

# Unlocking 5G PMN for Smart Manufacturing

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Digital  
Transformation

Key Technologies

PEGATRON  
5G / Edge / AI

SVR  
Acceleration

5G  
Communication

AI  
Application

Domain Knowledge

Products and Manufacturing  
Experiences and Technologies

**PEGATRON**  
The Lighthouse of  
Digital Transformation

*End to End  
Solution*

One-Stop  
Service

*Versatile  
Application*

User Oriented  
Customized  
Easily deployed

**PEGATRON**  
**5G** ▶

*Reliable  
Integration*

Experienced experts of  
different field landing  
cases

# Leadership insights

Pegatron has used digital transformation to become a total solution provider for 5G connectivity.

5G technology drives the rapid change to enhance smart manufacturing. We have proven that 5G can enhance manufacturing capabilities.

# Digitalize Manufacturing Industry by 5G PMN



## Flexibility

- Wireless Connectivity
- Rapid Deployment



## Real-time

- Fast and Low Latency
- Control in Real-time



## Efficiency

- Large Capacity
- Multi-connection
- AI Analysis



## Security

- Zero Trust
- Private and Safe



Ostrava, Czech

Chongqing, China

Suzhou, China

Kunshan, China

Shanghai, China



CÔNG TY TNHH PEGATRON VIỆT NAM

Hai Phong, Vietnam

# viettel + PEGATRON

## Build PEGATRON's first overseas 5G smart factory Promote 5G smart manufacturing and PMN service in Vietnam



Tokyo, Japan

HEADQUARTERS



Jeffersonville, USA



San Jose, USA



Taipei, Taiwan



Taoyuan, Taiwan



Juarez, Mexico



Chennai, India



Batam, Indonesia



Sydney, Australia



Xindian, Taiwan



Rapid Deployment



Vision AI



Assembly AI Monitoring



Remote Collaboration

Practical Applications in Smart Manufacturing  
and PEGATRON Vietnam Factory

# Rapid Deployment

Dynamic production planning and execution



Virtual Factory by Digital Twins



## Feature :

- Wireless Connectivity
- Quick Setup by Digital Twins
- Scalable Expansion
- Minimizing re-config time & Maximizing Equipment Utilization
- Big data collection, analysis, and abnormal alert

## Application :

- New Product Launch
- Remote site planning
- Production line optimization
- Capacity Expansion

# Vision AI

## The Fastest AI Landing Platform



### Feature :

- Easy to Set Up
- Various AI Integrated
- Reinforce pretrained AI models
- Customize Your Own Service

### Application :

- Forbidden Area Detection
- Face Recognition
- Abnormal Behavior Detection (Pose Estimation)
- Object Detection (Safety obedience checking/ Flame Detection / Smoke Detection)

# Assembly AI Monitoring Driving Efficiency with AI



## Feature :

- Assembly SOP correctness detection
- AI visual inspection of the product
- Next-procedure guidance

## Application :



# Remote Collaboration

## Real-time Management



### Feature :

- AR Dynamics 365
- Assistance & Collaboration Anywhere
- Real-time Monitoring & Control
- Efficient Troubleshooting and Maintenance

### Application :

- Production Line Maintenance and Repair
- Inventory and Logistics Management
- Employee Education and Training
- Emergency Safety Situation Handling

# PEGATRON 5G Smart Factory Benefits

## Production line Utilization



**10%** ↑

### Standardized Test Station & Virtual Computing on Edge

Rapid deploy standardized test station. Through 5G high bandwidth, heavy computing of the test can be virtualized on MEC.

Increase utilization rate by 10%  
Reduce the consumables and installation labor costs up to 50%.

## Labor Cost



**50%** ↓

### Remote Assistant Remote Collaboration

Realize remote collaboration through VR and AR, and reduce the number and frequency of personnel travel. In addition to reducing travel expenses and isolation costs and time, it can also ensure the safety of employees.

## Yield Rate

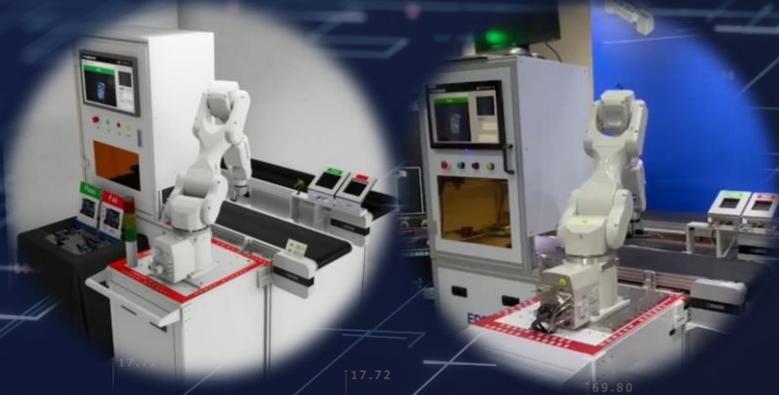


**50%** ↑

### Higher Accuracy Continuous AI Improvement on Edge

Dynamically allocate required AI computing resources. Through AOI inspection, collision parts and production line SOP checking, etc., errors are found early, saving 50% of inspection manpower.

# Advancing to next level Comprehensive 5G integration



## Deploy Application :

- Edge and AI solution
  - Digital Twins Robotics
  - Intelligent AMR
- PEGATRON Vision AI security system
- Numerous devices connection capacity
- CCD Recognition / Advanced AGV / More AI apps...etc.

## Milestone :



Taiwan

Q3, 2022



Vietnam

End of 2023



India



Mexico



Indonesia

2024

Thanks



5G ORAN Brochure



5G User Equipment