

ScanGate® Sensors

Accelleration, Temperature, Light, Magnetometer, Humidity

Worldwide unique ID, R/W memory, more than just a RFID transponder

A modular design features optimal adaption to the application



ScanGate® Sensor Transponders

The Internet of Things in a flash!

ScanGate® Sensors are ready-to-use wireless sensor nodes in the size of a key fob, combining a flash- programmable processor, a 2.4 GHz ISM-band ultra-low-drain radio, four sensors and power.

ScanGate® Sensor is the first low-cost sensor platform in the world designed for the Internet of Things. Until today sensor modules have come in all shapes and sizes for different specific applications. Being made in limited quantities makes them expensive, while custom programming for every application takes time and adds risk. In contrast ScanGate®Sensors can be used for countless applications – starting with indoor localisation, logistics, data logging and smart phone accessories - the only limit is your imagination.

ScanGate®Sensors are smaller, cheaper, faster to deploy and longer lasting because they are standardised, certified, and use very low power. By simply flashing each ScanGate®Sensor (using the easy-to-use tools provided) you lock in a high-level app to bring your customers the benefit of the Internet of Things – in record time.

Applications, how it works and what it does

ScanGate®Sensors can be deployed as miniature beacons in buildings, parking garages, shopping malls, and airports without significant installation effort. ScanGate®Sensors allow highly accurate indoor positioning on a smartphone or on a paired ScanGate® Sensors location logger device. The installation of ScanGate®Sensors eliminates the need for costly Wifi infrastructure, power cabling, and site-specific finger-printing. Each beacon consumes much less energy than Wifi.

Temperature, Humidity and Shock Sensors for Logistics

Thousands of autonomous measurement nodes can be used in food logistics and be installed in transport containers allowing the microclimate of the packages to be tracked and logged. Can be used for quality assurance.

ScanGate®Sensors enable you to create the next killer application for smart phones. ScanGate®Sensors bring an endless variety of applications to the smart phone with a single extremely affordable device. Let your imagination run wild!

2nd generation will include maintenance-free autonomous operation

Asset Tracking and Tracing

Assets and inventory are a main part of the property of a company. Sustainable and reliable marking with ScanGate®Sensors with a worldwide unique ID enables tracking and tracing and easy continuous inventory.

- If items are moved, you get a signal and related data are recorded
- If items leave a certain area, signal and data are recorded
- Fast inventory: Move around and item IDs are recorded

Vehicle Identification and Location

ScanGate®Sensors provide

- Fully automatic monitoring of vehicles in garages and parking lots.
- Access to private, business and public premises
- Control of refuelling and collect refuelling data automatically
- That only vehicles with registered ScanGate®Sensors can be operated.
- Proper accounting per vehicle



Logistics

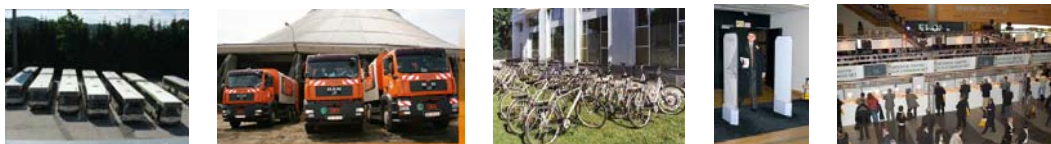
Mobile items are difficult to manage. ScanGate®Sensors help to optimise transport time and avoid losses

- All parcels or parcel containers in a truck are monitored permanently- temperature, shock, humidity, light
- Sensitive and hazardous goods are monitored during transport
- Commissioning of parts (e.g. for a construction site) is easy and without errors because of fully automatically data collection

Connecting People

ScanGate®Sensors do more than just identification.

- Security in tunnels and mines, access control and security control in public areas, government buildings, schools
- Network and "In Door" RTLS provides a complete picture of people and their movement
- Interactive communication at events and leisure areas
- Fast ticketing at large giant events



Features and Benefits, Technical Data



- ☑ 32-bit ARM Cortex M0 CPU core
- ☑ Available sensors
 - Integrated acceleration sensor, shock, movement
 - Integrated temperature sensor
 - Integrated light sensor (open cover detector)
 - Integrated magnetometer
 - humidity sensor
- ☑ Highly flexible, 2.4GHz multi-protocol radio
- ☑ Fully qualified Bluetooth® v4.0 low energy with integrated Radio, Link Layer, Host stack, native service and profiles, optimized solution for Peripheral (slave) role operation
- ☑ Connection to smart phones, PDA's, PCs, tablets, mobile Computers
- ☑ Certifications FCC, R&TTE, CE
- ☑ Ultra-low-power
 - Powered by coin cell battery: Best-in-class power consumption enabling months to years of battery lifetime when running from standard coin cells
 - Autonomously powered by energy harvesting (2nd generation)
- ☑ Very low-cost device
- ☑ Application specific transponders, tags and keyfobs
- ☑ Compact and ergo metric design, IP 69 available
- ☑ Made for outside operations, industrial areas, rough environment, on vehicles, ...
- ☑ Beeper, LED indicators for Power, Signal, Communication Control
- ☑ Thread-safe and run-time protected
- ☑ 3 data rates (2Mbps/1Mbps/250kBs)
- ☑ +4dBm to -20dBm output power
- ☑ Additional GPIO ports available for optional sensors and for Interfacing
- ☑ Configurable I/O mapping for analog and digital I/O
- ☑ *STOP PRESS SUSTAINABILITY ALERT*: 2nd generation Tokencubes (available 1st half 2014) are autonomously powered and achieve almost unlimited lifetime. This revolutionary step sharply reduces the environmental load caused by disposable electronics.
- ☑ ATEX compliance on request

