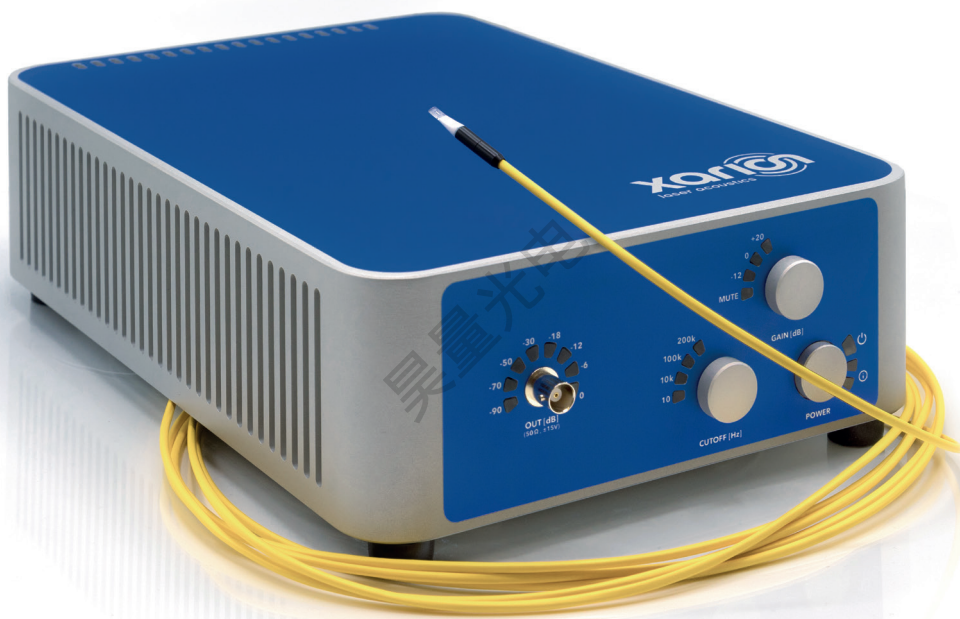


# Eta250 Ultra

optical microphone



moving sounds without moving parts

**xarion**  
laser acoustics

## Acoustic

|  |  |
|--|--|
| Transducer type                        | Membrane-free, optical                     |
| Frequency range                        | 10 Hz - 1 MHz                              |
| Dynamic range                          | 100 dB                                     |
| Self-noise                             | 50 $\mu$ Pa (BW: 1 Hz, measured @ 1 kHz)   |
| Self-noise, full bandwidth             | 50 mPa                                     |
| Max. sound pressure for THD < 3%       | 400 Pa                                     |
| Max. sound pressure level for THD < 3% | 146 dB rel. 20 $\mu$ Pa                    |
| Damage threshold                       | > 194 dB rel. 20 $\mu$ Pa                  |
| Sensitivity                            | 10 mV/Pa @ 1 kHz (0 dB gain, 50 $\Omega$ ) |
| Polar pattern                          | Omnidirectional                            |
| Sound field optimization               | Free field and pressure field              |
| Calibration                            | Yes, standard calibrators (with adapter)   |

## General

|   |   |
|---|---|
| Sensor output                           | $\pm$ 15 V (high impedance), $\pm$ 7.5 V (50 $\Omega$ ) |
| Sensor output voltage connector         | BNC   |
| Size of sensor head                     | diameter: 5 mm; length: 38 mm                           |
| Weight of sensor head                   | ca. 10 g  |
| Fiber cable length                      | 5 m (other upon request)                                |
| Size of control unit                    | 220 mm x 334 mm; height: 93 mm                          |
| Weight of control unit                  | 8 kg  |
| Power supply (signal conditioning unit) | 120/230 V $\pm$ 5%; 50/60 Hz                            |
| Power consumption                       | < 50 W  |
| Operating temperature of sensor head    | -20°C to 100°C (0°F to 210°F)                           |