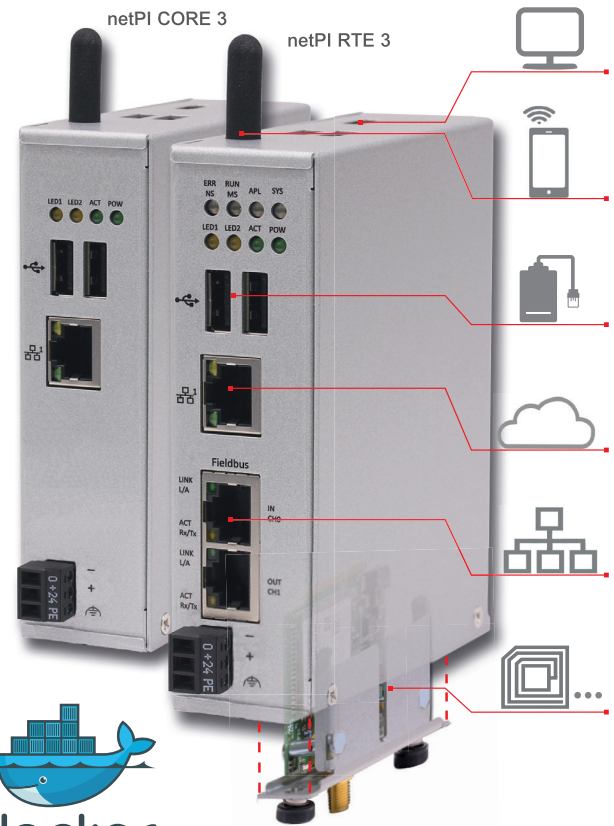
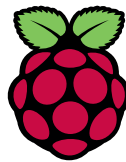


- Raspberry Pi 3 architecture based platforms
- With/without Industrial Ethernet controller
- For Cloud and IIoT Edge Automation projects
- Cyber secured infrastructure for industrial use
- Docker host for container-isolated user apps
- Expansion slot for advanced networking modules



### Hardened design for industrial use

The device series netPI is based on an industrial suited customized Raspberry Pi 3 design made to run any custom applications of the Edge Automation. The model RTE 3 comes with Hilscher's multiprotocol netX SoC additionally implementing all popular Industrial Ethernet networks. With their powerful Pi 3 1.2GHz quad-core ARM CPU the platforms are ready-made for any demanding Cloud, Industry 4.0 and Industrial Internet of Things (IIoT) application.

The model netPI RTE 3 includes two Industrial Ethernet ports extra to connect to systems such as PROFINET, EtherNet/IP and others, as supported by netX. An expansion slot at the units bottom accepts extension modules made for sensor/actuator level communications such as RFID, digital I/Os, others or own custom boards.

To meet EMC standards EN 55011 and IEC 61000, netPI is housed in a robust metal chassis and uses two additional PCB layers compared to a standard Pi 3. The radio antenna extends beyond the chassis for improved wireless coverage. A hardware Real-Time Clock with a supercapacitor as backup power source is supported. A nonvolatile auxiliary ferroelectric memory (FeRAM) guarantees high endurance for data to be rewritten billions of times (Model RTE 3).

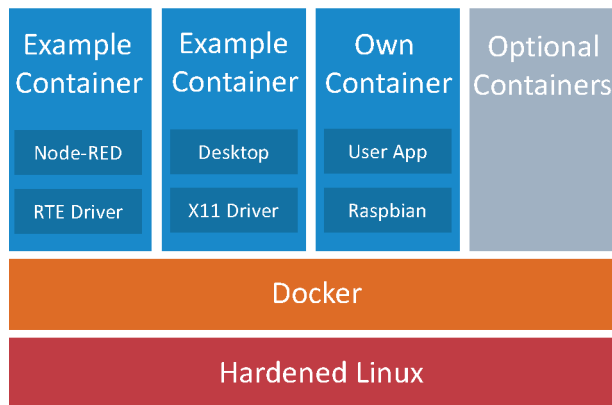
netPI hosts an AppArmor-secured Yocto Linux build. By design, the system software complies with the IEC 62443 cybersecurity standard for automation and control systems. User access is granted via web browsers over https-secured connections. The device boots secure and allows system updates with Hilscher integrity-checked software only.

# Technical Data / Product Overview

## Deploy software securely with Docker

User applications can be added to netPI with the hosted Docker environment only. Containerized software runs isolated and is not able to compromise netPI's host security. Also it will run the same regardless of the given host. So installing Docker on a popular Pi 3 turns it into a container development platform for netPI in minutes. Later a container transfer shifts work from Pi 3 onto the secured netPI. For that a web browser based GUI supports maintaining the containers lifecycle on netPI.

