



**We help equipment
manufacturers make
their products smart
and connected.**

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Who we are

Jitter B.V. helps equipment manufacturers make their products smart and connected. From Delft, the Netherlands, we build the electronics, the firmware that runs on it, and the secure server infrastructure around it, so our clients can read out, configure and update their devices remotely. We work as the extended technical team of companies that need that expertise but do not have it in-house.

COMPANY	
LEGAL ENTITY	Jitter B.V.
FOUNDED	2015
LOCATION	Delft, the Netherlands
DISCIPLINES	Electronics, firmware, software
ENGAGEMENT	Feasibility studies, fixed-price projects and long-term partnerships

INDUSTRIES SERVED
Energy & heating systems
Pharmaceutical & medical devices
Industrial automation & factory systems
Construction & infrastructure monitoring
Measurement & data acquisition
IoT & connected devices

Electronics, firmware and software in one team

Hardware and firmware are designed as one integrated whole. That removes the class of integration problems that appears when electronics and software are developed by separate parties. It also gives you a single point of contact across every discipline.

ELECTRONICS

- Schematic and mixed-signal design
- Multilayer, flex and rigid-flex PCB
- EMC/EMI-compliant layout
- Power supplies and battery systems
- Sensor integration and signal conditioning
- Design for manufacturing and series introduction

FIRMWARE

- Embedded Rust and C
- Bare-metal, RTOS and async architectures
- On-device signal processing
- Bootloaders and over-the-air updates
- CAN, Modbus, MQTT and other protocols
- Security- and safety-critical firmware

SOFTWARE & CLOUD

- Touchscreen and embedded GUI
- Backend services and REST APIs
- Web monitoring dashboards
- Data acquisition and condition monitoring
- DevOps and CI/CD for embedded
- Connectivity and industrial IoT

What we can be engaged for

Feasibility study & roadmap A modular desk study: requirements, technology scan, architecture options and a cost model, ending in a go/no-go and a development roadmap.	Connected products New devices or board revisions with 4G, firmware and a secure server, built on our proven sensor-link building blocks.	Modernizing existing equipment Adding connectivity to equipment already in the field, or replacing obsolete electronics with drop-in successors. No big-bang rewrites.	Long-term technical partner Ongoing development, firmware and security updates, and operation of servers and dashboards, years after the first delivery.
PCB design & design review Concept to production-ready files, or an independent review of schematic, layout and manufacturability before fabrication.	Embedded firmware & systems Maintainable firmware in Rust and C, with hardware and firmware co-designed from specification to production transfer.	Embedded GUI & touchscreens Industrial interfaces and medical displays, with the hardware integration included.	Engagements run from a single review to multi-year product development. Each is scoped and quoted as a fixed price before it starts.

What we work with

MICROCONTROLLERS
& PLATFORMS

- STM32
- ESP32
- RP2040
- Raspberry Pi CM4 / CM5
- Embedded Linux

LANGUAGES
& FRAMEWORKS

- Rust
- Embassy
- RTIC
- Tokio
- C
- TypeScript
- Angular

WIRED
INTERFACES

- CAN
- CANopen
- Modbus
- RS-485
- Ethernet
- USB
- SPI
- I²C
- UART

WIRELESS

- LTE / LTE-M
- Wi-Fi
- LoRa
- MQTT over TLS

BACKEND
& DATA

- PostgreSQL
- TimescaleDB
- MongoDB
- Grafana
- OpenTelemetry

DESIGN & BUILD
TOOLING

- KiCad
- Fusion 360
- Git
- CI/CD
- JTAG / SWD

Rust is our default language for new firmware and serverside applications. C remains in use where an existing codebase or toolchain requires it.

Designing for the rules you have to meet

CE / RED	Design for CE marking, including the Radio Equipment Directive 2014/53/EU
EMC	Pre-compliance work in-house and supervision of accredited testing
CYBER RESILIENCE ACT	EU obligations apply from December 2027. We design for them now
NIS2	Security requirements for connected systems that fall in scope
INGRESS PROTECTION	IP classification specified and validated for the operating environment

Compliance is a design input for us rather than a test at the end. Certification itself is carried out by accredited laboratories; we prepare the design, the documentation and the evidence.

