**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**

*Fraunhofer Institute for Integrated Circuits IIS*

Management of the Institute
Prof. Dr.-Ing. Albert Heuberger (executive)
Dr.-Ing. Bernhard Grill
Prof. Dr. Alexander Martin

Am Wolfsmantel 33
91058 Erlangen, Germany

Positioning and Networks Division
Nordostpark 84
90411 Nürnberg, Germany

Contact
Hanna Herger
Phone +49 911 58061-9414
networks@iis.fraunhofer.de

www.iis.fraunhofer.de
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!