IPLOOK 5GC Solution

2020.06

01

5G Introduction

5G Evolution

The mobile communication goes through a upgradation every one decade.
With the introducing of advanced technology, the efficiency of frequency usage and the capacity are improved dramasticly. As a result, the inovative services are emerging.

- **Prospect:** eMBB, mMTC, uRLLC, Inernet of everything

- **Initiative:** Convergend network service and requirement oriented service

2020s

5G 5GC

- 1Gbps~20Gbps
- Diversed mobile broadband service

2010s

4G EPC

- 100Mbps~1Gbps
- Mobile broadband
- services

2000s

3G CDMA

- 300kbps~80Mbps
- Mobile multi-media services
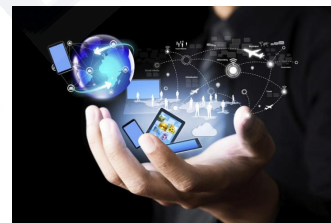
5G application scenario: eMBB, mMTC, uRLLC

Enhanced Mobile Broadband
20Gbps Max

- 3D video, UHD screen
- Remote work
- AR
- Voice

Massive Machine Type Communication
1M connections per SK

Smart city

Smart home

Ultra Reliable Low Latency communication
1ms Latency

- Autonomous product line
- The low latency application
- Autonomous Driving

eMBB

5G

mMTC

uRLLC
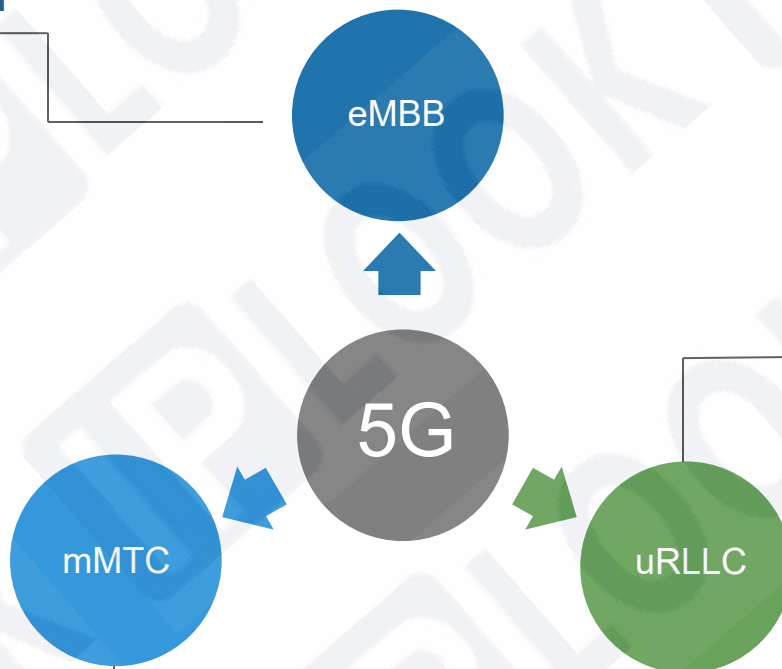
02

5GC Architecture and Deployment

5GC network architecture
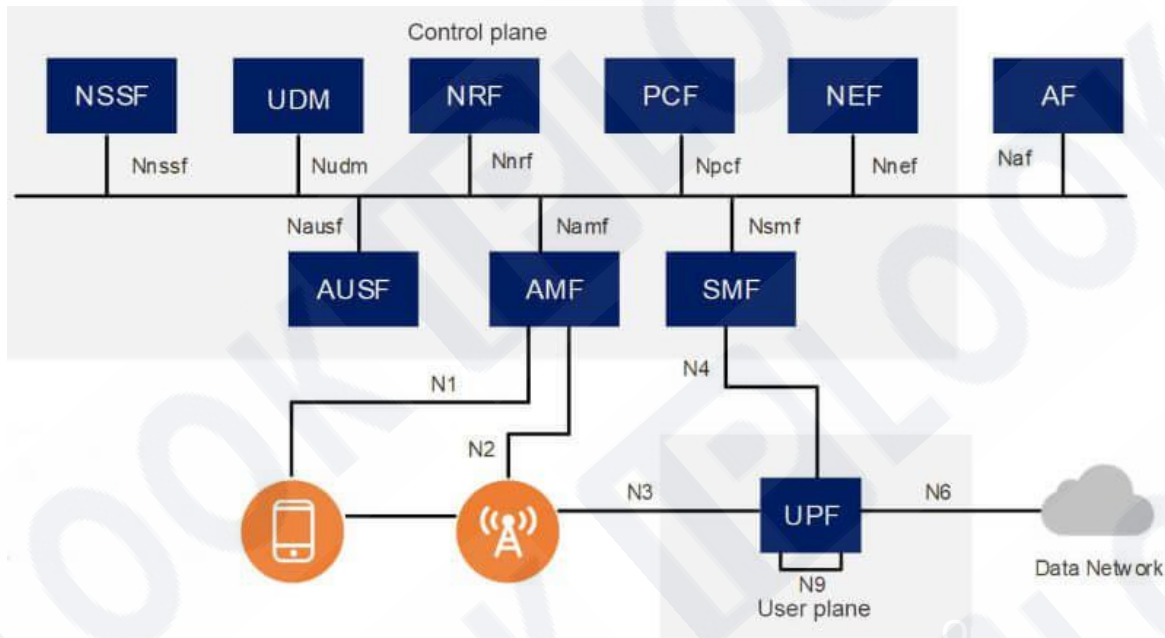
Self-Developed 5GC
Self-developed 5GC support X86 server deployment or cloud deployment

