, Humidity
Temperature Range	0–40°C
Environmental Protection	IP54
Wavelength	1550 nm
Eye Safety Class	1M
Software	Ommatidia Atelier (capture) / OmmH5view (processing)
Data Format	HDF5, UFF — exportable to other vibration SW platforms

(*) Depending on SpeedSync™ head

 Ready to get started? QMini™ delivers professional laser Doppler vibrometry performance in a compact, affordable, and easy-to-deploy package — the ideal entry point into non-contact vibration measurement with Ommatidia.

Get in touch

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