



Get a picture of the future

It's here. The future of sensors.

Observing quantum effects usually requires large, cooled and expensive setups. With the microwave-free quantum magnetometer, Quantum Technologies has achieved a real coup in collaboration with duotec. Our magnetic field camera is **small, coolingless, cost-effective** and nanometers-length more precise than anything previously known.

Precise with high resolution — QT-MI1080 magnetic field camera

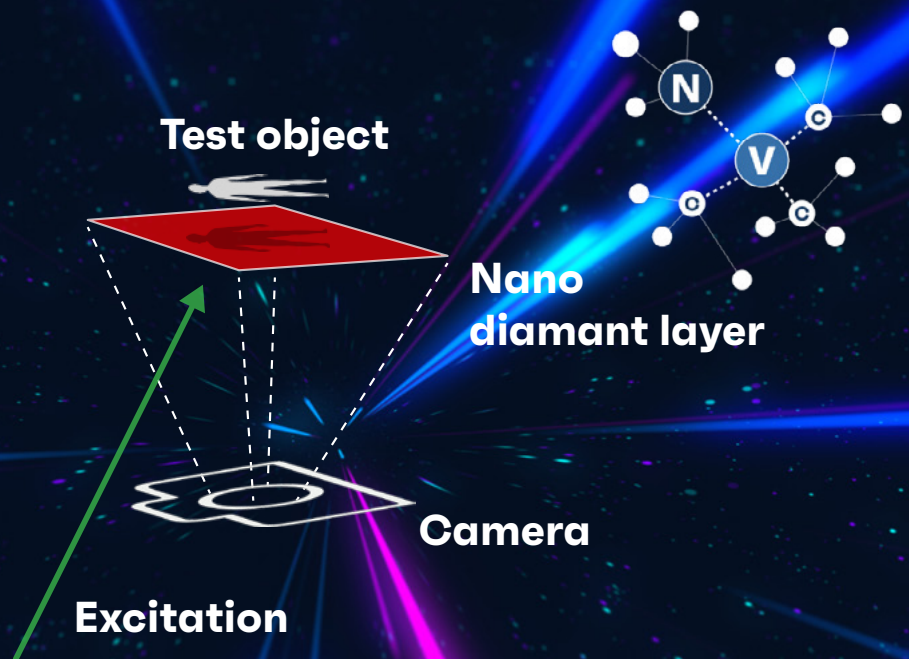
It is particularly well suited for:

- High-resolution measurements of magnetic field distribution [Full HD resolution]
- Non-destructive material testing by measuring the magnetization of components
- Magnetic field camera for measuring dynamic magnetization processes [140 fps]
- Inline monitoring of metallic and magnetic parts

This is how the future works:

Our quantum sensor measures magnetic fields purely optically.

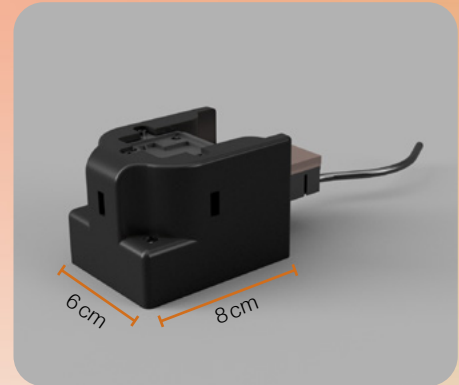
The quantum sensor uses the magnetic field dependence of the spin states of NV centers in diamond and their fluorescence.





QT-MI1080 – Megapixel magnetic imaging with Nanodiamonds

- The thin layer of nanodiamonds allows direct optical measurement of the magnetization
- Direct measurement of magnetic flux density with full HD resolution [1920 × 1080 Pixel]
- Filming of magnetization processes with up to 140 Hz
- Small design for integration into existing systems or for manual operation
- Galvanically isolated, non-magnetic and non-conductive sensor layer



Application – Non-destructive material testing



18 mm



- Direct measurement of the entire magnetic field distribution in one plane allows lightning-fast testing of magnetizable components
- Due to the extremely high pixel count, even the smallest faults can be detected
- Our metallic figure got a stab through the heart (ø 0.8 mm) – clearly visible in the magnetic field distribution

Technical data

- Magnetic measuring range: $|B| = 0 - 50$ mT
- Isotropic measurement of $|B|$
- Sensor area: 32×22 mm²
- Number of pixels: 1920×1080 [Full HD]
- Effective pixel size: $20 \mu\text{m}$
- Update frequency: up to 140 Hz
- Minimum sensor distance: < 1 mm

