



WE ENGINEER SMART THINGS

CTRL+N — INTERNATIONAL ENGINEERING STARTUP

Catalog
of Smart Devices,
Instruments &
Digital solutions



PROTOTYPE FAST. SCALE SMART.

At CTRL+, we **specialize in rapid prototyping** and full-cycle development of smart electronics.



From initial concept and industrial design to in-house assembly, firmware, and scalable manufacturing — we do it all under one roof

RESEARCH & TECH ARCHITECTURE

Define hardware/software/cloud requirements, protocols, interfaces

ELECTRONICS

Schematics, component selection, PCB design, enclosure sketches

FIRMWARE

Embedded software, cloud APIs, mobile/web applications

ENCLOSURE & INDUSTRIAL DESIGN

3D modeling, prototyping, sample device assembly: Prototype to Pilot Batch

PROTOTYPE TO PILOT BATCH

In-house assembly & testing for 1-1000 units

MASS PRODUCTION

Sourcing, PCBA, tooling, molding, QA and full assembly under control

LOGISTICS & SUPPORT

Packaging, delivery, post-launch updates, and documentation

OUR TECHNOLOGY STACK

HARDWARE PLATFORMS



WEB & MOBILE



RTLS



BACKEND & DASHBOARDS



WIRELESS CONNECTIVITY



PROTOCOLS



EMBEDDED SOFTWARE

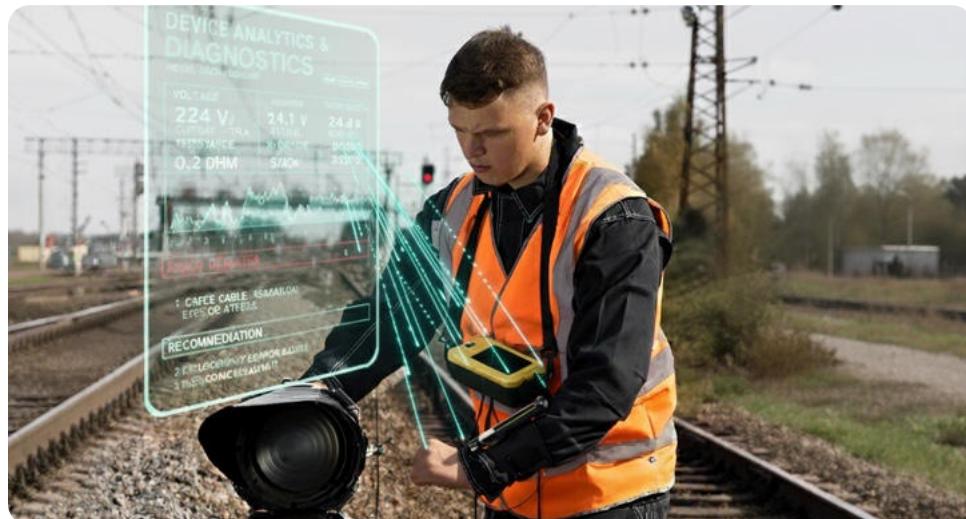


PROTOTYPING & LAB



INDUSTRIAL SAFETY & TRANSPORT

Solutions focused on workforce safety, high-precision positioning, and enhancing operational efficiency across major industrial and transportation sites.



INSIGHT

Intelligent Service Inspection Guidance High-tech Terminal

AI-powered terminal for railway electrical systems, fused with a multimeter.

INSIGHT guides and transforms maintenance, cutting downtime and ensuring SLA compliance.

AI ALGORITHMS

EMBEDDED SYSTEMS

MEASUREMENT ELECTRONICS

RTLS TECHNOLOGIES (UWB, BLE)

DIGITAL GEOFENCING

WEB PORTALS

ACCESS CONTROL SYSTEMS

MOBILE

INTEGRATION



SPAS

Safety Perimeter & Alerting System

RTLS-based digital geofencing solution ensuring worker safety in railway environments and hazardous zones.

Delivers centimeter-level UWB/BLE accuracy for access control and productivity optimization.



INDUSTRIAL SAFETY & TRANSPORT

Solutions focused on workforce safety, high-precision positioning, and enhancing operational efficiency across major industrial and transportation sites.



CWIIS

Connected
Worker
Intelligent
Safety
System

A wearable device for industrial workers, providing real-time safety and workforce monitoring.

