MICROSENS

Training Program 2020

MICROSENS

CONTENTS

Mission Statement

Your reliable partner on your path to the digital future

MICROSENS

MICROSENS is a medium-sized technology company that **provides modern IP based network infrastructures …**

in fields of **Digital Buildings, Smart Industry** and **Critical Infrastructures**.

As a **German specialist for the Digital Infrastructure & IP based Smart Building Solutions**, **MICROSENS** enables its customers to network **business and production processes** and successfully **move to a digital future**.

THE COMPANY

MICROSENS

MICROSENS GmbH & Co. KG is a medium-sized technology company

Our target market:
IP-based smart infrastructure for industrial applications

120
Employees*

Founded in 1993
- European R&D center in Hamm, Frankfurt and Wroclaw;
- German production line (Hamm);
- More than 700.000 active fiber ports installed

Our solutions:

- Industrial IP infrastructure solutions
- From optical transport IP networks, FTTO, to smart building.

Rooted in Germany,

with international footprints:
- Represented in 3 countries;
- Active in more than 50 countries

Sales*
20.0
Million €

Specialized in the fields of
- High reliable industry network
- Fiber To The Office (FTTO) solution
- IP-based Digital Buildings

Medium-sized structures
- Short decision lines
- Rapid response time
- Global partner structures

* Figure in 2019

HIGHLIGHTS

All-IP INFRASTRUCTURE

© iStock_ID869933132_loveguli

FIBER TO THE OFFICE SOLUTIONS

©iStock-498272366_joakimbkk

SMART BUILDINGS

- Product house for all-IP based smart infrastructure
- Integrated IP infrastructure for digital industry

- MICROSENS as technology pioneer for high reliable industry networks via Fiber To The Office (FTTO) solutions

- Build-out of modern IP network infrastructure towards building digitization

MICROSENS

REFERENCE CASE DUBAI AIRPORT

Floor tank installation

Desktop mounting

Cable trunk installation

- More than 8000 MICROSENS switches to create a high-performance fiber optic network in the international airport's new Concourse A terminal building.

- The MICROSENS Fiber To The Office (FTTO) concept is employed in an area of more than 500,000 square meters; the components' special design makes an intelligent combination of fiber optic and copper connection technologies possible.

MICROSENS

PRODUCT LINES

MICROSENS

Network Components	Smart Building Solutions

Management Software

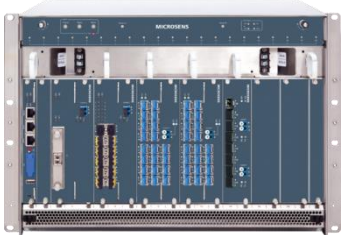| Network Management Platform (NMP)	Smart Building Manager

Enterprise Networks

- Fiber to the Office (FTTO)
- Basic Fiber Optic Products (BFOP)

Industrial Solutions

- For harsh environments
- Industrial reliability

Optical Transport

- Wide area location interconnection
- Data center interconnection

Smart Lighting & Smart Automation

The Network

TRAINING CONCEPT

System architect

Advanced introduction and training for both the MICROSENS Network Management Platform and more than one of the MICROSENS product lines. Award of "System Architect" certificate for customers, who pass the final test.

System administrator

Advanced introduction and training for both the MICROSENS Network Management Platform and one of the MICROSENS product lines. Award of "System Administrator" certificate for customers, who pass the final test.

Network expert

Advanced introduction and training for the MICROSENS Network Management Platform - NMP. E. g. network topologies, software updates, device configurations etc. Award of "NMP expert" certificate for customers, who pass the final NMP test.

General introduction

General introduction of MICROSENS' product portfolio and product concept

Basic knowledge

Introduction of MICROSENS FTTO/industrial/OTN products, including demo of scripting and Network Management Platform

Product expert

Advanced introduction and training for one of the MICROSENS product families. Leaning of product operation and configuration through CLI, Web-UI and NMP system including scripting practice. Award of "Product expert" certificate for customers, who pass the final product test.