Open RAN
Joining TIP, O-RAN to keep intimate negotiation with NR vendors. As a result, IPLOOK's 5GC owns excellent compatibility.

Advanced Tech
Comply to 3GPP R15/R16, keeping pace with all the main telecom infra provider.

NSA/SA converged into one

Converged 3G/4G/5G core network

- IPLOOK 5GC could support NSA/SA radio network simultaneously.
- IPLOOK 5GC supports the legacy 4G radio equipment and terminals.

5GC deployment mode 1

Security of enterprise data:

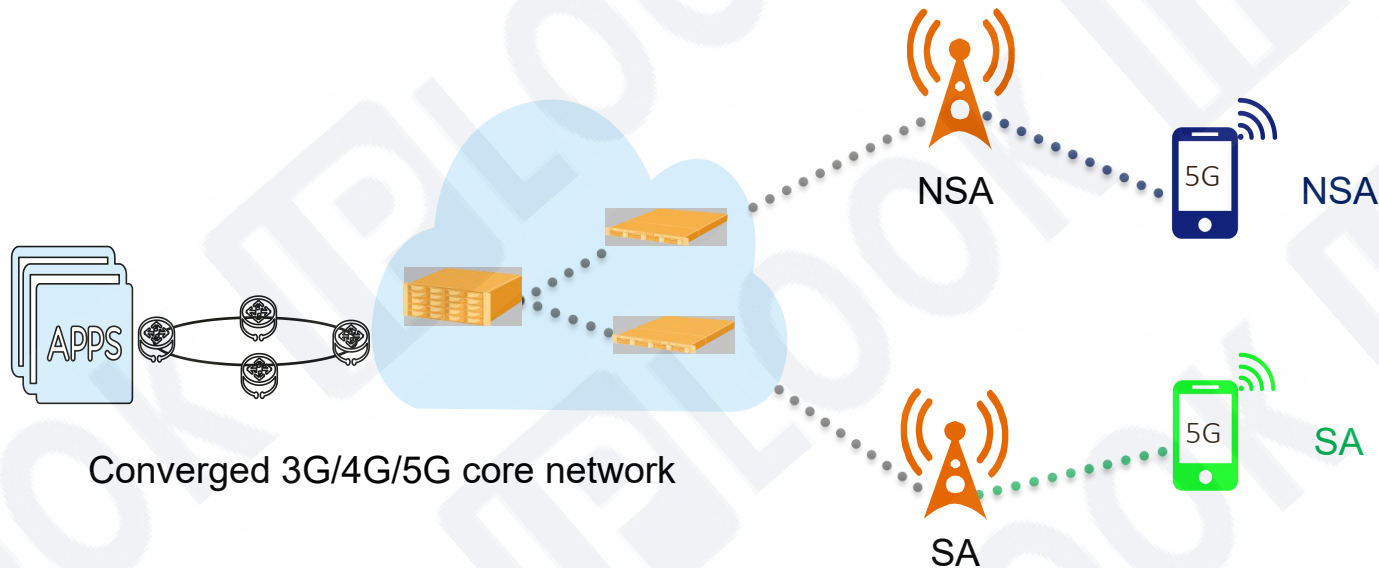5G private network and public network are physically isolated to provide complete data security, which can guarantee the absolute security of enterprise data (the disconnection of public network will not be affected).

