

# netFIELD APP PROFINET TAP

BROWNFIELD IOT  
ENABLEMENT IN 15 MINUTES



# ENABLE BROWN-FIELD MACHINERY FOR IOT APPLICATIONS

Equipping brown-field machinery with condition monitoring and data analytics applications allows to get the IoT-benefit out of existing machine installations. The **netFIELD** App PROFINET Tap allows extracting machinery process data simply by

monitoring the existing network traffic. There is no need to change PLC or machine configuration. It works with any PROFINET network, independent of PLC or device vendor.

## EASILY INTEGRATED AND CONFIGURED WITHIN MINUTES.

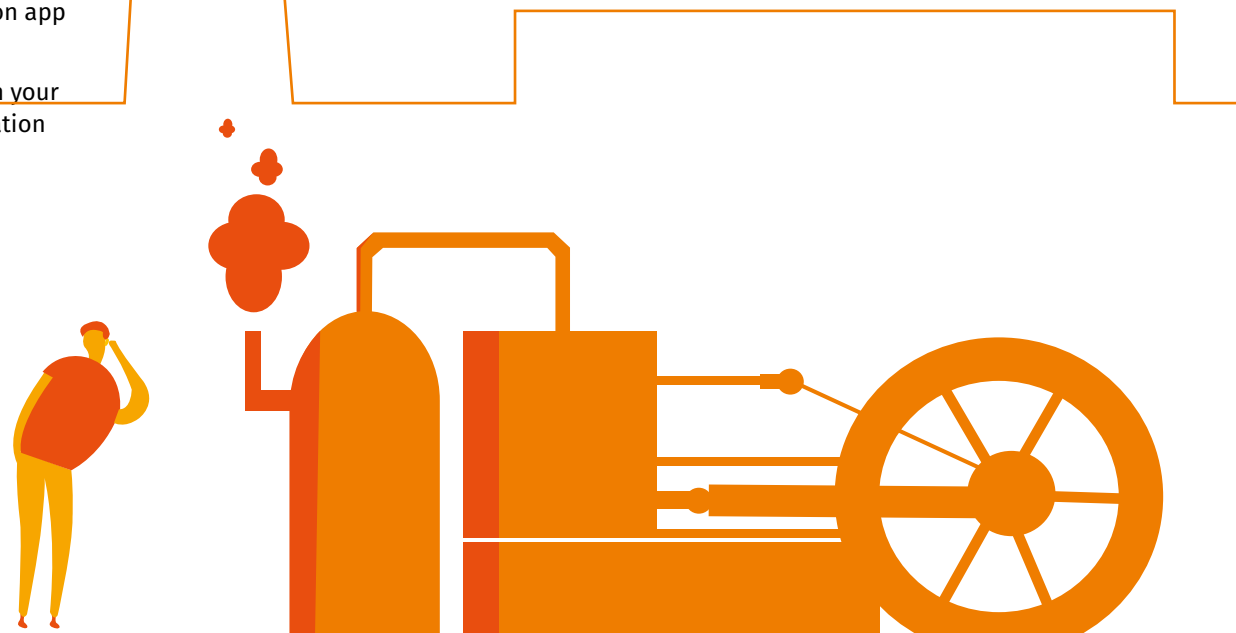
As there is no need of touching the network or PLC configuration the required integration effort is minimal. The rich configuration app allows importing symbol information from device description files. In a Siemens environment integration is even easier, TIA Portal semantics can be used directly.

IoT-enable your machine within minutes in five simple steps:

- 1 Lead out existing network traffic via a network TAP (1) device or the mirror port of a switch (2)
- 2 Automatically read in the PROFINET configuration from a machine startup
- 3 Add data semantics automatically simply by importing the TIA Portal Engineering project or GSDML device description files
- 4 Select information of interest from the whole machine process data image interactively in the configuration app
- 5 Subscribe to MQTT messages in your monitoring or analytics application

(1) TAP = Terminal Access Port, a hardware device which allows mirroring network traffic without interference to existing infrastructure

(2) Many managed Ethernet switches support mirroring network traffic streams via switch configuration



## HOW IT WORKS UNDER THE HOOD

### Containerized software

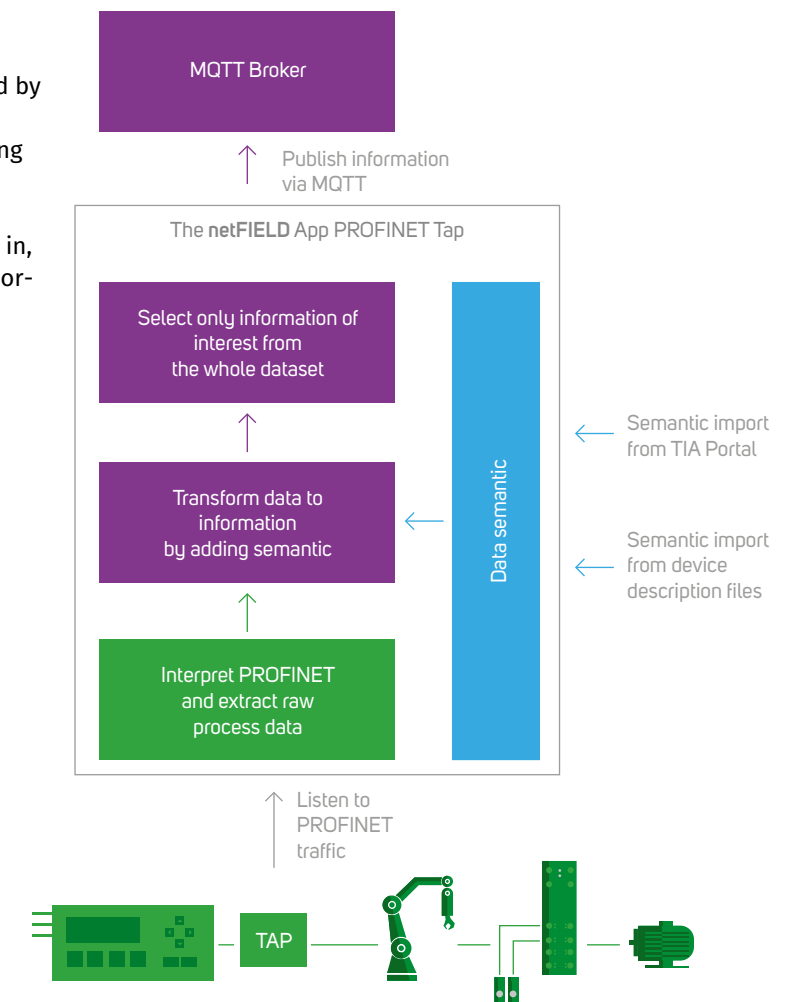
- The **netFIELD** App PROFINET Tap is delivered as a containerized software which allows easy deployment and software management.
- The software container delivers a built-in rich configuration app which can be used easily via a web-browser without the need of installing any additional software tools.