6. System architect

1. Entry

From Beginner to Specialist

5. System admin.

2. Associate

4. Professional (network)

3. Professional (product)

MICROSENS

ENTRY - GENERAL INTRODUCTION

HIGH LEVEL AGENDA:

Day 1
- 09:00 – 09:30 Welcome and introduction round
- 09:30 – 10:30 Basic foundation of MICROSENS technologies
- 10:30 – 12:30 An overview of the MICROSENS portfolio
- 13:15 – 14:30 Managed / unmanaged systems
- 14:30 – 15:30 Short introduction of HW and SW features of MICROSENS Switches
- 15:30 – 16:30 Demo: Initial setup of MICROSENS switches
- 16:30 – 17:00 Open discussion and question round
- 17:00 – 17:30 Feedback and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer per request*	- Frequent session in Hamm (2x per year) - 1 day event	- Notebook with full admin rights	- Not necessary

Free of charge
(Max. 10 participants)

* Additional fee shall be charged

MICROSENS

ASSOCIATE - BASIC KNOWLEDGE

HIGH LEVEL AGENDA:

Day 1
- 09:00 – 09:30 Welcome and introduction round
- 09:30 – 10:30 Basic foundation of MICROSENS products
- 10:30 – 12:30 Demo: advanced configuration of MICROSENS products (Web-UI, CLI)
- 13:15 – 14:30 Basics of Network Management systems
- 14:30 – 16:00 Demo: Management of MICROSENS products through NMP System
- 16:00 – 16:30 Open discussion and question round
- 16:35 – 17:00 Feedback and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Frequent session in Hamm (2x per year) - 1 day event	- Own notebook with full admin rights	- Entry training or - Basic network knowledge

Free of charge
(Max. 10 participants)

* Additional fee shall be charged

MICROSENS

PROFESSIONAL - PRODUCT EXPERT (e.g. FTTO/SBS/OTN)

HIGH LEVEL AGENDA:

Day 1

- 09:00 – 09:30   Welcome and introduction round
- 09:30 – 10:30   Demo: Initial setup of one of MICROSENS product lines
- 10:30 – 12:30   Practice exercise in Lab
- 13:15 – 14:30   Advanced configuration of one of MICROSENS product lines
- 14:30 – 16:30 Practice exercise in Lab
- 16:30 – 17:00   Open discussion and question round

Day 2

- 09:00 – 10:30 Summary of day 1 and Question round
- 10:30 – 12:00 Practice exercise in Lab
- 13:15 – 14:30   Basics of Network Management systems
- 14:30 – 16:00   Demo: Management of MICROSENS products through NMP System
- 16:00 – 17:00   Test for "PRODUCT PROFESSIONAL" certificate
- 17:00 – 17:30   Award of "PRODUCT PROFESSIONAL" certificate and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Per request - 2 days	- Own notebook with full admin rights	- Associate training or - Equal knowledge

1800Euro + 200Euro/participant
(Max. 8 participants)

* Additional fee shall be charged
* Need equipment on site

MICROSENS

PROFESSIONAL - NETWORK EXPERT

HIGH LEVEL AGENDA:

Day 1
- 09:00 – 09:30 Welcome and introduction round
- 09:30 – 10:30 Initial setup of MICROSENS NMP system (Win/Linux)
- 10:30 – 12:30 Practice exercise in Lab
- 13:15 – 14:30 Configuration of NMP system with MICROSENS products
- 14:30 – 16:30 Practice exercise in Lab
- 16:30 – 17:00 Open discussion and question round

Day 2
- 09:00 – 10:30 Summary of day 1 and Question round
- 10:30 – 12:00 Advanced NMP setup in complicated topology and different devices
- 13:15 – 16:00 Practice exercise in Lab
- 16:00 – 17:00 Test for "NETWORK PROFESSIONAL" certificate
- 17:00 – 17:30 Award of "NETWORK PROFESSIONAL" certificate and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Per request - 2 days	- Own notebook with full admin rights	- Associate training or - Equal knowledge

1800Euro + 200Euro/participant
(Max. 8 participants)

* Additional fee shall be charged
* Need equipment on site

MICROSENS

ADMINISTRATOR - SYSTEM ADMINISTRATOR (e.g. FTTO/SBS/OTN NETWORK ADMIN)

HIGH LEVEL AGENDA:

Day 1

- 09:00 – 09:30   Welcome and introduction round
- 09:30 – 10:30   Demo: Initial setup of one of MICROSENS product families
- 10:30 – 12:30   Practice exercise in Lab
- 13:15 – 14:30   Advanced configuration of one of MICROSENS product families
- 14:30 – 16:30   Practice exercise in Lab

Day 2

- 09:00 – 10:30   Initial setup of MICROSENS NMP system (Win/Linux)
- 10:30 – 12:30   Practice exercise in Lab
- 13:15 – 14:30   Advanced configuration of NMP system with MICROSENS products
- 14:30 – 16:30   Practice exercise in Lab

Day 3

- 09:00 – 10:30   Advanced NMP setup in complicated topology and different devices
- 10:30 – 12:30   Practice exercise in Lab
- 13:30 – 16:00   Test for "SYSTEM ADMINISTRATOR" certificate
- 16:30 – 17:00   Award of "SYSTEM ADMINISTRATOR" certificate and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Per request - 3 days	- Own notebook with full admin rights	- Focus on one of MICROSENS product lines and advanced NMP operation - Associate training or - Equal knowledge

