



5G Private Network

# Natively Industrial

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FIRECELL - CONFIDENTIAL



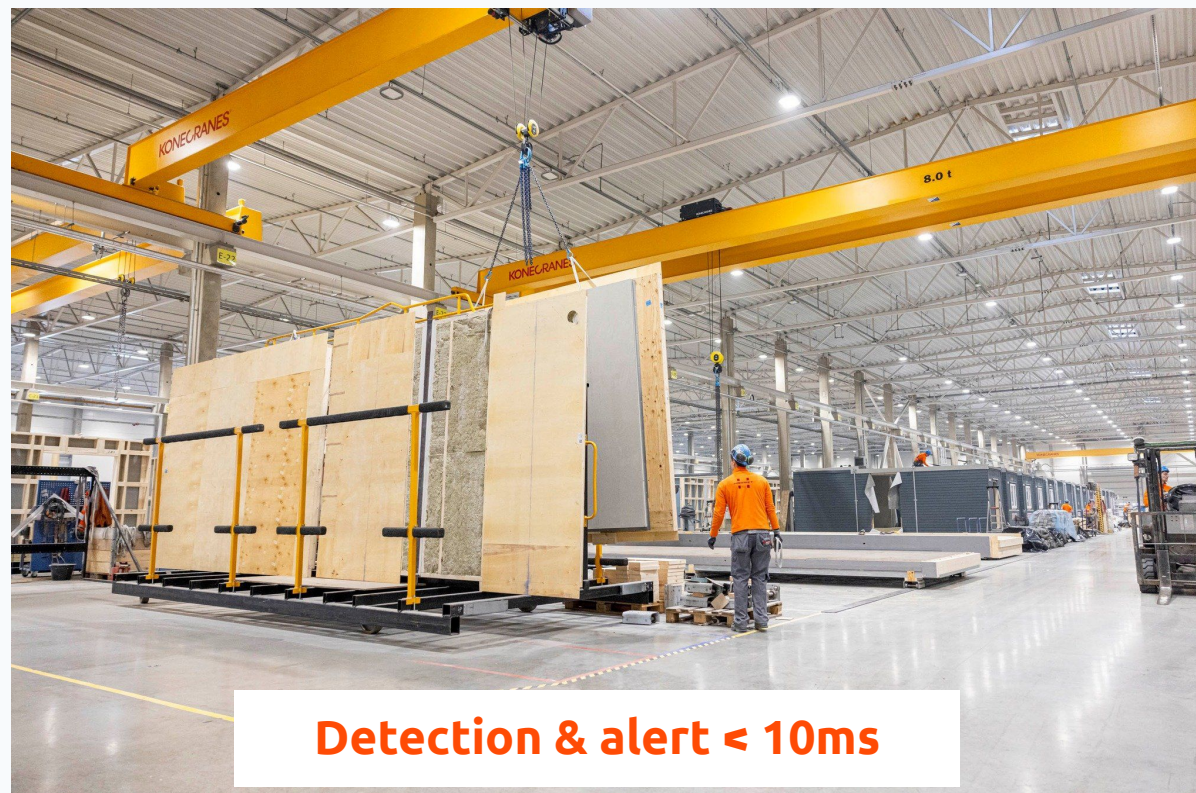


# 5G-TIMBER: Private 5G for smarter, sustainable Industry 4.0.

## Intelligent Workplace Risk Detection

- 5G-connected camera vision systems continuously monitored work areas
- Detect unsafe conditions, restricted zone breaches, and hazardous worker and equipment behaviours in real time.
- Edge-based AI video analytics processed enabling instant hazard detection
- Low-latency 5G connectivity ensured rapid transmission of alerts to workers