### Form data to information

- The extracted raw fieldbus data is automatically enriched by semantics during the capture process.
- The required semantic information can be read in by using AutomationML as interchange format with TIA Portal in a Siemens environment.
- Alternatively, GSDML device description files can be read in, allowing mapping semantic information in any non-vendor-specific environment.
- Of course, it is always possible to "fine tune" semantics manually via the configuration app.

### Deep packet inspection with integrated fieldbus intelligence

- The **netFIELD** App PROFINET Tap analyses the existing machine network traffic using deep packet inspection technologies.
- It "understands" the fieldbus protocol by itself and thus does not require you as an end-user to deep-dive into fieldbus technology.
- Due to the listening-only functionality, **netFIELD** App PROFINET Tap is absolutely invisible to your existing machine components and thus cannot disturb the existing process.



*There is no need of touching your working machine, nor changing PLC or machine configuration*

*Automatic PROFINET configuration detection and semantic mapping from TIA Portal or GSDML*

*Secure by design due to the listening-only functionality*



Article	Order Number	Category	Version
<b>netFIELD</b> App PROFINET TAP	1917.007	Data Acquisition	1.0.0

#### HEADQUARTER

Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

[contact@netfield.io](mailto:contact@netfield.io)  
[www.netfield.io](http://www.netfield.io)

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# CONTAINER REVOLUTION

ENABLING THE INTELLIGENT EDGE



# THE FUTURE IS INTELLIGENT AND CONTAINERIZED

Hilscher, a leader in industrial communication, has launched a unified IoT technology portfolio and named it **netFIELD**. It includes scalable gateway hardware (**netFIELD Edge**), a secure operating system (**netFIELD OS**), ready-to-use applications for the edge (**netFIELD Apps**), an open REST API standard for connecting with **netFIELD**-based applications and services (**netFIELD Cloud**), and a user-friendly self-service portal (**netFIELD Portal**).

**netFIELD** is a fully managed service that makes it possible to run workloads at the edge from a central point at scale, bringing intelligence to the edge with a hybrid cloud and edge approach.

**CONTAINERS ARE REVOLUTIONIZING CONNECTED IOT  
DEVICES AND NETFIELD.IO IS THE PERFECT MATCH  
TO MANAGE AND RUN THEM.**

## INTELLIGENT EDGE

We solve the data integration challenge by running intelligence at the edge. Deploy Docker containers to your devices. Build your own applications or get our ready-to-use containers.

## OPEN PLATFORM

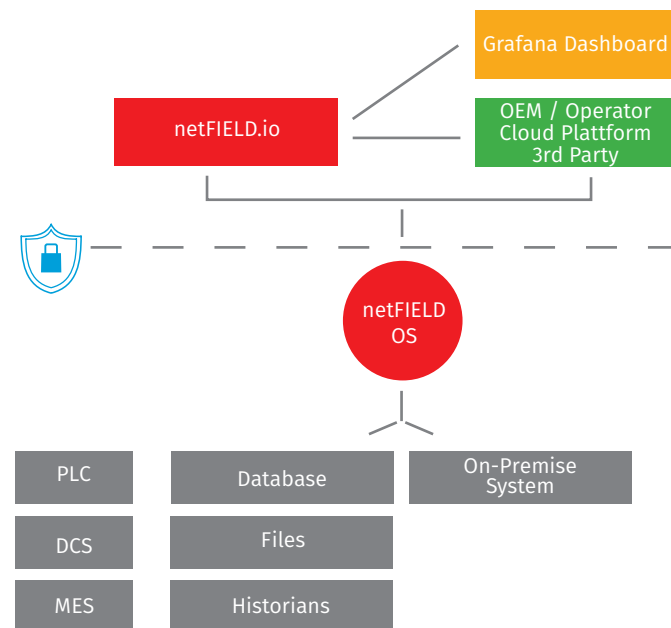
Manage your devices from a single-point with end-to-end security, powerful open APIs and SDKs. Use our data storage or streaming pipeline for further data analysis or visualization.

## EASY PORTAL

Manage your device fleet with our self-service portal by deploying containers, updating the operating system or remote managing configurations.

## FAST DASHBOARD

Quickly focus on the most important aspects of your data using user-defined visualization dashboards.



## INDUSTRIAL IOT SOLUTIONS DO COST MILLIONS

- Why should you reinvent the wheel?
- Join us at the forefront of technology.

With our technology, you pull ahead  
of your competitors.

## REMOTE MANAGER

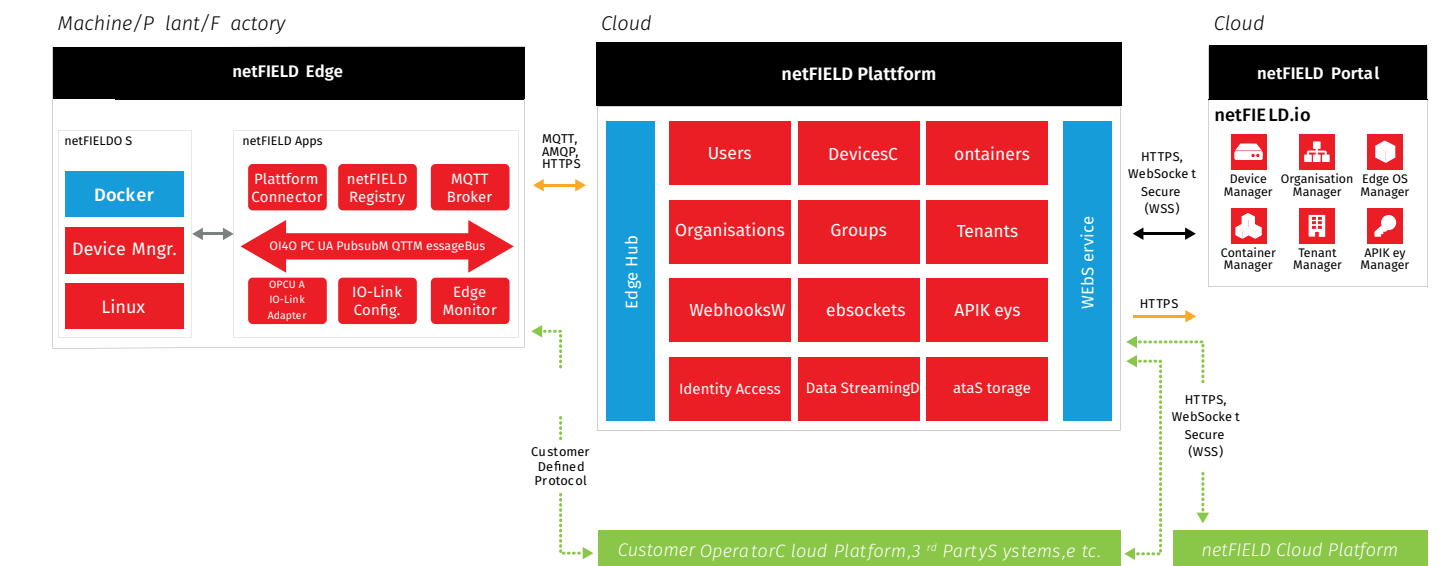
Control and manage your devices  
with a secure, private connection  
from anywhere.