It protects personnel in hazardous zones, supports emergency response, and integrates seamlessly with enterprise **WFM systems**.

RTLS TECHNOLOGIES (UWB, BLE)

WEARABLE DEVICES

WFM INTEGRATION

MONITORING SYSTEMS

RTLS TECHNOLOGIES (MICROWAVE)

EMBEDDED TERMINALS



PULSERADAR

Train Driver
Monitoring
System



PULSERADAR is an advanced monitoring system for train drivers. Using radar sensors and AI analytics, it continuously tracks vital signs and detects fatigue, stress, or distraction.

The system provides real-time alerts to prevent accidents, enhancing safety for both operators and passengers without disrupting normal operations.

INDUSTRIAL SAFETY & TRANSPORT

Solutions focused on workforce safety, high-precision positioning, and enhancing operational efficiency across major industrial and transportation sites.



RTLS ZONE

Indoor and Outdoor
Precision Positioning System



Key Functions

- Monitoring the presence of workers in hazardous zones
- Anti-collision and anti-runover system (installed on moving machinery)
- Recording actual work areas and monitoring subcontractors

Can be used as a safety barrier in areas where access must be restricted to personnel authorized to perform work in hazardous zones

RTLS

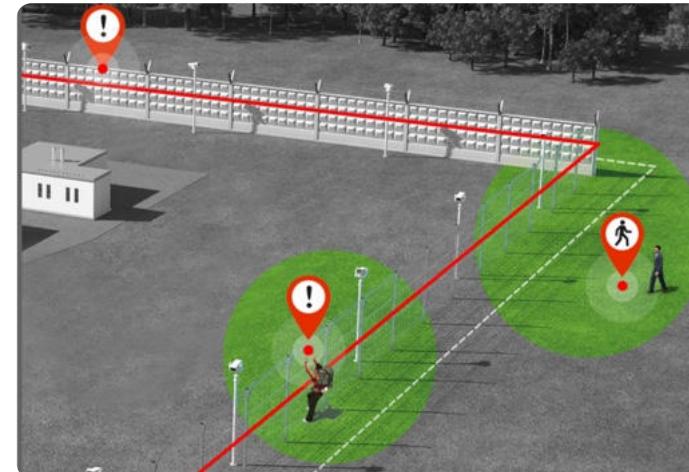
UWB

IoT

ELECTRONICS

INTEGRATION

RTLS MW RADAR IoT INTEGRATION



GEOFENCE PERIMETER

Intelligent Human
Detection System
for Controlled Zones

Operating Principle

- Uses microwave and radar sensors
- Creates multi-layer detection zones
- Identifies a person and analyzes movement context
- Sends event notifications to the monitoring system

The system is in demand for:

- Power facilities
- Traction substations
- Maintenance sites
- Depots and warehouses

MEDTECH & HEALTHCARE

This segment targets healthcare clients in need of remote diagnostics, custom medical equipment, or intelligent documentation workflow automation.



IOT REMOTE DIAGNOSTICS MRI BASED EQUIPMENT



Development of a solution for remote diagnostics and monitoring of **MRI base** equipment.

The system features a high degree of autonomy with **Linux-based software** for industrial data acquisition and device integration.

LINUX

INDUSTRIAL INTERFACES

IOT

INTEGRATION SOLUTIONS

UWB
IOT
ELECTRONICS
HEALTH MONITORING
WEARABLES


LIFEBEA WEARABLE DEVICES

Development of a multifunctional wearable device for tracking personnel or patient location and vital health parameters.

Uses **UWB technology** for precise positioning combined with health monitoring sensors, ensuring real-time visibility and safety.

INFRASTRUCTURE & FACILITY MANAGEMENT

Solutions for high-precision accounting, perimeter control, object monitoring, and optimizing resource efficiency in urban and major commercial infrastructure.

UAV (UNMANNED AERIAL VEHICLE)

LiDAR

NAVIGATION SOFTWARE

GEOPOSITIONING



SKYLINE MATCH

Automated
Landscape
Scanning
System



A **UAV-based** solution for precise aerial terrain mapping and cadastral comparison.

The system uses drones with **LiDAR sensors** and 360° cameras to capture complex relief data, which navigational software then overlays onto geospatial maps for accurate analysis.