Bringing the Internet of Things to a Data Highway near you

Applications	
<p>Industrial Sensor Applications</p> <ul style="list-style-type: none"> ○ Temperature sensor networks ○ Acceleration and vibration detection ○ Condition-based maintenance ○ Light sensing ○ Magnet detection, magnetic pulse counting, field sensing ○ Humidity measurement 	<p>Home and Building Security and Automation</p> <ul style="list-style-type: none"> ○ Open/close detector ○ Glass break sensor for doors and windows ○ Light, temperature and occupancy sensors ○ Keyless entry ○ Access activity logging, people finding ○ Pet tags and feeders
<p>Data Loggers</p> <ul style="list-style-type: none"> ○ Temperature loggers, read out by smartphone or gateway ○ Acceleration loggers, read out by smartphone or gateway 	<p>Indoor Localisation</p> <ul style="list-style-type: none"> ○ Asset tracking ○ Retail space tracking ○ Vehicle tracking in parking garages ○ Indoor smartphone tracking
<p>Consumer Products/ Smartphone Accessories</p> <ul style="list-style-type: none"> ○ Proximity applications ○ Find me, alarm ○ Temperature sensors (always connected or data logging) 	<p>Museums and Collections</p> <ul style="list-style-type: none"> ○ Libraries, art collections, treasuries ○ Light, shock, movement sensors for status detection ○ Animation feedback in the area of the arts

ScanGate® Sensors

Application and custom design



SGS-6934-01-A

ScanGate® Sensors

Transponder with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption. Works on metal

Inventory and asset tracing and tracking
Production control, data logging in logistics, RLTS for mobile assets and production parts

Dimensions: 69 mm x 34 mm x 10mm
Protection: IP68
Operating temperature: - 25°C to +60°C
Housing: Delrin, others on request (ABS, PA6)
Fixing by adhesive, two component glue or double adhesive tape



SGS-6934-01-M

ScanGate® Sensors

Transponder with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption. Works on metal.
Integrated Magnet Holders

Service asset tracing and tracking
Production control, data logging in logistics, RLTS for mobile assets and production parts

Dimensions: 69 mm x 34 mm x 10mm
Protection: IP68
Operating temperature: - 25°C to +60°C
Housing: Delrin, others on request (ABS, PA6)
Integrated magnets for fixing on metal, easy reusable



SGS-3207-01-A

ScanGate® Sensors

Transponder with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption. Works on metal

Inventory and asset tracing and tracking
Production control, data logging in logistics, RLTS for mobile assets and production parts

Dimensions: 32 mm diameter x 7mm
Protection: IP68
Operating temperature: - 25°C to +60°C
Housing: Delrin, others on request (ABS, PA6)
Fixing by two component glue or double adhesive tape



SGS-3207-01-Ex

ScanGate® Sensors

Transponder with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption. Works on metal

Inventory and asset tracing and tracking
Production control, data logging in logistics, RLTS for mobile assets and production parts

ATEX approval on request
Dimensions: 32 mm diameter x 10mm
Protection: IP68
Operating temperature: - 25°C to +60°C
Housing: Delrin, others on request (ABS, PA6)
Fixing by two component glue or double adhesive tape



SGS-9050-CS01

ScanGate® Sensors

Clamshell card with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption.

People tracing and tracking
Data logging for RLTS for secure areas and hazardous environment, in mines and tunnels

Dimensions: 90 mm x 40 mm x 6mm
Protection: IP65
Operating temperature: - 25°C to +60°C
Housing: ABS
Fixing with clip



SGS-400-KB01

ScanGate® Sensors

Keyfobs with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption.

People access and T&A, tracing and tracking
Data logging for RLTS for secure areas and hazardous environment, in mines and tunnels

Dimensions: 40 mm diameter
Protection: IP65
Operating temperature: - 25°C to +60°C
Housing: ABS
Fixing with clip

ScanGate® Sensors

Accessoires

Scangate® Sensors		
		Price
SGS-6934-01-A	ScanGate® Sensors Transponder with unique ID and R/W memory. Sensor for temperature, acceleration and shock, light and magnetic fields. Integrated logger, ultra low power consumption. Works on metal Dimensions: 69 mm x 34 mm x 10mm, Protection: IP68, Housing: Delrin,	On request
SGS-6934-01-M	Same as above but with Magnet Fixing	On request
SGS-3207-01-A	Same as above but dimensions 32 mm diameter x 10mm, Housing ABS	On request
SGS-3207-01-Ex	Same as above but with EX - ATEX certificate for use in hazardous areas	On request
SGS-9050-CS01	Card	On request
SGS-400-KB01	Key fob	On request
Scangate® Sensors Accessoires		
Bluetooth Adapter		
SD1000	Bluetooth RS232 Adapter: BT Specification v2.0 + EDR, Supports up to 4 multiple simultaneous connections, Working distance (In an open field) : Nom. 100 meters, up to 1000m using patch antenna, No external drivers required	On request
UD 100	Bluetooth USB Adapter: BT 2.0+EDR Class 1, Working distance 300m, up to 1000m using optional antenna, USB 2.0 interface, Bluetooth driver CD (Toshiba / BlueSoleil driver)	On request
SD-DU	Additional Antenna 5 dBi dipol for Bluetooth adapters	On request
ANT Adapter		
	ANT RS232 Adapter	On request
	ANT USB Adapter:	On request
	Additional Antenna	On request
Optional		
SGS-DEMO-Soft	Demonstration software	On request
SGS-StartUp Kit	SGS tags and Evaluation Software, SDK	On request
	Software	
SGS-iOS	App for iPhone, iPad	On request
SGS-Android	App for Android	On request

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