**Improved worker protection in dynamic industrial environments where fast response is critical.**



**Detection & alert < 10ms**



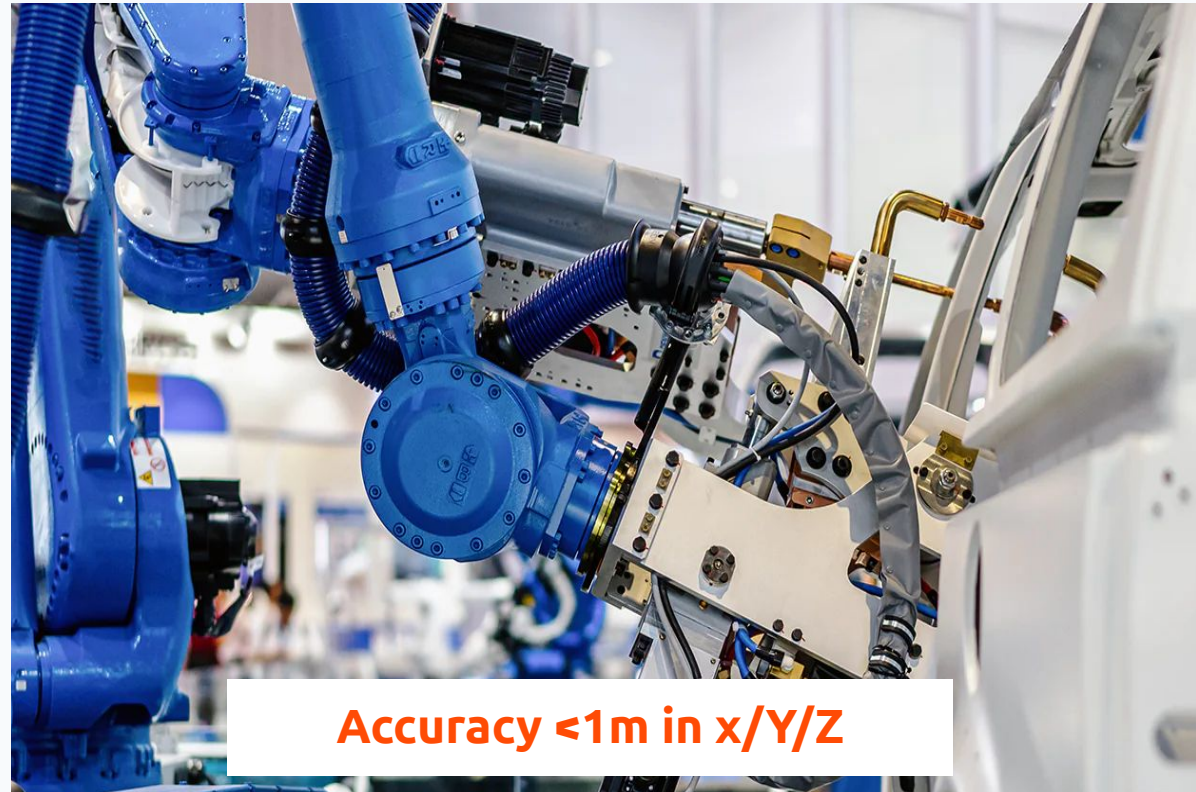


# Geo5G: Sub-metre 5G indoor positioning for connected tools.

## Smart Tool Geolocation on Assembly Lines

- Private 5G network deployed on Stellantis & Airbus Atlantic production floors to track connected tools in real time.
- UL-TDoA (Uplink Time Difference of Arrival) algorithm, no extra hardware needed beyond the 5G RAN.
- Geolocation engine fully integrated into Firecell's 5G Core & RAN stack, validated at TRL-7 with <math><1\text{ m}</math> X/Y/Z accuracy.
- Smart geofencing automatically deactivates tools operating outside their designated work zones, preventing assembly errors.

**Precise indoor tracking over private 5G reduces tool-loss incidents and guarantees 100% quality control on high-volume assembly lines.**



**Accuracy <math><1\text{ m}</math> in x/Y/Z**



# stic5G: Safe TSN for Industrial-Grade Real-Time Campus 5G Networks.

## Deterministic 5G Connectivity for Industrial Machines & AGVs

- Franco-German consortium integrating Time-Sensitive Networking (TSN) over private 5G for aircraft assembly lines.
- PROFINET/Ethernet OT protocols bridged transparently onto 5G, no rewiring of existing industrial infrastructure required.
- End-to-end latency target ~10 ms at 99.999 % reliability; supports real-time robot, crane and Automated Guided Vehicle control.
- Validated at Airbus Toulouse & Hamburg, with a dedicated management dashboard for hybrid 5G-campus operation.

**TSN-over-5G brings wireless flexibility to industrial campuses without sacrificing the timing guarantees manufacturing requires.**



**RTT 5,9ms / Jitter 3ms**





# Firecell 5G - What's next?



Edge AI

URLLC

## Autonomous Operations

Deterministic connectivity for robots, AGVs and cobots via URLLC. Edge-deployed AI enables autonomous decision-making with no cloud round-trip latency.

Zero unplanned downtime on mission-critical production lines.



Massive IoT

Digital Twin

## Predictive Maintenance & Digital Twin

Massive sensor data collection over 5G feeds Digital Twins and AI models to anticipate equipment failures before they occur.

Up to 30% reduction in maintenance costs on industrial equipment.



Geolocation

Safety

## Intelligent Asset & Worker Tracking

Precise location of tools, parts, vehicles and workers across the entire site, both indoors and outdoors, with no additional infrastructure required.

Full traceability and active worker safety enforcement in hazardous zones.



PEGASUS V5.0 · ATLAS EDITION

FIRECELL

# The Private 5G you build **mission-critical** networks on.

Four things you get with Atlas Edition. Measured, not estimated.

**~77 s**

**Fast recovery**

hardware failover · auto-restore

**9**

**Dynamic Slicing & QoS**

5QI profiles in real time

**5.9 ms**

**Ultra-low latency**

URLLC · proactive grants

**16+ bands**

**Open architecture**

P5G + operator · all bands

**Let's build mission-critical, together.**

Pegasus v5.0 · Atlas Edition · Available now through Firecell SI partners.

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