2700Euro + 300Euro/participant
(Max. 5 participants)

* Additional fee shall be charged
* Need equipment on site

MICROSENS

ARCHITECT - SYSTEM ARCHITECT

HIGH LEVEL AGENDA:

Day 1
- 09:00 – 09:30 Welcome and introduction round
- 09:30 – 10:30 Concept foundation of MICROSENS product lines (FTTO/OTN/SBS)
- 10:30 – 12:30 Demo: Advanced configuration of MICROSENS products in different lines
- 13:15 – 16:30 Practice exercise in Lab with different products

Day 2
- 09:00 – 10:30 Initial setup of MICROSENS NMP system (Win/Linux)
- 10:30 – 12:30 Practice exercise in Lab
- 13:15 – 14:30 Advanced NMP setup in complicated topology and different devices
- 14:30 – 16:30 Practice exercise in Lab

Day 3
- 09:00 – 10:30 Typical network topologies and trouble shooting
- 10:30 – 12:30 Practice exercise in Lab
- 13:30 – 16:00 Test for "SYSTEM ARCHITECT" certificate
- 16:30 – 17:00 Award of "SYSTEM ARCHITECT" certificate and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Per request - 3 days	- Own notebook with full admin rights	- Focus on all MICROSENS product lines and advanced NMP operation - Expert training or - Equal knowledge

2700Euro + 300Euro/participant
(Max. 5 participants)

* Additional fee shall be charged
* Need equipment on site

MICROSENS

SPECIAL OFFER – SECURITY NETWORK ADMINISTRATOR FOR CRITICAL INFRASTRUCTURE

HIGH LEVEL AGENDA:

Day 1
- 09:00 – 09:30   Welcome and introduction round
- 09:30 – 11:30   Foundation of secured network for critical infrastructure
- 11:30 – 12:30   Demo: How to configure a secured network step by step
- 13:15 – 16:30   Practice exercise in Lab with different products

Day 2
- 09:00 – 10:00   Summary of day 1 and Question round
- 10:00 – 12:00   Advanced setup with redundant topologies and application of security concept
- 13:15 – 16:00   Practice exercise in Lab
- 16:00 – 17:00   Test for "SECURITY NETWORK ADMINISTRATOR" certificate
- 17:00 – 17:30   Award of "SECURITY NETWORK ADMINISTRATOR" certificate and farewell

Location	Duration	Equipment	Knowledge requirements
- MICROSENS in Hamm - On-site by customer*	- Per request - 2 days	- Own notebook with full admin rights	- Basic network knowledge - Basic know-how of switch configuration - Expert training or - Equal knowledge

1200Euro + 250Euro/participant
(Max. 8 participants)

* Additional fee shall be charged
* Need equipment on site

MICROSENS

PROFILE OF OUR COACHES

Reinhold Jäkle
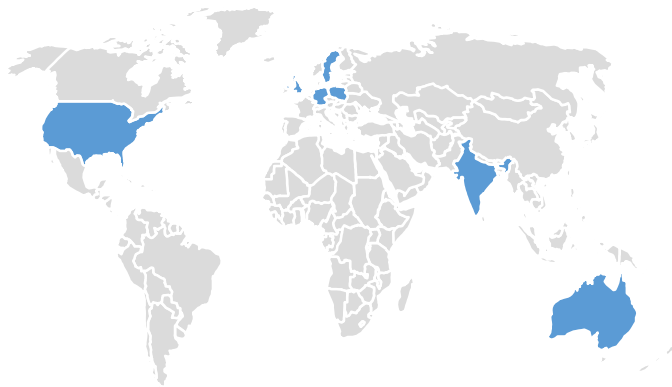Senior Software Architect

Career background

Multifarious career functions as Software engineer, Software Architect, Technical Leader. Comprehensive knowledge for Requirements Management and Information Modelling and

> 20 Years in Software- and Network-Management Product development

> 10 years in Database Development

> 15 year teaching Software Design and Programming

> 10 years working in distributed team

Expertise

●●●●● Software Development

●●●●● Information Modelling

●●●●● Database Management

●●●● Network Management

●●●● BMS

●●●●● Requirements Management

Work experience with teams from

Languages

> German (native)

> English (fluent)

Specialized for product families

SMART BUILDING MANAGER

nmp

SBM   NMP

MICROSENS

PROFILE OF OUR COACHES

Anatoly Spuling
Technical Consultant

Career background

Senior engineer with many years of experience in MICROSENS networks. Technical After- and Pre-Sales Support. Successful implantation of large scale networks with more than 5000 devices.