## CONTAINER MANAGER

Create your container collection  
and share them with your  
customers and partners.

## DATA STREAMING & STORAGE

Use our data storage and real-time IoT streaming for dashboarding and analytics applications.



**netFIELD** is one platform for all your data integration and application management needs.



## REACH NEW HEIGHTS

Item	Description
<input checked="" type="checkbox"/> <b>ON-BOARDING WORKSHOP</b>	Hands-on workshop about how our technology can elevate your business outcomes. Any number of participants, one price.
<input checked="" type="checkbox"/> <b>netFIELD.IO TENANT</b>	Get your slice of a multi-tenant cloud.
<input checked="" type="checkbox"/> <b>netFIELD.IO INSTANCE</b>	Your dedicated cloud deployment.
<input checked="" type="checkbox"/> <b>netFIELD OS</b>	Our proven OS on your devices.

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Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

[contact@netfield.io](mailto:contact@netfield.io)  
[www.netfield.io](http://www.netfield.io)

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# netFIELD

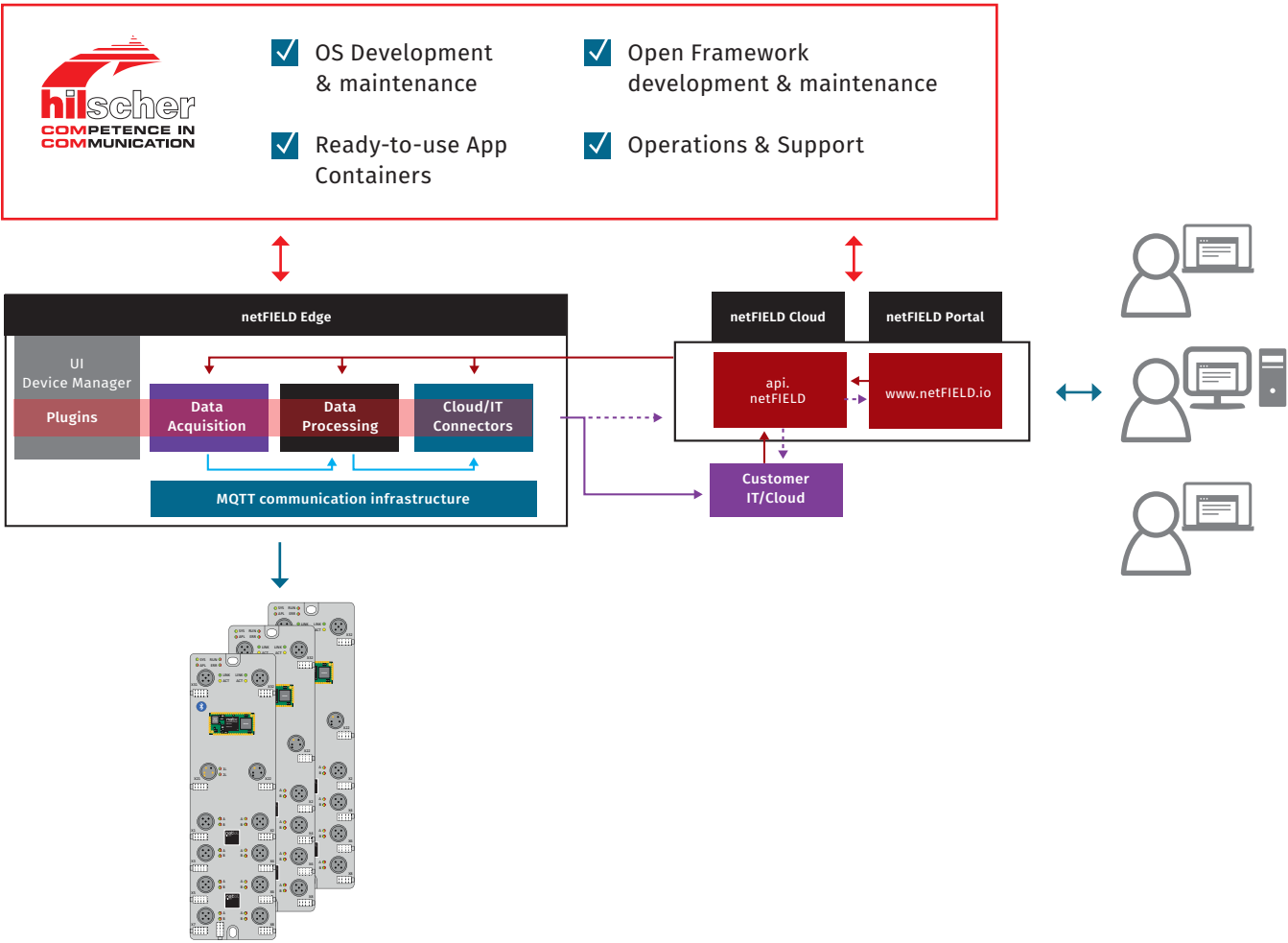
## COST STRUCTURE



netFIELD: SOFTWARE AS A SERVICE

The **netFIELD** framework (**netFIELD** Cloud, **netFIELD** Portal, **netFIELD** Apps and **netFIELD** OS) is designed to help you run your cloud-based business model for industrial applications. It allows you to manage distributed edge devices or instances inside plants or machines that acquire, process and consolidate data to be transferred to cloud applications.

Hilscher is developing, maintaining and supporting the framework and provides it as Software-as-a-service (SaaS). This allows the implementation of not only modern technical services but as well an attractive cost structure that supports your business model being technically and commercially efficient.