Docker Hub is the common exchange platform for Docker containers. netPI's registry at <https://hub.docker.com/r/hilschernetpi/> is providing container samples for immediate use, such as the Thing-editor Node-RED or a Desktop and many more. Other registries host third party Pi compatible software you can use as well or even better your own containers.



Parameter	Value
Dimensions (H x W x L)	140 x 35 x 105 mm
Enclosure	Metallic, top hat rail-mountable, IP 20
Weight	400g
Power supply	19.2V ... 28V DC, 3-pin 3.5mm terminal block
Power consumption	min. 4.2W (no USB), max. 9W (USBs load 1A)
Temperatures	-20°C ... +60°C operating, -40°C ... +85°C storage
Processors	BCM2837@1.2Ghz, netX51
Memory	8GByte MLC NAND (3000w/e)
RAM	1GByte LPDDR2 RAM, 8KByte FeRAM (RTE 3)

Parameter	Value
Ethernet, standard	1x RJ45, 10/100Mbit/s
Interfaces	4x USB 2.0A (max. load 1A), 1x HDMI, 1x Wifi/BT
Real-time clock	capacitor buffered, 7 days backup
Ethernet, industrial	2x RJ45, 10/100Mbit/s (RTE 3)
Indicators	4 basic Pi LEDs, 2 programmable, 4 netX LEDs (RTE 3)
Approvals	CE, FCC
EMC	EN 55011:2009, IEC 61000-6-2:2005, EN 61131-2
Operating system	Yocto Linux, Kernel 4.9 or higher (AppArmor secured)
Docker	17.06.1-ce or higher with Portainer.io web GUI

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

Article Description	Article
NIOT-E-NPI3-51-EN-RE	netPI RTE 3, Industrial Pi 3 with Industrial Ethernet Controller
NIOT-E-NPI3-EN	netPI CORE 3, Industrial Pi 3 (Q1/2018)
NIOT-E-NPIX-RFID	netPI RFID extension module (Q1/2018)
NIOT-E-NPIX-IO	netPI 4 digital I/O extension module (Q1/2018)
NIOT-E-NPIX-EVA	netPI expansion slot to 52 pin header evaluation board (Q1/2018)
netHAT 52-RTE	netHAT module with netX SoC for netPI software development on standard Raspberry Pi



### Headquarters

**Germany**  
Hilscher Gesellschaft für Systemautomation mbH  
Rheinstrasse 15  
65795 Hattersheim  
Phone: +49 (0) 6190 9907-0  
Fax: +49 (0) 6190 9907-50  
E-Mail: [info@hilscher.com](mailto:info@hilscher.com)  
Web: [www.hilscher.com](http://www.hilscher.com)

### Distributors

More information at [www.hilscher.com](http://www.hilscher.com)

### Subsidiaries

**China**  
Hilscher Systemautomation (Shanghai) Co. Ltd.  
200010 Shanghai  
Phone: +86 (0) 21-6355-5161  
E-Mail: [info@hilscher.cn](mailto:info@hilscher.cn)

**France**  
Hilscher France S.a.r.l.  
69500 Bron  
Phone: +33 (0) 4 72 37 98 40  
E-Mail: [info@hilscher.fr](mailto:info@hilscher.fr)

**India**  
Hilscher India Pvt. Ltd.  
Pune, Mumbai  
Phone: +91- 8888 750 777  
E-Mail: [info@hilscher.in](mailto:info@hilscher.in)

**Italy**  
Hilscher Italia S.r.l.  
20090 Vimodrone (MI)  
Phone: +39 02 25007068  
E-Mail: [info@hilscher.it](mailto:info@hilscher.it)

**Japan**  
Hilscher Japan KK  
Tokyo, 160-0022  
Phone: +81 (0) 3-5362-0521  
E-Mail: [info@hilscher.jp](mailto:info@hilscher.jp)

**Korea**  
Hilscher Korea Inc.  
Seongnam, Gyeonggi, 463-400  
Phone: +82 (0) 31-789-3715  
E-Mail: [info@hilscher.kr](mailto:info@hilscher.kr)

**Switzerland**  
Hilscher Swiss GmbH  
4500 Solothurn  
Phone: +41 (0) 32 623 6633  
E-Mail: [info@hilscher.ch](mailto:info@hilscher.ch)

**USA**  
Hilscher North America, Inc.  
Lisle, IL 60532  
Phone: +1 630-505-5301  
E-Mail: [info@hilscher.us](mailto:info@hilscher.us)