



The technical partner for companies developing smart hardware.

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Who we are

Jitter B.V. is an electronics design and embedded engineering company in Delft, the Netherlands. We build the hardware, the firmware that runs on it, and the software around it. 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	Fixed-price projects and long-term partnerships

INDUSTRIES SERVED
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

Embedded systems Hardware and firmware co-designed from specification through to production transfer.	PCB design Concept to production-ready files. Sensor integration, mixed-signal, low-power and industrial designs. KiCad throughout.	Embedded firmware Maintainable firmware in Rust and C, from bare-metal to async architectures, including motor control and embedded GUIs.	Modernizing legacy systems Drop-in replacements that keep backward compatibility while enabling new features. No big-bang rewrites, minimal downtime.
Embedded GUI & touchscreens Industrial interfaces, medical displays and sensor dashboards, with the hardware integration included.	PCB design review Independent review of schematic choices, layout, power and signal integrity, and manufacturability. Concrete feedback before you commit to fabrication.	Custom projects Multi-disciplinary work spanning hardware, firmware, software and mechanics, with one point of contact across all of it.	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

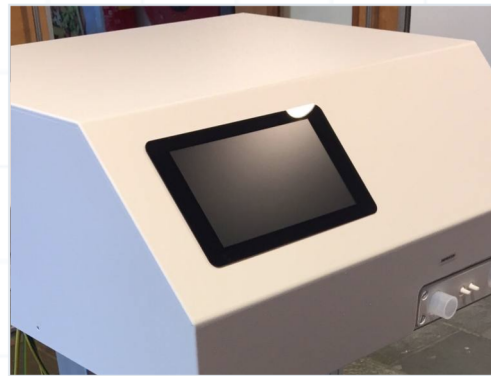


DOSERX1 · DOSER B.V.

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 · OWN PRODUCT

Structural vibration monitoring

Built end to end: custom MEMS sensor hardware, Rust firmware, cloud backend and analytics dashboard.

Deployed across the Netherlands and Belgium for SBR-A/B/C compliance monitoring. Now an independent company.



DAQ HUB · KREBER B.V.

8-channel data acquisition

Simultaneous sampling with a low-noise analog front end, for measurements inside a sealed rotating machine.

Standalone and battery-powered, with no cabling routed through the machine.

The Jitter Platform

For sensing and monitoring work we build on proven blocks instead of starting at zero.
Three layers: take all of them, or only the one you need.

1 Hardware & electronics

Measuring in the field, for years, unattended.

LTE/4G base board · battery or mains with backup · swappable sensor and I/O frontends · custom sensor PCBs and industrial enclosures

2 Backend & cloud

Data that arrives securely and stays reliable.

MQTT/TLS ingestion · time-series storage and REST API · OTA firmware updates · alarm and anomaly detection · automated PDF reporting

3 Dashboards & visualisation

From measurement to decision, at a glance.

Web monitoring dashboards · real-time maps and charts · project and device management · configurable thresholds and alerts



Sensor Link hub: base board with LTE modem and a swappable sensor frontend.

What we deliver is yours. Hardware designs, firmware and infrastructure are handed over documented and transferable. The platform shortens the path to market by skipping years of iteration we've already done for you.

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

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



Engineering intelligence into the systems that matter.