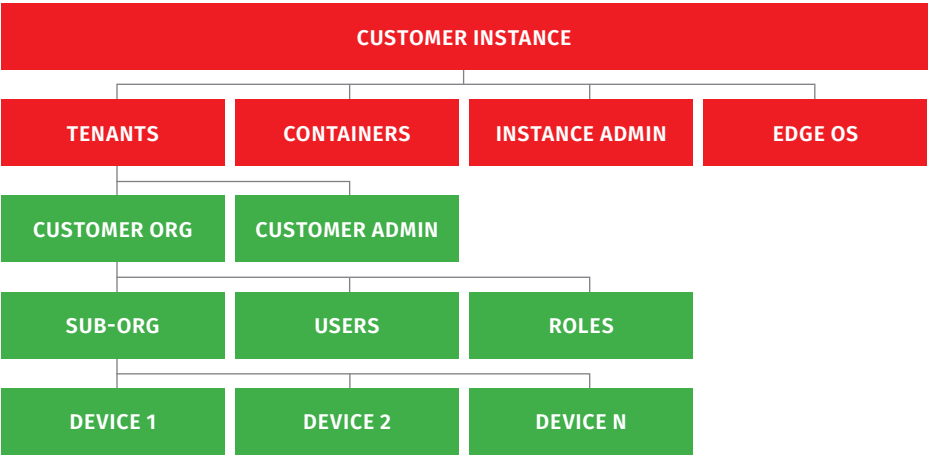
USING NETFIELD SERVICES YOU GAIN A WIDE RANGE OF FLEXIBILITY BY SELECTING ONE OF THE BASIC SUBSCRIPTION MODELS

- ESSENTIAL**  
Entry-level with a relatively low number of devices
- BUSINESS**  
Flexible tenant structure for device fleet management
- ENTERPRISE**  
Full instance authority with all framework features

netFIELD: SUBSCRIPTION MODELS

**netFIELD** subscriptions mainly differentiate by the administration level of the framework. While the Essential model allows a user to just manage its devices, the Enterprise model instantiates the framework under the full management authority of the subscriber.

NETFIELD.IO ORGANIZATIONAL VIEW



LIST OF SUPPORTED FEATURES OF THE SUBSCRIPTION MODELS

Feature Overview	Essential	Business (Tenant)	Enterprise (Instance)
Tenant management	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Manage organisations and sub-organisations	<input type="checkbox"/> / <input type="checkbox"/>	<input checked="" type="checkbox"/> / <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> / <input checked="" type="checkbox"/>
Possibility to create users/administrators	<input checked="" type="checkbox"/> / <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> / <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> / <input checked="" type="checkbox"/>
Control update timeframe of the cloud platform	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Release and provide your OS/FW versions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Data storage in encapsulated database	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Number of managed devices, users, organisations and API-keys	limited	defined by tenant	unlimited
Send process data to your own IT environment (no storage in the Hilscher Portal netFIELD.io)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Own domain naming for netFIELD.io platform	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Subscription costs on monthly basis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Initial setup cost	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Onboarding Workshops	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>





## INITIAL

Art. No.	Item	Description	Costs
TBD	On-Boarding Workshop	Duration: 2 days For clarification of customer application and netFIELD.io platform setup requirements	One time payment
TBD	Test devices	PROFINET IoT Gateway "Connect" (NIOT-E-TP51-EN-RE); max 3 devices; available only in combination with the On-Boarding Workshop	
1351.020	netFIELD Essential Setup	Setup and commissioning; includes 5 devices, 3 users	
1351.021	netFIELD Business Setup	Setup and commissioning	
1351.022	netFIELD Enterprise Setup	Setup and commissioning	

## PLATFORM OPERATIONAL COSTS

Art. No.	Item	Costs
TBD	netFIELD Essential Subscription	Subscription / month
TBD	netFIELD Business Subscription (5 users)	
TBD	netFIELD Enterprise Subscription (5 users)	

## DEVICE MANAGEMENT COSTS

### ENTERPRISE AND BUSINESS SUBSCRIPTIONS

Art. No.	Item	Costs
TBD	Edge Gateway (EGW) management: includes all data traffic required for health and status data, firmware updates and container configuration management	Subscription / month tiered pricing based on number of connected EGWs

### ESSENTIAL SUBSCRIPTION

Art. No.	Item	Costs
TBD	Edge Gateway (EGW) management: includes all data traffic required for health and status data, firmware updates and container configuration management	Subscription / month tiered pricing based on number of connected EGWs

## HEADQUARTER

Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

contact@netfield.io  
www.netfield.io

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# netFIELD DEVICE

IP67, netX SOCS & netRAPID

# IO-LINK DEVICES WITH REAL-TIME ETHERNET

OPTIMIZED TECHNOLOGY PLATFORM WITH PRE-QUALIFIED SOFTWARE ECOSYSTEM

**netFIELD** Device technology platform connects IO-Link sensors – wired or wireless – with demanding Real-Time Ethernet networks. For configuration and diagnostics an integrated OPC UA server with IO-Link companion profile is used. It

combines established **netX 90** technology with Hilscher's new netIOL chip – an intelligent IO-Link transceiver with additional diagnostics to detect plant errors.

## IO-LINK COMMUNICATION FOR OEM BRANDLABELING

### Network Connectivity

- Based on proven HILSCHER netX technology

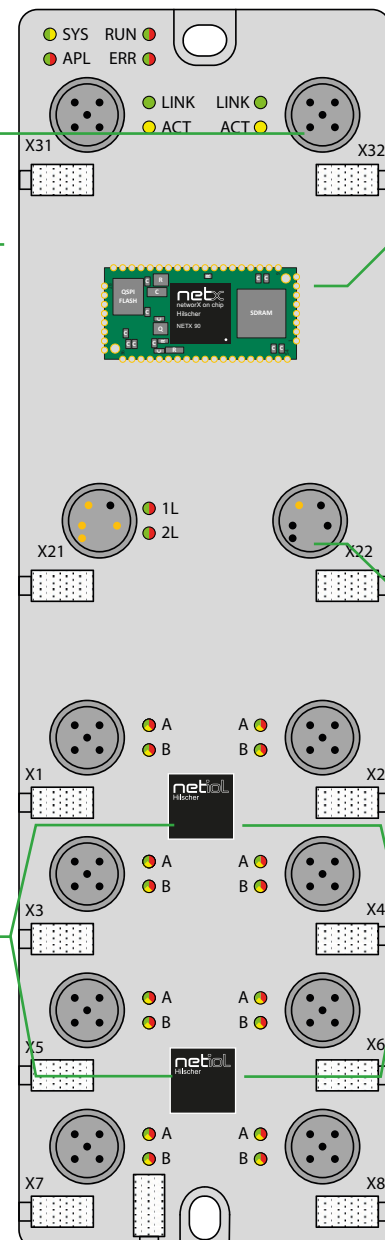


### Configuration & Diagnosis

- Based on OPC UA using IO-Link Companion Profile
- Per webserver or OPC UA via Ethernet
- Alternatively wireless via mobile devices

### Intelligent 4-channel IO-Link transceiver

- 32Bit RISC CPU, up to 16 ports cascable
- 8-port time synchronized communication with 400µs cycle time
- Diagnosis of voltages and currents from each IO-Link pin, on-chip temperature and supply voltage



### Modular application firmware

- Configurable runtime including protocol & IO-Link stack, OPC UA & webserver, configuration & OEM management
- Qualified firmware & precertified networks
- Expandable to fit your application
- Firmware download, authentication, IO-Link port configuration and diagnosis via integrated webserver.

