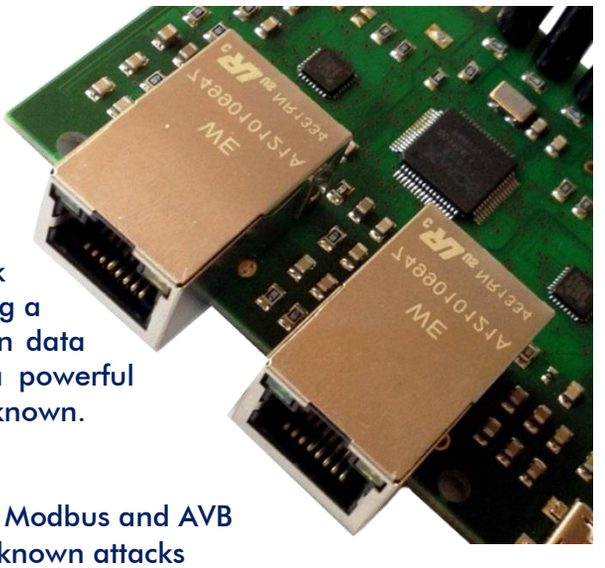
IaT® for IoT

“Internet alarm Things” for IoT

MicroIDS & MicroTap

- Intrusion Detection Systems for distributed security
- Industrial Ethernet Protocol support
- DIN rail or hand-held TFT

Securing your factory is not just watching the front door!



Intrusion Detection for Industrial and Automotive

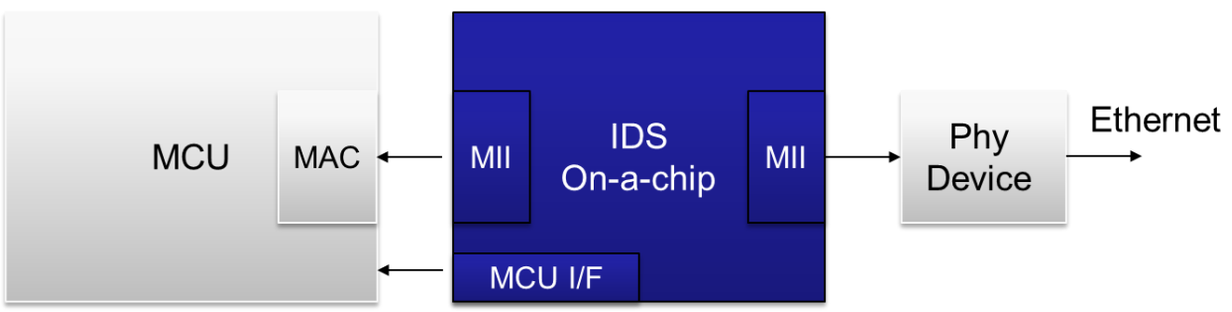
Intrusion detection systems are used to recognize network traffic that is not classified as normal and therefore likely being a threat. Such systems have been around for a while mainly in data centres. However, they are only useful when running on a powerful computer. Systems for the Industrial world are yet virtually unknown.

The main requirements for the Industrial market are:

- Support for protocols such as EtherCAT, Profinet, CAN, Modbus and AVB
- Self-learning approach to deal with little history about known attacks
- Small size, low cost and low power consumption

Industrial Embedded Devices usually have little performance- and memory-overhead. Implementing data security mechanisms on these devices is therefore not feasible. The dual-port MicroIDS device solves this problem. It can be easily retrofitted to existing Industrial Ethernet networks.

MicroIDS Device securing Industrial Networks



The network topology doesn't matter as long as all packets pass through the packet inspection. Because the existing network doesn't have to be changed at all, it can be secured at a very low cost, simply by plugging in the module.

Research on Anomalies detection Algorithms

An efficient protection can be achieved when the intrusion detection system uses self-learning approaches for recognizing so far unknown network anomalies in addition to pre-defined rules for already known attacks.
MicroIDS devices already come with a powerful and flexible rule definition language and tools to develop efficient rule programs. Rules can be downloaded to the device and stored in the on-board Flash memory.
In order to deal with unknown attacks there are currently going on several research projects together with the University of Applied Science Aalen that are using neural network and deep learning methodologies. In addition, embedded parallel processing is applied to the algorithms for packet analysis in order to realize maximum bandwidth on the network.

Hochschule Aalen
University of Applied Science Aalen – Zentrum Industrie 4.0
Prof. Dr. Axel Zimmermann

Steinbeis
Steinbeis-Innovationszentrum
Transferplattform Industrie 4.0

Reslogica GmbH
Smarte Systeme im Namen der Logik
Mail: IaT@reslogica.de