SPOTMONITOR

AI-Powered Video
Analytics System



A video analytics system using **AI/Computer Vision** to maximize parking space utilization and streamline traffic flow.

Provides real-time data on occupancy and violations for ground and underground parking.

VIDEO ANALYTICS

AI / COMPUTER VISION

NEURAL NETWORKS

OPENCV

INFRASTRUCTURE & FACILITY MANAGEMENT

Solutions for high-precision accounting, perimeter control, object monitoring, and optimizing resource efficiency in urban and major commercial infrastructure.

RTLS TECHNOLOGIES (UWB, BLE)

EMBEDDED SYSTEMS

RFID/NFC

IOT CONNECTIVITY

EDGE COMPUTING

INDUSTRIAL SENSORS

FIRMWARE DEVELOPMENT

MQTT / CORP COMMUNICATION

DATA VISUALIZATION & ANALYTICS

CLOUD INTEGRATION

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INVENTRA

INtelligent
inVENTory
TRAking
system

Development of a highly specialized industrial **B2B** device for diagnostics or measurement.

Requires complex embedded firmware, integration of precision sensors, and a rugged design.



CULTURE, ENTERTAINMENT & CUSTOM MECHATRONICS

Solutions for projects that demand the custom engineering of mechanics, electronics, and software for building sophisticated interactive installations or spectacles.

MECHATRONICS MICROELECTRONICS SOFTWARE DEVELOPMENT PROTOTYPING



Development of unique **Lunarium exhibits** demonstrating complex physical and natural phenomena such as tsunamis, the northern lights, and more.

The project included a full-cycle solution: concept creation, microelectronics and mechatronics design, software development, production, and installation.



Ensuring uninterrupted operation of over 100 exhibits and real-time monitoring of **MTTR/MTBF metrics**.

The solution includes an **IoT-based system** with sensor-equipped controllers, dedicated software, and automated alerts through a Telegram bot.

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INTERACTIVE EXHIBITS DEVELOPMENT

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ARTEM

Automated
Remote
Telemetry &
Exhibit
Monitor

IOT

EMBEDDED SYSTEMS (CONTROLLERS)

TELEGRAM BOT INTEGRATION

CULTURE, ENTERTAINMENT & CUSTOM MECHATRONICS

Solutions for projects that demand the custom engineering of mechanics, electronics, and software for building sophisticated interactive installations or spectacles.

MECHATRONICS

TRIM STABILIZATION SYSTEMS

PNEUMATICS



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FOUNTAIN-SHIELD

Intelligent
Fountain
Stabilization
Hub

Stabilization of a 19-ton floating platform at a target depth of -400 mm, compensating for fountain pressure and wave motion.

The system utilizes a mechatronic control architecture for real-time trim correction, featuring multi-loop air pressure regulation.

SPORTTECH

Solutions for the sports and security training market, focusing on high-accuracy timing, virtual/interactive simulation, and specialized hardware for objective performance control and analysis.

15 SHOOT TIMER SMART WATCHES

A high-precision chronometer for training analysis (dry/live-fire).

The portable device features a sensitive microphone (50–130 dB) with echo filtering and Bluetooth connectivity for data export to a mobile app.



ELECTRONICS ACOUSTIC SENSORS BLUETOOTH MOBILE APPLICATION

ANALYTICS WEARABLES

MACHINE VISION SYSTEM PROJECTION ANALYTICAL SOFTWARE



16 RESHOT

Interactive
Shooting
Range

An interactive shooting gallery system designed to bring users closer to the video game experience while providing realistic training.

Uses a **Machine Vision System** for automatic shot detection and performance analytics.

SPORTTECH

Solutions for the sports and security training market, focusing on high-accuracy timing, virtual/interactive simulation, and specialized hardware for objective performance control and analysis.