### Sensor and Device powering

- Up to 16A each for 1L and 2L
- Max. 4A (Pin1) per sensor
- Nom. 2A (DO) per digital out

### Alternatively IO-Link wireless module

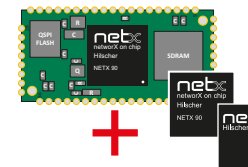
- TigoMaster 2T SOM from CoreTigo
- Supports up to 16 Wireless devices

## FROM CHIPSET VIA MODULE TO BRANDLABELED IP67 DEVICE



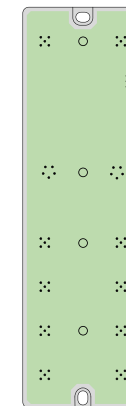
### netX 90 & netIOL

- Chipset for own designs
- Tested circuit board designs, incl. design package
- Branded software or own application



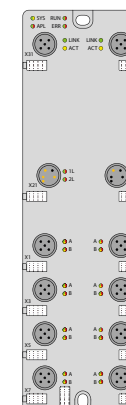
### netX RAPID 90 netIOL

- Embedded module for own designs
- Tested circuit board designs, incl. design package
- Preloaded with software
- Branded software or own application



### OEM Circuit Board

- Individual or ready-to-use OEM hardware
- Tested & qualified circuit board
- Preloaded with software
- Branded software or own application



### IP67 Brandlabeling

- Ready-to-use IP67 module
- Tested & certified product
- Preloaded with software
- Branded software or own application



Customers profit from an optimized and validated technology platform as well as a pre-qualified software ecosystem and pre-certified protocol stacks.



# NETFIELD DEVICE TECHNOLOGY PACKAGES

## 1 BRAND LABELING

### IP67 MODULE BRANDING

- brand labeling first IP67 module incl. housing
- fixed functionality, board lineout & connectors
- brand labeling module firmware
- production of IP67 device at Hilscher

### OEM CIRCUIT BOARD ONLY

- brand labeling first OEM circuit board, w/o housing
- fixed functionality but customizable board lineout & connectors
- brand labeling module firmware
- production of OEM circuit board at Hilscher
- housing incl. cast resin filling by OEM

### OPTIONAL

- workshops & more
- certification support
- additional firmware modifications
- Future option: Bluetooth interface

## 2 EMBEDDED

### MODULE – NETRAPID 90 & NETIOL

- preloaded & ready-to-use embedded module for own designs
- tested circuit board design, incl. design package & schematics
- basic firmware application as an example
- production of netRAPID 90 at Hilscher

### CHIPSET - NETX 90 & NETIOL

- chipset for own designs
- tested circuit board design, incl. design package & schematics
- basic firmware application as an example
- design & production by OEM

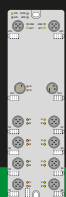
### OPTIONAL

- evaluation board & workshops
- sophisticated application example
- certification support
- Future option: Bluetooth interface

## 3 OEM SPECIFIC

### CUSTOMER SPECIFIC IP67 SOLUTION

- based on netFIELD device technology
- OEM specific hardware and software modifications
- production at Hilscher or OEM



### IO-Link DI/DO/DIO

IO-Link Master,  
Digital Input/Output

60mm, 8 ports with M12

PROFINET IO-Device,  
EtherCAT Slave,  
EtherNet/IP Adapter

8 Port IOL-M, Class A  
8 Port IOL-M, Class B

16 DI, 16 DO, 16 DIO,  
8 DIO + 8 DIO

-25°C ... +70°C

1L: max. 16A  
2L: max. 16

Sensor supply: max. 4A (Pin1)  
Digital Out: nom. 2A (DO)

### IO-Link DI/DO/DIO

IO-Link Master,  
Digital Input/Output

30mm, 8 ports with M8

PROFINET IO-Device,  
EtherCAT Slave,  
EtherNet/IP Adapter

8 Port IOL-M, Class A

16 DI, 16 DO, 16 DIO

-25°C ... +70°C

1L: max. 16A  
2L: max. 16A

Sensor supply: max 4A (Pin1)  
Digital Out: nom. 2A (DO)

### IO-LINK Wireless Master

Wireless IO-Link Master

30mm

PROFINET IO-Device,  
EtherCAT Slave,  
EtherNet/IP Adapter

Wireless, 2 tracks, 16  
channels

-

-25° ... + 70°C

-

-

### IO-Link Device (Hub)

IO-Link Slave Hub

30mm, 8 ports with M8

-

IOL-Hub, Class A  
IOL-Hub, Class B

8 DIO

-25°C ... +70°C

1L: max. 4A  
2L: max. 4A

Sensor supply: max. 2A (Pin1)  
Digital Out: nom. 2A (DO)

Note: All technical data may be changed without further notice.

## HEADQUARTER

Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

contact@netfield.io  
www.netfield.io

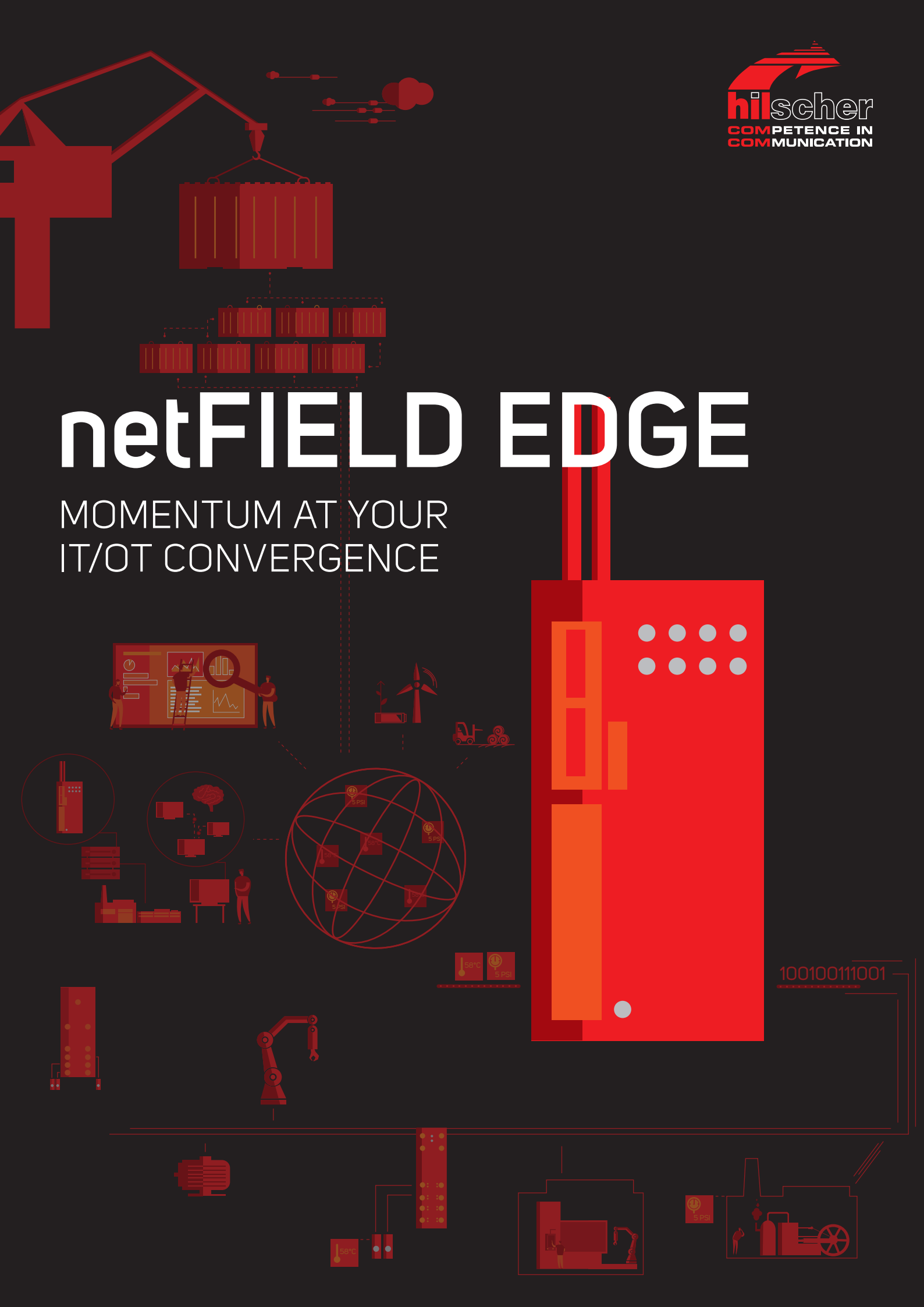
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# netFIELD EDGE

