## **ASTRI Networking Software Technologies**

ASTRI develops technological infrastructure and platform for wide-ranging applications like public safety and smart cities. We provide licensable software technologies for network equipment or solution providers, enabling them to develop and integrate networking solutions, and to build reliable 4G/5G applications.

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### 4G/5G SDN/NFV Technologies and Solutions 4G/5G 軟件定義網絡(SDN)/網絡功能虛擬化(NFV) 技術及解決方案



4G/5G core network elements (EPC, C-SGN) – distributed or centralised architecture for private or public network deployment



**Cloud Networking Platform and** Technologies - optimised, high performance platform for hosting virtual network functions and applications with orchestration capabilities.



latency/throughput demanding



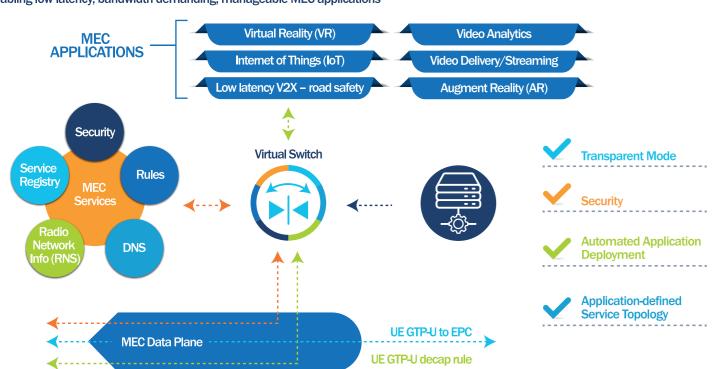
Networking protocol stacks - for virtual network functions development.



## Edge Cloud/Multi-Access Edge Computing (MEC)

Enabling low latency, bandwidth demanding, manageable MEC applications

**ASTRI MEC Platform** 





#### LTE VIRTUAL NETWORK FUNCTIONS (VNFS) LTE 虛擬網絡功能







LTE Virtual EPC

MultiCore Networking protocol stack enabling high performance

VNF development. Supporting x86

### CORE TECHNOLOGIES 核心技術



Network

Ability to support multiple network slices (mobile broadband, high reliable/low latency, NB-IoT slices). Enabling multi services and

Control Plane User Plane

Supporting deployment of separate Control Plane and User Plane for greater flexibility and scalability.

## NFV/SDN Platform & Cloud Networking

Container Based

**Adoption of Docker** 

services/applications

deployment and

provisioning.

technology for platform

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Platform built-in virtualised networking functions including NAT, LB, FW, TCP Optimization, VPN and **DNS Services. Service Function Chaining (SFC)** fully integrated to provide flexible service insertion.

Software-defined intra-/inter-site cloud networking through distributed laver-2/laver-3 and virtual edge gateways.

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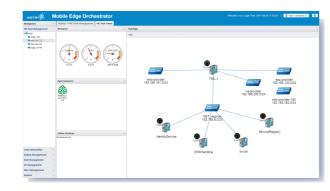
High performance and commercial-ready virtualised network infrastructure and virtual network functions built using ASTRI FastGate, open-source DPDK and

#### Advanced Features

Supporting Multi-Access technologies, High Availability (HA) and more. Network visibility and automated troubleshooting designed specifically for Edge Cloud Platform.

# 

## **Management and Orchestration**





### FastCloud Network Orchestrator

Manage virtual resources, NFV network deployment for LTE Core Network, small cell network, MEC in an intuitive and automated manner.



FastCloud MEC Orchestrator

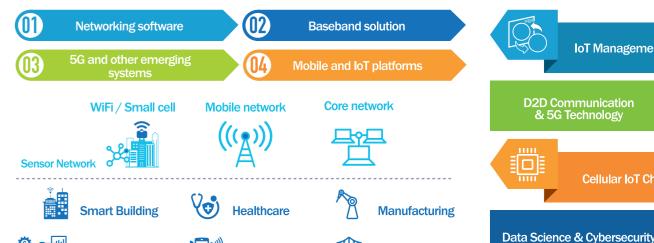
Manage MEC applications: definitions, deployments, rules and traffics.

