SENIS provides advanced sensors and instruments for magnetic field and electric current measurements.

Our solutions and services help our clients in the test & measurements, automotive, consumer electronics, energy and transportation industries to create high performance, robust and reliable products.

SENIS® is registered trademark.
OUR VALUE

✓ The only accurate, high-resolution 3-axis magnetic field measurement in a single point

✓ Unique product portfolio:
  ✓ 3 sensor chip families
  ✓ 10+ Magnetometers, 5+ Mappers, 6+ Current Transducers

✓ In-house R&D and operations:
  ✓ Customized projects and flexible solutions
  ✓ Fast and precise response to customer inquiries
  ✓ Highest quality and best performance products

✓ Calibration Lab ISO 17025 accredited

✓ Extensive knowledge accumulation with:
  ✓ Experts with 100+ patent applications and 300+ publications
  ✓ 70%+ employees hold an university degree (four PhD)

✓ Wide installation base with satisfied customers worldwide

✓ Patented solutions allowing cost-effective production

✓ ISO 9001 and ISO 22301 Business Continuity Management
**OUR HISTORY**

**2004**
- SENIS GmbH, a spin-off of SENTRON AG (LEM, AKM, Melexis)
- Change from SENIS GmbH to SENIS AG
- 15 employees

**2011**
- Merger with Ametes AG
- Takeover of Ametes Current Sensing Business
- 30+ employees

**2013 - 2016**
- Steady expansion of product portfolio
- ISO 9001
- Buildup of IC design group
- Licensing of angle sensor patent to MagnaChip, Korea
- Swiss CTI project
- Patent application for new vertical Hall sensor
- 30+ employees

**2017**
- Move to new facilities
- Class 1,000 cleanroom
- New calibration & test laboratories
- Patent application for new angle sensor
- Patent application for new calibration tool
- Eddy-current, AMR probe as a mapper option
- 40+ employees

**2018**
- EMPIR, EU project for nano-scale traceable measurement
- CleanSky, EU project to develop very low consumption, wireless current sensor
- Applied for EU project to industrialize and launch the new sensor chips: 3DHALL, 3-axis Hall sensor chip
- Applied for HITRI+ EU project (CERN+)
- Industrial line defectoscope (crack detection)
- 45+ employees

**2019 - 2020**
- Calibration Laboratory accreditation ISO 17025
- ISO 22301 Business Continuity
- China office in Shanghai
- New sensor promotion
- AMA Innovation award nominated (FAMAS)
- Applied for HITRI+ EU project (CERN+)
- Industrial line defectoscope (crack detection)
- 45+ employees
FACILITIES

SENTRONIS. Nis, Serbia:
- Engineering & Production
- Calibration & Test Labs
- Class 1'000 Clean Room
- Die- and wire-bonding
- Chip Tests
- Mechanical Workshop
- HV / PD Test

SENIS AG, Baar, Switzerland:
- Marketing & Sales, Mgmt
- Research & Development
- IC Design, Probe Assembly

SENIS, Shanghai, China:
- Marketing & Sales, BDM
• HQ, Management, S&M, R&D at SENIS, Switzerland
• Product engineering and production at SENTRONIS Serbia, a SENIS company
• SENIS Office in China – S&M, BDM
• Direct sales by SENIS, Switzerland
• Distributors in USA, Germany, Italy, Japan, China, Taiwan, Korea, Russia and India
MARKETS

CONSUMER ELECTRONICS
- Test, QA and R&D - Permanent Magnets for Sensors & Actuators
- Magnetic and Measurement Systems Characterization
- Material Testing

AUTOMOTIVE
- Power System Control
- Maintenance
- Monitoring

ENERGY & TRANSPORTATION
- Active Field Control
- Undulator Shimming
- High Field Mapping
- Magnetic Field Levitation
- Zero-Field Mapping
PRODUCTS

MAGNETOMETERS
- Very accurate
- Very stable
- First integrated 3D Hall probes
- Small & thin
- Single Chip Solutions

MAPPERS
- High Dynamic Response
- High Measurement Range
- High Spatial Resolution
- Low noise
- Fully calibrated
- Innovative, patented Solutions
MAGNETOMETERS

- 3-axis Hall
- Single Si-chip
- 100x10x100µm
- 2uT to 20T
- DC to 75kHz
- 1 ppm res.
- <50 ppm acc.
MAPPERS

- 135mm³
- > 600mm³
- Portable
- 1μm / 0.02°
- 100mm/s
- 360° /s
- Calibrations
- Interchangeable
- Hall
- AMR, GMR
- Eddy-current
- Inductive (Coil)
- Sliding
- Touch stylus
- In-line tools
CURRENT SENSORS

- 20kA range
- DC – 200kHz
- 0.05% res.
- 1%, 0.1% acc.
- >4kV isolation
- Hall, AMR
- 1uA DC
- IDL
**3DHALL - REAL 3-AXIS HALL SENSOR SENSE3DX**

