

**ASTRI**Hong Kong Applied Science and  
Technology Research Institute  
香港應用科技研究院

# TSN-enabled 5G System

Co-developed by PCL and ASTRI



5G-based  
Time-Sensitive Networking  
for Industrial 4.0



Fully  
compliant with  
3GPP standard

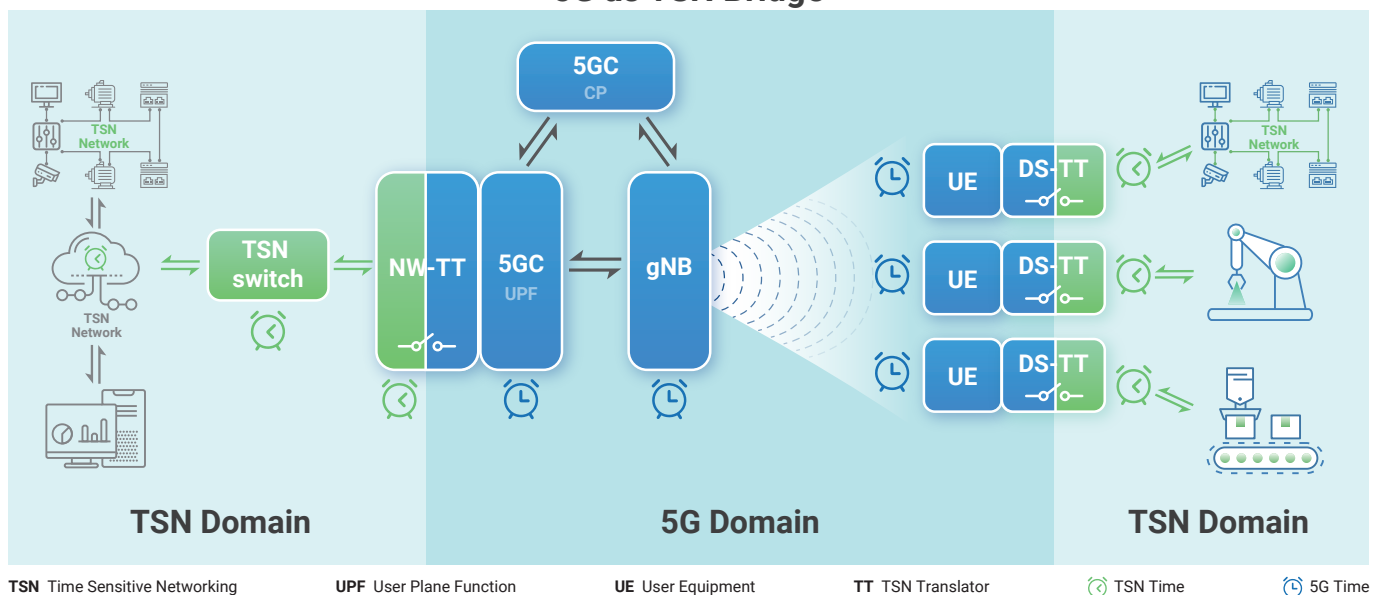


Lightweight,  
support of IPC and  
cloud deployment



Support of both  
x86 and ARM  
platforms

## 5G as TSN Bridge



ASTRI's solution delivers a deterministic network for "5G Smart Industrial", realising Industrial 4.0 transformation towards a fully 5G connected factories.



### HIGHLIGHTS

**< 240ns\***

End-to-end precise time  
synchronisation

**< 1us\***

End-to-end ultra-low jitter

**0 packet loss\***

End-to-end high availability

### FEATURES

- Modular design, flexible in deployment and integration
- Lightweight 5G UPF, supporting both edge computing and cloud-network convergence
- Seamless integration with existing 5G network and TSN network

### USE CASES

- Wireless real-time industrial remote control
- Wireless real-time sensor data collection
- High bandwidth and real-time AGV/AMR

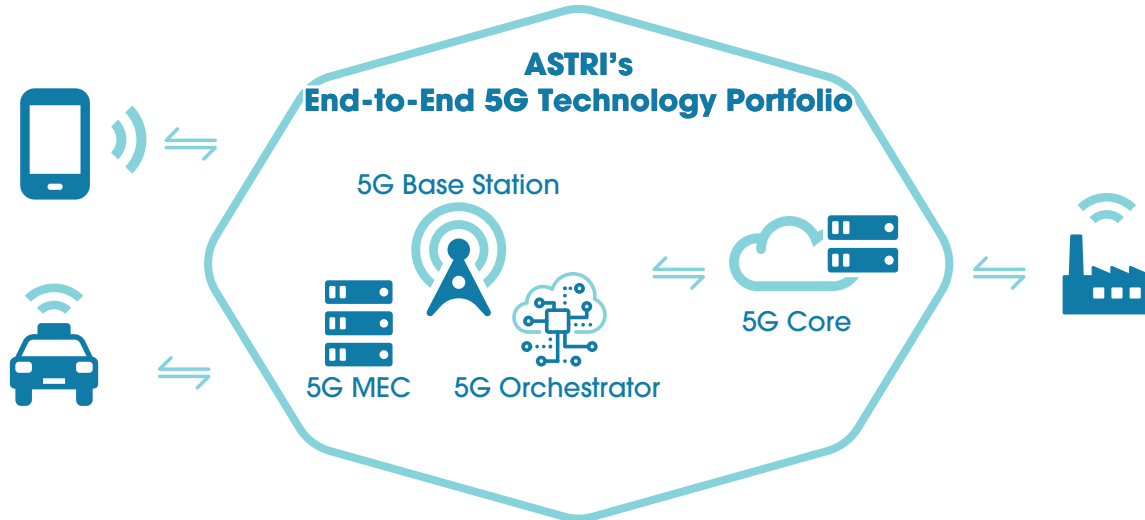
\* Based on real test environment in lab



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# End-to-End 5G Solution



Cost-effective  
end-to-end 5G  
network solution



5G orchestrator  
service and network  
management system



Flexible deployment,  
suitable for public  
and private network  
applications



Enabling Industry 4.0  
and Smart City  
Applications



Customisation  
and code licensing  
services

ASTRI's 5G technologies have since been licensed to many companies, and recently ASTRI has been supporting major public sectors and organisations for 5G rollout in Hong Kong.



## KEY FEATURES

- High throughput (>1.3Tbps)
- 5G Base Station, Core, MEC and Orchestrator
- Flexible deployment: bare metal, VM, container, cloud deployment
- Support R15, R16 and R17 cutting edge features

## USE CASE ENABLED

- 5G AGV in the smart factory
- 5G fully-connected factory, smart PLC, smart robot
- 5G machine vision, 5G drone inspection
- 5G machine collaboration, AR / VR assisted design

ASTRI's end-to-end 5G technologies are licensable and aim for vertical market applications, enabling our customers to enter the market quickly.

**Hong Kong Applied Science and Technology Research Institute Company Limited**

5/F, Photonics Centre, Hong Kong Science Park, Shatin, Hong Kong

Phone: (852) 3406 2861 | Fax: (852) 3406 2801 | [liangdong@astri.org](mailto:liangdong@astri.org) | [www.astri.org](http://www.astri.org)

