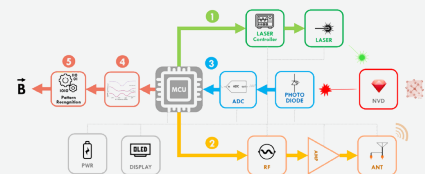
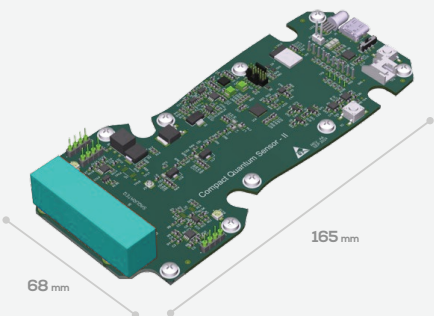


CQS-II

COMPACT QUANTUM SENSOR

QUANTUM MAGNETOMETER

CQS-II is an enhanced version of the prototype quantum magnetometer, CQS, designed and developed by Morgan State University, Department of Physics. This magnetometer uses the principles of Nitrogen Vacancy Diamond based ODMR (Optically Detected Magnetic Resonance) to precisely measure a spatial magnetic field (both direction and magnitude) via a single sensing block.



GENERAL	Magnetometer Type	NV-Diamond
	Operating Principle	Optically Detected Magnetic Resonance (ODMR)
MAGNETIC FIELD MEASUREMENT	Sensitivity	1 nT/√Hz vectorial magnetic field output
	Dynamic Range	10 mT
	Bandwidth	10 Hz
	Postprocessing	Custom Machine Learning Model
	Measurement Modes	DC/AC field measurement
OPTICAL SYSTEM	Excitation Laser	532 nm
	Optical Collection	Photo Diode
	Photo Diode Signal Processing	Trans-Impedance Amplifier
MICROWAVE SYSTEM	Microwave Frequency	2.87 GHz
	Microwave Power	18 dBm
	Resonance Linewidth	<1 MHz
ELECTRICAL	Power Supply	5V USB-C
	Battery Type	3.7V Li-Po
	Battery Life	6h
	Power Consumption	<1000 mW during active measurement
CONTROL & INTERFACE	Readout Method	Photoluminescence
	Data Acquisition Rate	1 kHz
	Communication Interface	USB, Bluetooth
	Compatible Platforms	Windows/Linux/Mac
MECHANICAL	Dimensions (LxWxH)	165x68x32 mm
	Weight	280 g
	Casing Material	ABS
SOFTWARE	Signal Processing Methods	FFT, Lock-in Amplification, AI-based
	API Availability	Yes
	Data Logging Format	CSV/EDF/MAT



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