SECURE BY DESIGN

- Memory-safe Rust across firmware and backend, so an entire class of vulnerabilities is absent by construction
- Unique device identity using X.509 certificates with mutual TLS
- Cryptographically signed over-the-air firmware updates
- A software bill of materials (SBOM) per component
- Logging designed against data-minimisation requirements

Track record



BTB ENERGY SYSTEMS

Connected solar water heater

New controller with its own 4G connection instead of the homeowner's Wi-Fi: electronics, control firmware and a secure server, ready for the Cyber Resilience Act.

Built in 12 weeks by reusing 10 sensor-link building blocks.



DOSERX1 · DOSER B.V.

Pharmaceutical 3D printer

GMP-compliant printer for personalised medication. Distributed CAN bus architecture, embedded Rust firmware and an Angular touchscreen interface.

Developed over 2.5 years as an integrated part of the client's team.



AIRONE · OPERATIONAIR / TU DELFT

Emergency ventilator

Built during the first weeks of the COVID-19 pandemic. Complete control electronics, two PCB revisions and a real-time embedded GUI.

Schematic to assembled boards in five days; 80 units commissioned by the Dutch Ministry of Health.



FROGWATCH B.V. · TECHNOLOGY PARTNER SINCE 2017

Remote vibration monitoring

Developed end to end by Jitter: MEMS sensor hardware, Rust firmware, cloud backend and dashboard. Settings and firmware updates are managed remotely.

1,190 monitoring projects in the Netherlands and Belgium. Independent since 2026, with Jitter as shareholder and technology partner.

sensor-link

For connected equipment we build on proven building blocks instead of starting at zero, and add custom work for what makes your product unique. Three layers: take all of them, or only the one you need.

1 Device

Connected from the moment it is switched on.

4G/LTE main board · Rust firmware · swappable sensor and IO frontends · Modbus, CAN or serial link to existing controllers · battery or mains

2 Server

Data that arrives securely, on your own server.

MQTT/TLS ingestion · X.509 certificate per device · time-series database · signed over-the-air updates · designed for the CRA

3 Interface

Your data, in the form you need.

Direct database access · API for your own systems · web dashboard with alerts · embedded GUI on the device



sensor-link hub: main board with LTE modem and a swappable sensor frontend.

No lock-in, no subscription. The software of the building blocks (firmware and server) is open source under MIT/Apache-2.0 at github.com/JitterCompany/sensor-link. Application code, server and data are yours. Per produced device you pay a one-time contribution to the further development of the building blocks.

Working with Jitter

DIRECT ACCESS TO ENGINEERS

You work with the people who design and build your product. No account managers or project layers in between.

FIXED PRICE, SCOPED UP FRONT

Projects are scoped and quoted as a fixed price before they start, so there are no hourly billing surprises.

YOU OWN WHAT WE DELIVER

Project-specific schematics, PCB files, source code and infrastructure are handed over documented and transferable, so you can continue without us.

CONTINUITY OVER YEARS

Many engagements began as a single project and became multi-year partnerships. As your engineers come and go, we keep the deep knowledge of your systems and transfer it back to your team.

"Your electronics knowledge was decisive for what the team achieved: a fully working AIROne prototype in three weeks."

PROF. JAAP HARLAAR, DIRECTOR OF EDUCATION, TECHNICAL MEDICINE, TU DELFT

"You work quickly towards a first prototype, but at the same time precisely and in a structured way. I can only recommend you to any company developing a product with an electronic component."

DAAN DOMHOF, CO-FOUNDER, DENTAL ROBOTICS

Jitter B.V.

REGISTRATION

LEGAL NAME	Jitter B.V.
FOUNDED	2015
CHAMBER OF COMMERCE	KvK 97502537
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ENQUIRIES	Scoping conversations are free and non-binding



We help manufacturers make their equipment smart and connected.