MOMENTUM AT YOUR  
IT/OT CONVERGENCE



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## YOUR DIGITAL IIOT TRANSFORMATION WITH OUR MANAGED EDGE DEVICES

Devices of **netFIELD** Edge complement the factory floor when PLCs alone come to their limits in IIoT based instrumentations delivering loads of data. They aggregate, compute or forward with power. Your augmented intelligence software either device deployed or on a companion cloud exploits the information flood turning it into factory insights to gain beneficial value outcome like reducing downtimes or increasing efficiency.

The integrated Docker enables the deployment of any business logic and computing jobs wrapped up into secure and portable containers. In minutes your software is shifted to the local edge on any number of devices managed world-wide through a complementing web portal.

## YOUR FOCUS STAYS ON APPLICATIONS WITH OUR EDGE SOLUTION-READY PLATFORMS

### HIGH ASSURANCE LINUX

YOCTO Linux with security modules, signed images boot only and TLS secured web front end

### DOUBLE DOCKER

Portal and local shell managed two Docker instances for moving containerized workload encapsulated and securely onto the devices

### INDUSTRIAL ETHERNET

Multi-protocol controller **netX** featuring Industrial Ethernet networks real-time processing in active or listening mode

### ENHANCED CONNECTIVITY

Device model dependent connectivity options for Wifi, USB, serial, CAN, storage, display and many more

### COMPUTING POWER

Sufficient CPU power executing even sophisticated container software on premise



Separate OT ports for Real-Time Ethernet networks like PROFINET, EtherCAT, EtherNet/IP



Powerful x86 or ARM based quad-core CPUs with clock rates starting at 1.2GHz



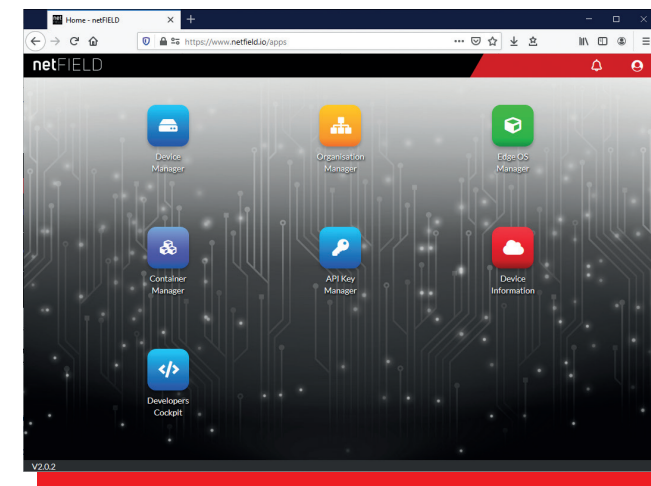
IT uplink ports for both local or cloud based intermittent communications



Additional interfaces for different types of sensors and actuators of the shop floor



## YOUR DEVICE FLEET MANAGED THROUGH YOUR INTERNET PORTAL



### ENTERPRISE PORTAL

Web control center for remote orchestration and management of installed device fleet and their software containers

### ACCESS CONTROL

Administration of company hierarchical structures with role-based permission control

### REST API

https based programming interface for building own fully featured portal independent web or mobile apps

### SCALEABLE ROLL-OUT

OEM prepared to maintain an own instance or a custom portal copy as a tenant



*Our hybrid Edge/Portal solution brings intelligence to your IT/OT transitions at any time from anywhere. Remote deployment, troubleshooting and auto-provisioning contribute to a rapid scale across any containerized software to reduce capital and operational costs of your Integrated Industry and Automation projects.*

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Technical data	Description
OT networks support	Protocols PROFINET, EtherNet/IP, EtherCAT, Modbus TCP
IT networks support	Any Ethernet frame based protocol
Operating system	Linux, Yocto based
Security enhanced OS	Yes
Real-Time kernel patched	Yes
SSH access	Yes
Web user interface	Cockpit, <a href="http://www.cockpit-project.org">www.cockpit-project.org</a>
Container engine	Docker 19.x CE
Docker engine instances	Two. First locally manageable, second from remote
Local instance management	Via SSH or Cockpit UI, Docker standard
Remote instance management	Via <a href="http://www.netfield.io">www.netfield.io</a> internet portal, usage optional
Portal subscription	On monthly basis
Fleet container management	Via portal UI frontend
Remote access to local UI	Via portal UI frontend
Remote software update	Via portal UI frontend
RESTful API backend	Yes
White labeling	Yes

Article	Order Number	Description
NIOT-E-TPI51-EN-RE/NFLD	1321.400/NFLD	Docker Edge Gateway "netFIELD Connect", 4x 1.2GHz ARM32 CPU, 1GB RAM, 8GB SD, Wifi
NIOT-E-TIJCX-GB-RE/NFLD	1321.300/NFLD	Docker Edge Gateway "netFIELD OnPremise", 4x 2GHz x64 CPU, 8GB RAM, 128GB SSD, Wifi

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Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

[contact@netfield.io](mailto:contact@netfield.io)  
[www.netfield.io](http://www.netfield.io)

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# LET IO-LINK SENSORS SPEAK INTERNET DIRECTLY



## LEAVE CLASSIC IO-LINK INSTRUMENTATIONS BEHIND – USE INSTANT-ON INTERNET INSTEAD

**sensorEDGE** gets your IO-Link sensors' data directly on the internet eliminating the use of PLCs, Fieldbus and separate IO-Link masters. The sensor boxes uplink to an internet portal where the boxes and the connected sensors are ad-

ministered and their data is visualized. IO-Link sensors are commissioned with ease due to an auto-discovery and -provisioning service using sensors' IODD files automatically grabbed from a central database.

