
fischertechnik Training Factory Industry 4.0

Facts & figures

Name	fischertechnik Training Factory Industry 4.0
Brand	fischertechnik GmbH, construction kit manufacturer “Made in Germany”, founded in 1965 Headquarters: Waldachtal (near Horb am Neckar, Baden-Württemberg, Germany)

What support does the fischertechnik Training Factory Industry 4.0 offer?

Training and simulation on a realistic production model
In-depth learning through haptic comprehension
Optical and sensory applications
Digital traceability with NFC/RFID
Custom manufacturing in batch size 1
Integrated cloud connection
Control via smart devices
Use and operation of dashboards
Web-based remote maintenance
Connection of production and planning data
Connection of upstream and downstream logistics processes
Software application in C/C++
Individual programming possible

Important Components of a haptic training factory

TXT controller, Storage and retrieval stations, vacuum gripper robot, high bay warehouses, multi-processing station with oven, sorting line with colour detection,
environmental sensor, pivoting camera, NFC/RFID reader, calibration unit, WLAN router.

Technical Features TXT controller

- ✓ Communicate via MQTT (Message Queuing Telemetry Transport).
- ✓ Dual processor: ARM Cortex A8 (32bit/600MHz) + Cortex M3
- ✓ Storage capacity: 256 MB DDR3 RAM, 128 MB flash
- ✓ Storage expansion: Micro SD card slot
- ✓ Display: 2.4" colour touch display (320x240 pixels)
- ✓ 8 universal inputs: Digital/analogue 0-9VDC, analogue 0-5 k Ω
- ✓ 4 quick counting inputs: Digital, frequency up to 1kHz
- ✓ 4 motor outputs 9V/250mA (max: 800 mA): Infinitely variable speed, short-circuit proof, alternatively 8 individual outputs, e.g. for lights
- ✓ Combined Bluetooth/WiFi module: BT 2.1 EDR+ 4.0, WiFi 802.11 b/g/n
- ✓ USB 2.0 Client: Mini USB port to connect to a PC
- ✓ USB host port: USB-A port for fischertechnik USB camera, USB sticks, etc.
- ✓ Camera interface: via USB host, Linux camera driver is integrated in the operating system
- ✓ 10-pole pin strip to increase inputs and outputs as well as I2C interface
- ✓ Integrated loudspeaker
- ✓ Integrated real-time clock with replaceable buffer battery for logging measured values within a defined period
- ✓ Linux-based open source operating system
- ✓ Can be programmed with ROBO Pro, C-Compiler, PC-Library, etc.
- ✓ Power supply: 3.45 mm 9V DC port, or 2.5 mm fischertechnik port

Dashboard

The dashboard can be accessed and operated via mobile end devices such as tablets and smart phones as well as through a laptop or pc. This enables the platforms to be displayed from three various perspectives:

- Customer view
- Supplier view
- Production view

Data security

The cloud servers are located in Germany and ensure that stringent European regulations are applied to the data's storage. Personal data is safeguarded in an account with password access that applies the high-security "OAuth2" industry standard. Any data sent to the cloud is transmitted with certificate-based encryption (https standard, green lock symbol in the web browser).

fischertechnik cloud

A connection is established to the fischertechnik cloud through the provided WiFi router that is integrated into the Training Factory. We recommend using Chrome or Firefox browsers. The cloud can be accessed with a personal account that requires one-time setup (www.fischertechnik-cloud.com).

Accompanying booklet

In addition to all technical documents that are available on www.fischertechnik.de/simulieren, there is also an educational accompanying booklet on fischertechnik's eLearning portal with a detailed instruction manual as well as vivid and helpful training and lesson content that has been specially developed for the Training Factory Industry 4.0. It also contains technical specifications and explanations for the individual modules of the Training Factory.

The accompanying booklet can be accessed via www.fischertechnik.de/service/elearning.

The fischer Group of Companies

The fischer Group of Companies, headquartered in Waldachtal in Germany's Northern Black Forest, generated sales of 864 million Euros in 2018 with a worldwide staff of 5,200 employees. The family-owned enterprise operates 47 of its companies in 35 countries and exports to more than 100 countries. It includes the five divisions: fischer fixing systems, fischer automotive systems, fischertechnik, fischer consulting and LNT Automation.

fischer fixing systems is the technological market leader in important areas of fixing technology. fischer offers products that deliver technical perfection to a wide range of customers, from do-it-yourselfers to craftsmen to key account partners.

fischer automotive systems manufactures high-quality parts for car interiors. The company is highly competent in the plastics processing segment and is an important partner for the automotive industry. fischer automotive systems produces air vents, cup holders, trays and multi-function components.

fischertechnik is active both in the construction kit and in the educational toy sector. As one of the last toy makers, fischertechnik develops and produces exclusively in Germany.

fischer consulting evolved from the competence and skills developed in the company itself, among these the fischer ProcessSystem with its central aim of permanent and continuous improvement for the ultimate benefit of the customer. fischer consulting advises small and medium-sized businesses, government agencies and major companies on their way towards lean and efficient processes.

LNT Automation develops and manufactures custom electronic solutions. The company also develops, produces and distributes custom and capacitive touch systems such as multi-touch solutions made of glass and the corresponding controller units. All electronics are manufactured in-house.

www.fischer.group

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