ELECTRONICS

LASER SYSTEMS

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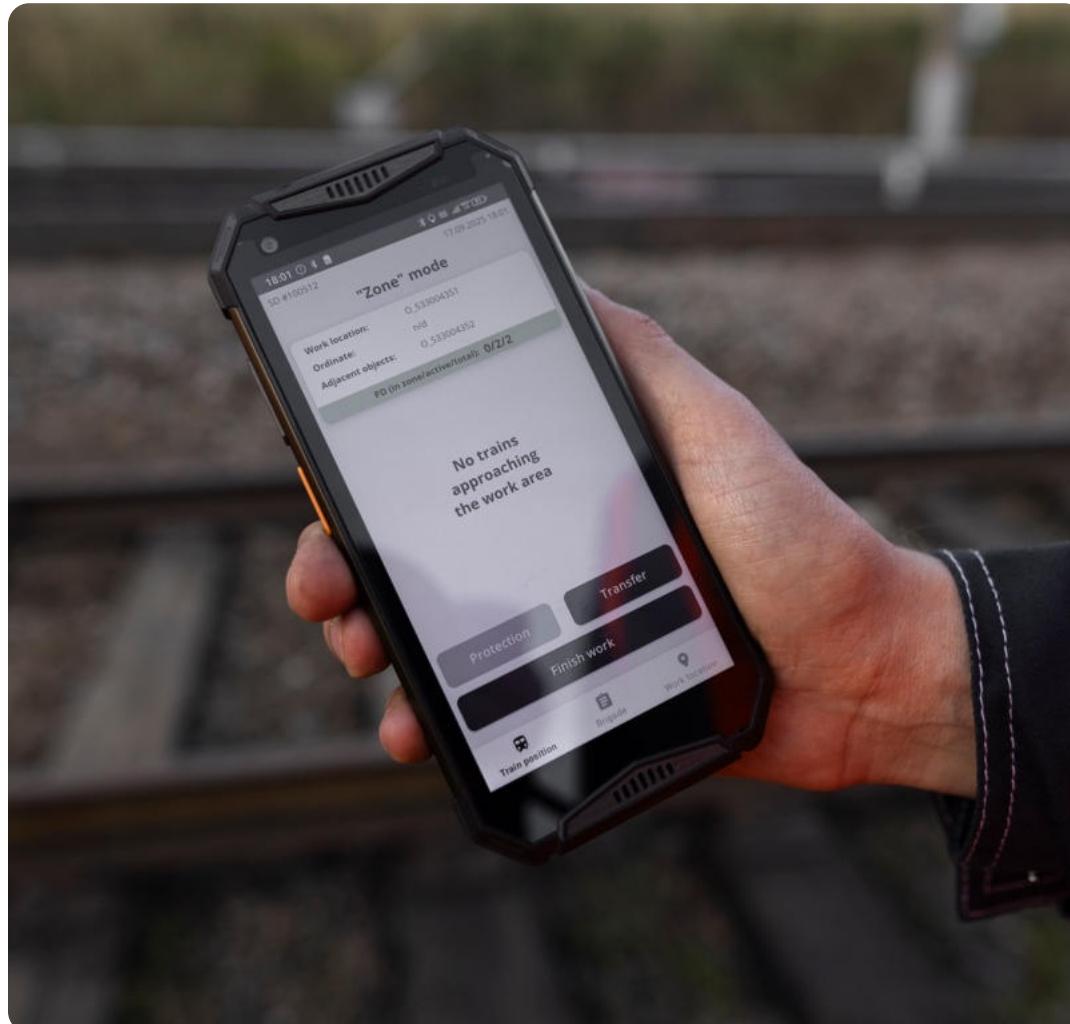
LASER CARTRIDGE MODULE

A safe and realistic dry-fire training system. The module replicates the firing action using a laser cartridge form factor for accurate shot simulation.



CUSTOM OS DEVELOPMENT

Solutions for creating custom, controlled operating environments (AOSP/Linux). Essential for clients requiring absolute data security, hardware governance, and removal of public services for targeted enterprise applications.



18 CUSTOM MOBILE OS IMPLEMENTATION

A solution for enterprise mobile environments based on a closed **Android (AOSP) operating system**. It ensures security, compliance, and full hardware control.

Key features include UI customization, centralized app repository, network policy management, and secure connectivity via eSIM integration.

AOSP (ANDROID OPEN SOURCE PROJECT)

MOBILE DEVICE MANAGEMENT (MDM)

EMBEDDED SECURITY

NETWORK POLICY MANAGEMENT

ESIM INTEGRATION



R&D | ELECTRONICS
CLOUD, MOBILE & EMBEDDED SOFTWARE
HARDWARE DESIGN

LET'S BUILD YOUR NEXT CONNECTED DEVICE

CTRL+N — INTERNATIONAL ENGINEERING STARTUP

1435 SYSTEMS

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