Cellular IoT Chip Design

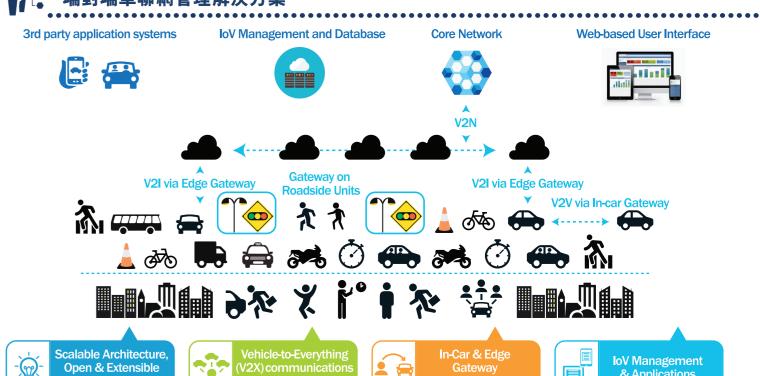
### **Building Smart Cities with Next Generation Network Technologies**

### 以新一代網絡技術建設智慧城市











Hong Kong Applied Science and Technology Research Institute Company Limited 5/F, Photonics Centre, 2E Science Park East Avenue Hong Kong Science and Technology Park, Sha Tin, Hong Kong 香港應用科技研究院有限公司,香港沙田香港科學園科技大道東2號光電子中心5樓





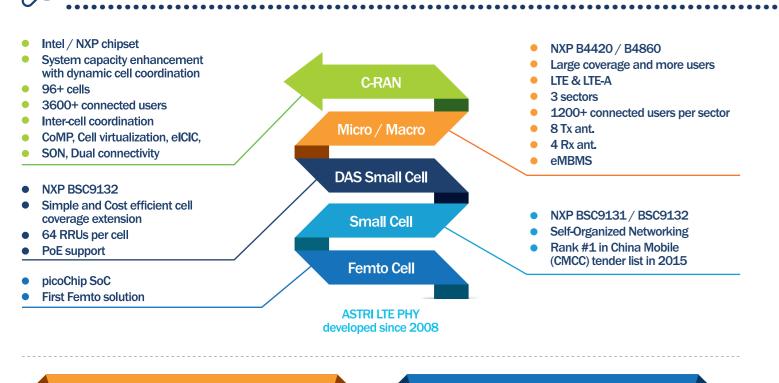








# Commercial LTE eNB Solutions 商用LTE eNB解決方案



LTE Micro/Macro Cell Solutions

NXP B4420/B4860 SoC

Passed LTE-Metro test

TD-LTE and FDD LTE

Large coverage and multi-sectors

Complete system level model

# Commercial LTE Terminal Solutions 商用LTE終端解決方案

LTE Small Cell Solutions

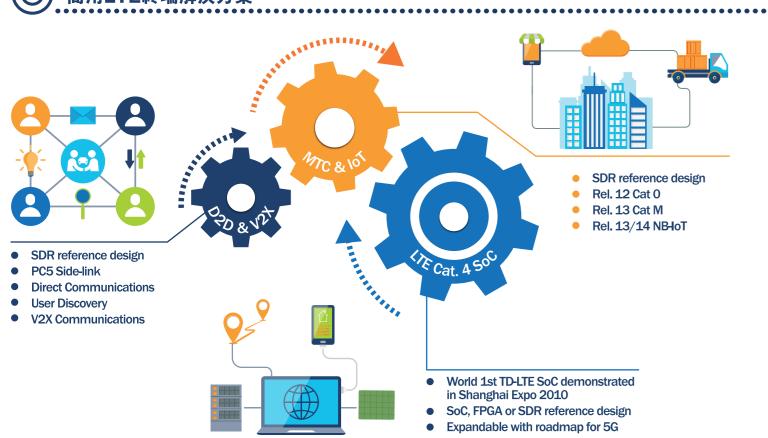
• Rank #1 in China Mobile (CMCC) small cell tender 2015

