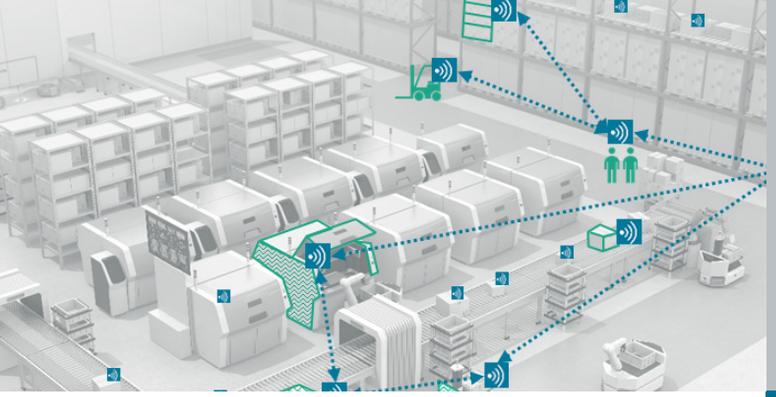

AT A GLANCE

s-net® is an extremely energy-efficient, software-based communication technology for wireless networking and positioning for industrial IoT applications. The mesh technology developed by Fraunhofer IIS belongs to the category of Low Throughput Networks (LTN) and is suitable for long-life battery-operated systems thanks to its high energy efficiency.

Thanks to the time-synchronized TMDA process and a specially patented frame structure, all s-net® nodes are continuously available and can be reached very quickly via multiple hops. This allows packets to be transmitted from the end node across multiple router nodes to the gateway and back with low latency.

With bi-directional multi-hop communication in the worldwide royalty-free bands, the technology offers high robustness, low installation costs and flexible scalability for the end customer. Thus, you can use the s-net® technology for your individual IoT applications.

WWW.S-NET-INFO.COM

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FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

S-NET®

MESH CONNECTIVITY FOR IOT

KEY FEATURES

Self-organisation
Dynamic setup of the network topology for high robustness and specific installation effort

Extreme energy efficiency
Battery life up to 12 years through
Time synchronization of the network

Continuous availability
Time-synchronous bi-directional communication

Mesh Network
Multi-hop communication with patented
Low latency method

Positioning
Independent positioning in the network

Flexible configuration
Various profiles for special applications as well as individual parameterization

s-net®

Data throughput	255 byte/s per Node; 512 byte/s per Frame
Frequency Band	433 MHz; 868/915 MHz; 2,4 GHz
Range (multi-hop)	>300 m Indoor; >3 km Outdoor
Energy Efficiency	175 nWh per Data Packet

s-net® profile – Example »fast«*

Latency [s]	2 seconds
Typical power consumption	Router node 0,89 mA@3V End node 0,40 mA@3V

s-net® profile – Example »low power«*

Latency [s]	64 seconds
Typical power consumption	Router node 0,06 mA@3V End node 0,04 mA@3V

** for S-NET-MOD-868-AM1*

APPLICATIONS

s-net® is versatile due to its flexibility:

- Smart assembly and production
- Process monitoring
- Smart Tracking
- Worker-support systems
- Picking: flexible and mobile pick-by-light systems
- Smart logistics
- Product tracking
- Status and environmental monitoring

OUR OFFER

Fraunhofer IIS is the ideal partner for the development and implementation of individual IoT solutions.

We support you from a technical and economic feasibility analysis to the licensing of s-net® technology for your specific application. Customer-specific requirements can be scaled individually.

Realize your ideas with individual solutions of Fraunhofer IIS!