> Long term experience in IT business

> 17 years at MICROSENS for support and production

> Stakeholder of key customers in terms of support and trouble shooting

> Reference project: Russia Railway, ENIWA AG etc.

Expertise

●●●●● Network Topology

●●●●● MICROSENS Management Platform (NMP)

●●●●● Network Protocols

●●●●● Troubleshooting & Testing

●●●● Industrial Automation

●●●● International Project Management

Customer experience in

Languages

> Russian (native)

> German (fluent)

Specialized for product families

FTTO   Industrial   NMP

MICROSENS

PROFILE OF OUR COACHES

Dirk Herppich
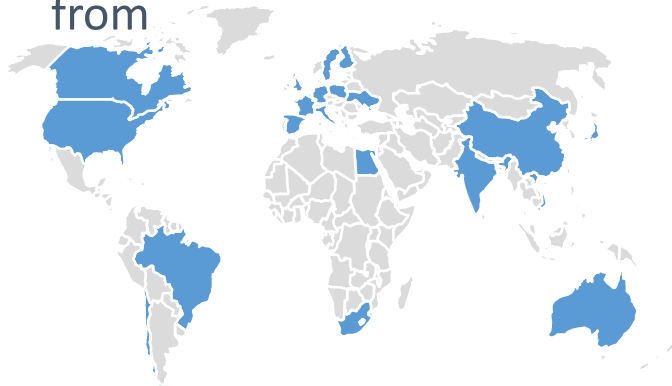Technical Consultant

Career background

Started working in the IT sector in 1987 at the Deutsche Telekom. Joined MICROSENS as a student in 1995. After finishing studies with diploma in 1997, working for 2-3 years in hardware development department. Afterwards changed into technical sales direction. Mainly active in international areas.

> 32 years in IT business
> 25 years at MICROSENS
> Experienced customer support expert
> Largest successful project: Dubai Airport (FTTO)

Expertise

●●●● Optical Transport Network

●●●● FTTO / GPON solutions

●●●● Industrial Automation

●●●●● International Project Management

●●●●● Troubleshooting & Testing

Work experience with teams from

Languages

> German (native)
> English (fluent)

Specialized for product families

FTTO   Industrial   Optical Transport

MICROSENS

PROFILE OF OUR COACHES

Dominik Zühlke
Technical Consultant
Smart Building Solutions
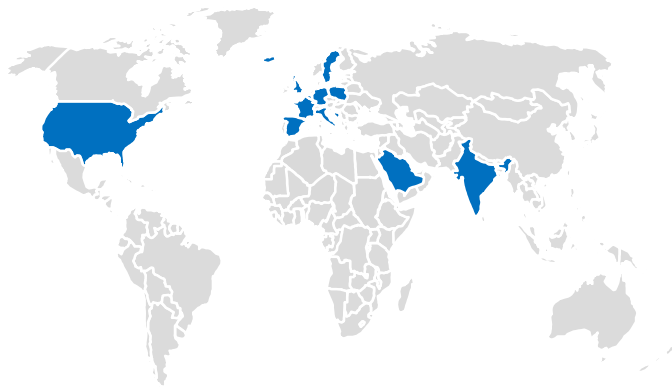
Career background

Building Automation specialist for DDC ,PLC programming and SCADA System integration. Project manager for Projects with more than 16000 Data points. Specialist for Building Electro Engineering.

> 13 Years in Building Automation with ABB Areadat.

> Specialist for Cross system integration (Modbus/ CAN/ BacNet/ LON/ KNX/ DALI/ MQTT).

> Project manger for TBA Automation in accordance to German VOB .

Expertise

●●●●● TBA Integration

●●●● HMI Visualization Design

●●●●● PLC Programming

●●●● TBA Project management

●●● Service and Support business development

●●●● Claim management

Customer experience in

Languages

> German (native)

> English (fluent)

Specialized for product family

smart building solutions
MICROSENS

Central Smart Lighting Controller

Smart Sensor

Smart Lighting Controller

Smart I/O Controller

LEARNING WITH US - GROW WITH US

> ❝
>
> ## I need to remain humble, stay disciplined and keep training. That's how I will continue to be a champion.
>
> Andy Ruiz Jr.
>
> ❞

The MICROSENS training program takes you as far as you want to go. From the essentials of basic products to system architect. You can develop and pursue your own professional development, keep track of the constant updates and innovations in technology and keep your learning alive.

For any further questions and information, you can

➢ Contact your MICROSENS counterpart

➢ In case of training requests or further details use our online support ticketing system:
https://MICROSENS.atlassian.net/servicedesk/customer/portals

MICROSENS

MICROSENS

The future communicates IP.
Innovation by conviction.