## RUGGED IO-LINK-TO-CLOUD SENSOR BOX

### HIGH DATA UPDATE RATE

Data exchanged at fine scale for responsive and time sensitive applications

### IP67 CLASS PROTECTED

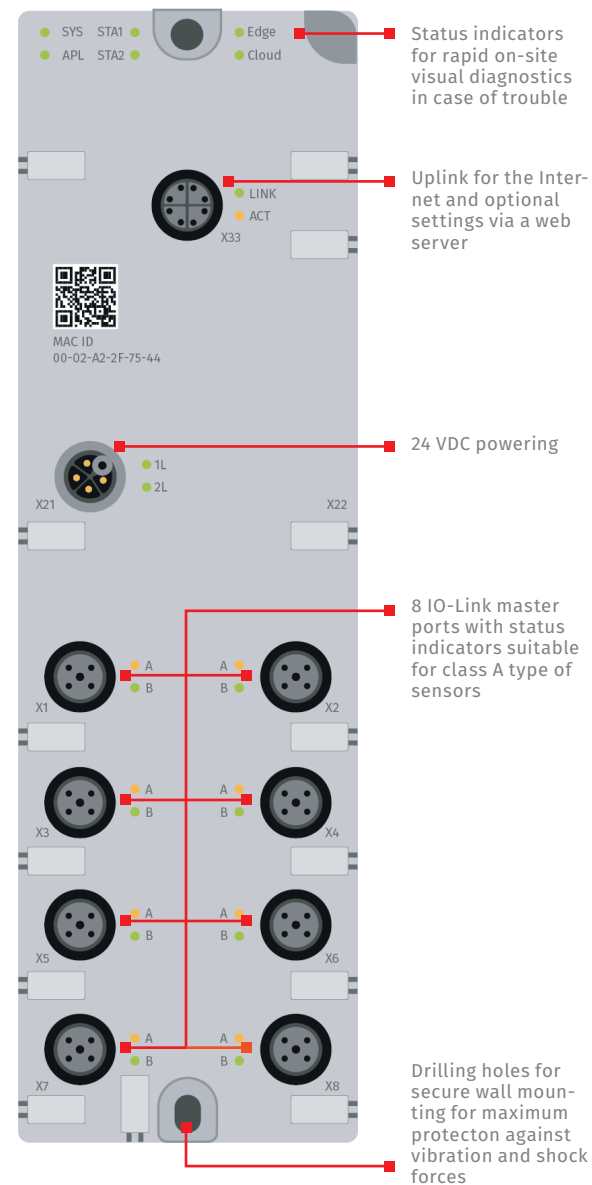
Encapsulated for cabinet-free installations in the field in any machine-close harsh environment

### 8 IO-LINK CHANNELS

For multi-sensor applications with high demand for local scope-limited connectivity

### IO-LINK CONFIGURATOR

Embedded web tool to auto-configure known or manually configure even high sophisticated sensors with support of IO-Link IODD files



## YOUR SENSOR DATA MONITORED ANYWHERE AT ANY TIME

### CENTRAL ORCHESTRATION

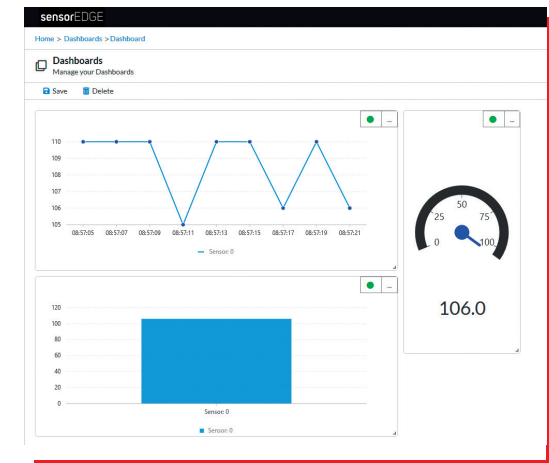
Time saving device and sensor administration from anywhere in the world across the **sensorEDGE** portal.

### FLEXIBLE DASHBOARDS

Powerful dashboards with a set of different widgets to monitor sensor data online at any time.

### REST API CONNECTOR

Personal endpoint to query maintained sensors' data from own applications for monitoring, long-term analytics or diagnostics.



The **sensorEDGE** boxes are compatible with over 10.000 marketed IO-Link devices. By redirecting their data to the Internet directly they are the cost-saving solution for any small and mid-range stand-alone and unattended in- and outdoor application. Remote monitoring your distributed assets wasn't easier.

100100111001





## TECHNICAL DATA

<b>IO-Link connectivity</b> 8 x Class A IO-Link master	<b>Dimension (L x W x H)</b> 200 mm x 60 mm x 20 mm
<b>Ethernet uplink</b> 1 x 100MBit/s	<b>Rating</b> IP67
<b>Power Supply</b> 1 x 24V DC	

## PRICING

<b>sensorEDGE Device</b>	One-off costs
<b>Portal subscription</b>	Monthly/annual, prepaid billing
<b>Sample rate/transfer interval to portal</b>	1 x per second/10 seconds/minute/hour/day
<b>Dashboard widgets</b>	Online line chart, gauge chart, bar chart
<b>API request limit per month</b>	2 x sample rate x 2.592.000

## PARTICIPATORY EVALUATION

JOIN THE  
PARTNERSHIP  
PROMOTION  
PROGRAM

## HEADQUARTER

Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

contact@netfield.io  
www.netfield.io

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# APP CONTAINER

INTELLIGENT EDGE SOLUTIONS

customer HILSCHER



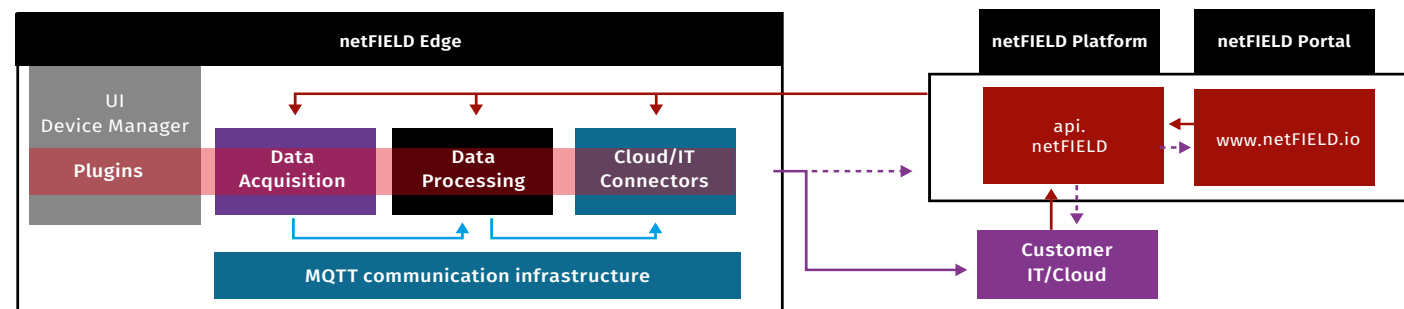
# BUILDING A CUSTOMER SOLUTION IS LIKE AN ORCHESTRATION.