- Any-Axis / All Axis (Bx, By, Bz) linear Hall sensor
- DC Magnetic field resolution: 1μT
- Low noise: 100nT/√Hz
- 3-Axis spatial resolution: 100 x 100 x 10μm³
- Seven selectable measurement ranges: from 15mT to 4T
- High frequency bandwidth: DC to 300kHz
- 16 bit AD converter
- Threshold switch
- On-chip parametrizable
- On-chip correction of sensitivity, offset, noise, temperature drift
- Outputs: Analog, PWM and SPI
- High temperature: -45°C to +125°C
- QFN28 package

**FAMAS - FAST MAGNETIC ANGLE SENSOR SENA2DX**

- Angle and speed measurement at up to 400'000 rpm
- Direct angle position (no need for ADC)
- Rotational position, angle and speed measurement
- High angular resolution: <0.08°
- Fast response: Latency 600ns
- Spatial resolution: 100 x 100 x 10μm³
- Magnetic field range: 15mT - 200mT
- On-chip parametrizable: clock frequency, angular resolution, output filter
- On-chip correction of sensitivity, offset, noise, temperature drift
- Outputs: SPI, A quad B and UVW
- On-the-shaft and off-the-shaft
- High temperature: -45°C to +125°C
- QFN28 package

**ANYCS - CURRENT SENSOR SENCN1DX**

- Sensitivity parallel and perpendicular to the chip surface
- 32 selectable ranges from 5mT to 1T
- Frequency bandwidth: DC – 1MHz
- Ultra fast response: <500 ns
- Low noise: <6μV RMS
- On-chip parametrizable
- Quiescent reference output 0V - 5V
- Power supply: 3.3V - 5.5V
- Under / Over voltage detection
- Analog output (ratiojometric and non-ratiometric)
- High temperature: -40°C to +150°C
- ESD: 4kV
- SIP-4L package

**FAMAS Sensor nominated for AMA Innovation Award**
MagnaChip Semiconductors and SENIS AG Sign Patent License Agreement

MagnaChip, a Korea-based designer and manufacturer of analog and mixed-signal semiconductor products, and SENIS AG, a manufacturer of magnetic field and current measurement instruments based in ZUG, Switzerland, have signed a patent license agreement. The agreement grants MagnaChip the right to use a portion of SENIS's patents covering magnetic field and current measurement technologies in its sensor products. MagnaChip expects the agreement to significantly strengthen its ability to develop and deploy sensor solutions for new industrial and consumer applications.

SEUL, SOUTH KOREA AND Ccip, SWITZERLAND — MagnaChip Semiconductor Corporation (“MagnaChip”) (KRX: 047930), a Korea-based designer and manufacturer of analog and mixed-signal semiconductor products, and SENIS AG, have announced that they have signed a patent license agreement. MagnaChip’s existing portfolio of sensors includes the e-compass and e-motion digital-wall sensor family. According to current, non-optical sensor-based sensor revenue grew 55% in 2015 to $1.5 billion, and is expected to grow to $10 billion in 2018.

“We are pleased to reach this strategic alliance agreement with SENIS AG, a company that we have previously collaborated with in a drive partnership,” said Dr. Kim, CEO of MagnaChip and general manager of MagnaChip’s display solutions division. “With access to SENIS’s high-performance magnetic field and current measurement technology, we expect to accelerate development of differentiated sensor solutions for our customers, particularly in industrial applications.”

About MagnaChip Semiconductor

Headquartered in South Korea, MagnaChip Semiconductor is a Korea-based designer and manufacturer of analog and mixed-signal semiconductor products for high volume consumer applications. MagnaChip Semiconductor believes it has one of the broadest and deepest range of analog and mixed-signal semiconductor platforms in the industry, supported by its 30-year operating history, a large portfolio of registered and pending patents and extensive engineering and manufacturing process expertise. For more information, please visit www.magnachip.com.

About SENIS AG

SENIS AG was founded by Dr. R. Popovic, a professor at EPTL, Switzerland, in 2006 as a spin-off of EPTL. SENIS develops and manufactures advanced instruments for magnetic field and current measurement and provides the corresponding development and engineering services.

CONTACTS

MagnaChip

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SENIS AG

Dr. R. Popovic, President

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Source: MagnaChip Semiconductor Corporation
is highly qualified: 75% of all 38 employees hold a University degree
Thank you!

Our World Records:

the only fully integrated 3-axis Hall Probe on the market
the smallest and thinnest 3-axis Hall Probe
magnetic field transducer & teslameter
with the highest resolution
and the highest frequency bandwidth
magnetic field measurements with the highest accuracy

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One accurate measurement is worth a thousand expert opinions.

— Grace Hopper —