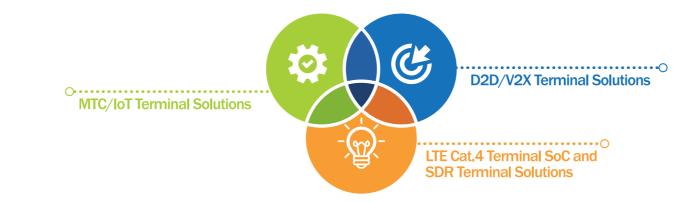
NXP BSC9131/BSC9132 SoC

Complete system level model

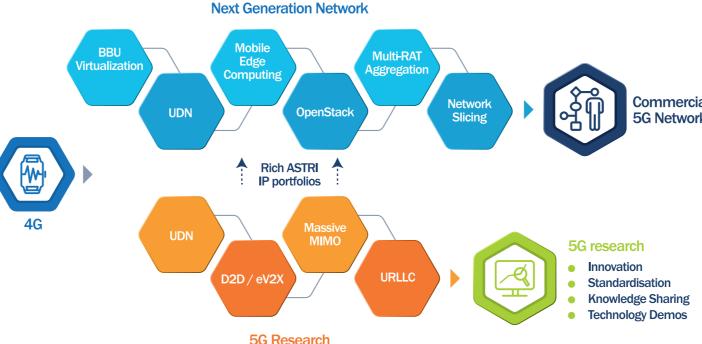
TD-LTE and FDD LTE

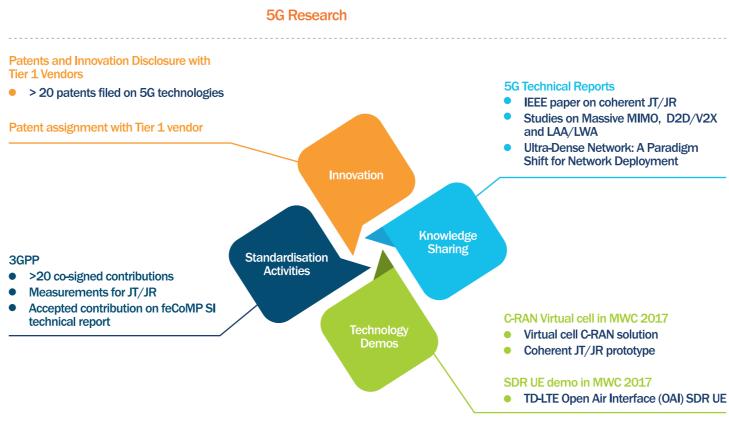
Simple deployment and cost efficient





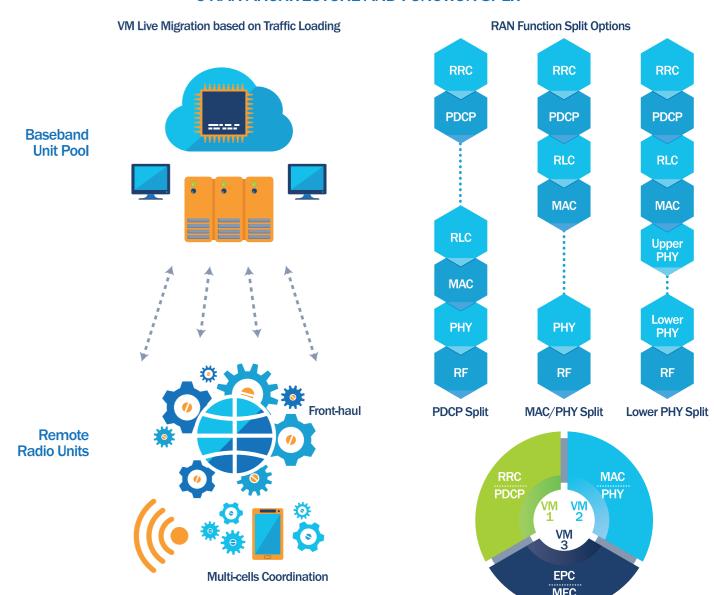
# 5G Radio Access Technologies 5G無線接入技術



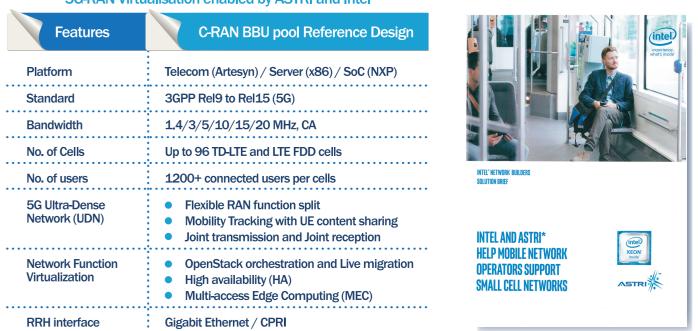




#### C-RAN ARCHITECTURE AND FUNCTION SPLIT



#### **5G-RAN Virtualisation enabled by ASTRI and Intel**



cover