A huge choice of available application containers can be networked to complete the customer solution with a minimum of development effort.

## Application containers might provide functions for

- Process-, Topology- and Asset Data acquisition from field devices and other data sources
- Data storage, aggregation and filtering
- Cloud-/On-Premise application connectivity and secure data transport

The open **netFIELD** application container reference architecture includes interfaces for the inter-container communication using MQTT. In this way it is possible to distribute overall solution workload over several devices or virtual machines. Additionally an application container may also be equipped with user friendly web application which can be seamlessly integrated as plugin into the Edge Device Manager. The ability to implement methods into an application container, which can be called via the cloud api is completing the reference architecture of a **netFIELD** application container.



## READY TO USE NETFIELD APPLICATION CONTAINER

### NETFIELD APP PROFINET TOPOLOGY

Make local data centrally available in the **netFIELD** Cloud platform.

- ✓ Transport data from the MQTT communication infrastructure to the **netFIELD** cloud platform API, where this data is exposed as a Web Socket Secure endpoint. You are free to configure which data topics are transported to the **netFIELD** Cloud platform.
- ✓ The configuration can be done locally or remote via the Device Manager provided by **netFIELD** OS.
- ✓ Stream this data into analytics pipelines or realtime dashboards. The firmware update of the **netFIELD** Edge device is also managed by the **netFIELD** Proxy application container.

### NETFIELD APP PROFINET DEVICE

Enable a **netFIELD** Edge device to be a field device in a PROFINET network

- ✓ **netFIELD** Edge devices with integrated netX technology can be connected directly to a real time ethernet network. In this case the **netFIELD** Edge device can exchange cyclic IO data with the PLC. Input an output data can be read/write via the MQTT communication infrastructure.
- ✓ The configuration can be done locally or remote via the Device Manager provided by **netFIELD** OS.

### NETFIELD APP PROFINET TOPOLOGY

Monitoring of topology and assets connected to a PROFINET network.

- ✓ The **netFIELD** PROFINET Topology application container is able to recognize, which devices including IO-Link sensors are available in the network and knows how they are related to each other.
- ✓ The complete set of asset data and network information is published to the MQTT communication infrastructure on a regular base.

### NETFIELD APP PROFINET TAP

Data diode to the field network and data filtering

- ✓ This one-way network connector can be attached without need to change the PLC configuration. The initial configuration is done while the machine will start. In this phase the **netFIELD** App PROFINET Tap is collecting all information about attached devices and IO data exchange between devices and PLC. Each IO data-point of a field device can be selected for publishing it to the MQTT communication infrastructure.
- ✓ The configuration can be done locally or remote via the Device Manager provided by **netFIELD** OS.

### MQTT COMMUNICATION INFRASTRUCTURE

- ✓ A further ready to use **netFIELD** application container is the **netFIELD** App MQTT Broker, which can be deployed to any **netFIELD** Edge device running **netFIELD** OS or a virtual **netFIELD** Edge device running **netFIELD** OS for Data-center. So it is possible to provide the MQTT communication infrastructure by one single device. In the case, that an MQTT broker is already available in the network, this broker can be used as MQTT infrastructure for the **netFIELD** application container as well.

### NETFIELD APP EDGE MONITOR

Monitor your **netFIELD** Edge device resource usage.

- ✓ Gain health insights and take action based on the acquisition of **netFIELD** Edge device configuration information and resource consumption data. The collected information are published to the MQTT communication infrastructure on a regular base.
- ✓ **netFIELD** Proxy is available and configured to provide these data to the **netFIELD** Cloud platform a data visualization is available in the **netFIELD** Portal.

### NETFIELD APP OPC UA CONNECTOR

Connect to and browse multiple OPC UA server of field devices

- ✓ This easy-to-use OPC UA Connector enables the connection to multiple OPC UA capable field devices and is able to automatically browse the complete node tree of any OPC UA Server. Relevant nodes can be selected so that the values can be published in the MQTT communication infrastructure. The configuration can be done locally or remotely via the device manager provided by **netFIELD** OS.

### NETFIELD APP AZURE/AWS/GOOGLE CONNECTOR

- ✓ Push selected data streams to the cloud of your choice.
- ✓ Transport data from the MQTT communication infrastructure to the Azure, AWS or Google cloud.
- ✓ The app configuration can be done locally or remote via the Device Manager provided by **netFIELD** OS or **netFIELD** Cloud.



Deploy the ready-to-use **netFIELD** apps together with self-developed containers to your **netFIELD** Edge devices in order to complete high-quality customer solutions.



Article	Order Number	Category	Version	Price / per Edge (EUR)
<b>netFIELD</b> App PROFINET Topology	1917.006			
<b>netFIELD</b> App PROFINET TAP	1917.007	Data Acquisition	1.0.0	
<b>netFIELD</b> App PROFINET Device	1917.004	Data Acquisition	0.9.3	
<b>netFIELD</b> App OPC UA Client	1917.009	Data Acquisition	0.9.1	
<b>netFIELD</b> App Google Connector	1917.003	IT/Cloud Connectors	1.1.0	
<b>netFIELD</b> App EtherCAT Tap	1917.008	Data Acquisition	Q4/2020	
<b>netFIELD</b> App Edge Monitor	1917.005	Data Acquisition	0.9.1	
<b>netFIELD</b> App Azure Connector	1917.001	IT/Cloud Connectors	1.1.0	
<b>netFIELD</b> App AWS Connector	1917.002	IT/Cloud Connectors	1.1.0	
<b>netFIELD</b> App Platform Connector	–	Connectivity	1.1.2	
<b>netFIELD</b> App MQTT Broker	–	Connectivity	1.6.8	
<b>netFIELD</b> App IO-Link Configurator		Connectivity	0.9.1	
<b>netFIELD</b> App OPC UA IO-Link Adapter		Connectivity	0.9.1	
<b>netFIELD</b> App IBH S7 Connector		Data Acquisition	Q4/2020	

Get in contact with  
our sales team

## HEADQUARTER

Germany  
Hilscher Gesellschaft für  
Systemautomation mbH  
Rheinstraße 15  
65795 Hattersheim (Frankfurt)

[contact@netfield.io](mailto:contact@netfield.io)  
[www.netfield.io](http://www.netfield.io)

## SOCIAL MEDIA

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information  
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