Lower network latency: 5GC and NR are deployed locally

Self management network: even if the public network is cut off, congested, etc, the private network will not be affected

Independent 5G E2E

5GC of public network

CP NEs

UPF

Public UE

Private 5G gNB

Private UE

CP NEs

UPF

Private 5GC

MEC platform
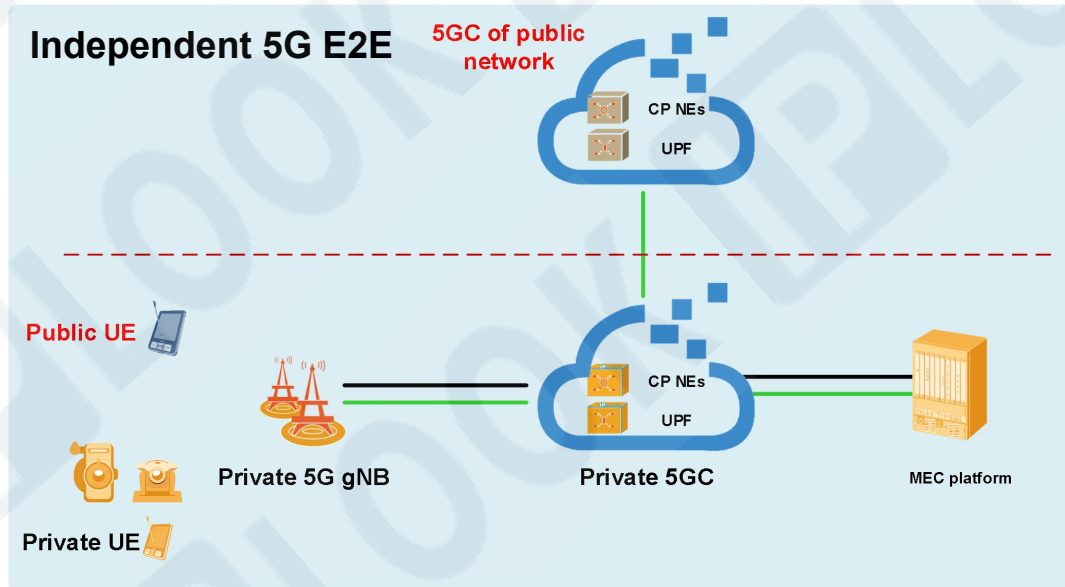
5GC deployment mode 2

IP LOOK

Data security: UPF deployment locally can still ensure the security of enterprise data

Lower network latency: UPF enables local breakout, which can guarantee low network latency

Local UPF

5GC of Public network

CP NEs

UPF

Public UE

Public 5G gNB

Private UE

UPF

Private UPF

MEC platform
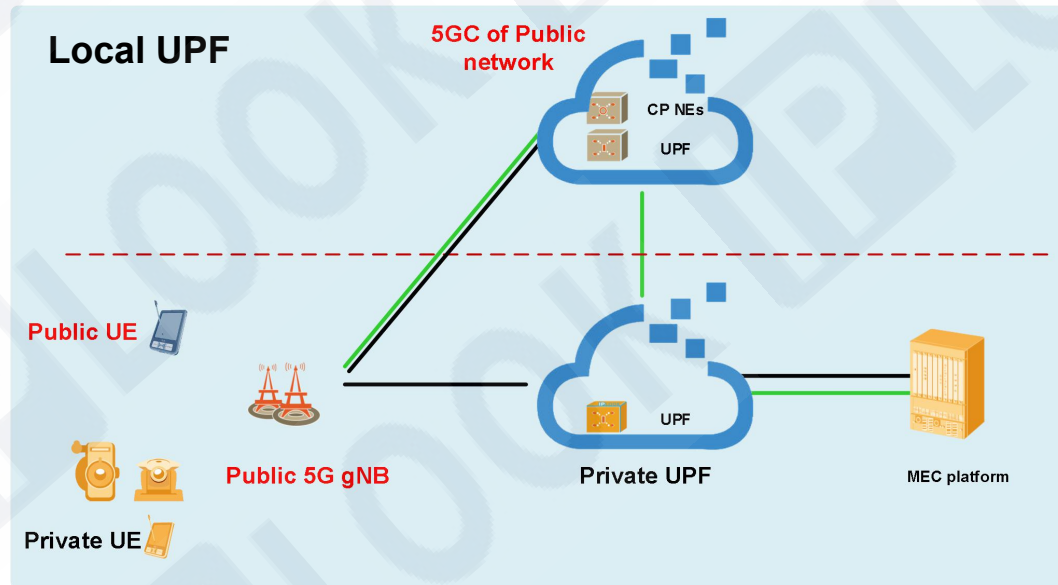
03

5GC Vertical Networks

5G Vertical networks

Smart Port

Smart Manufactory

Autonomous driving

5G Satellite

Smart farming

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Scenario 1-Port
Smart Port

5G Core
Operator network or private network

Port Warehouse

5G CPE

5G gNB

5G NG RAN

SGW/UPF

N6

Remote Control

AI Monitor

Machine Learning

Monitoring robot App

HW

Police station
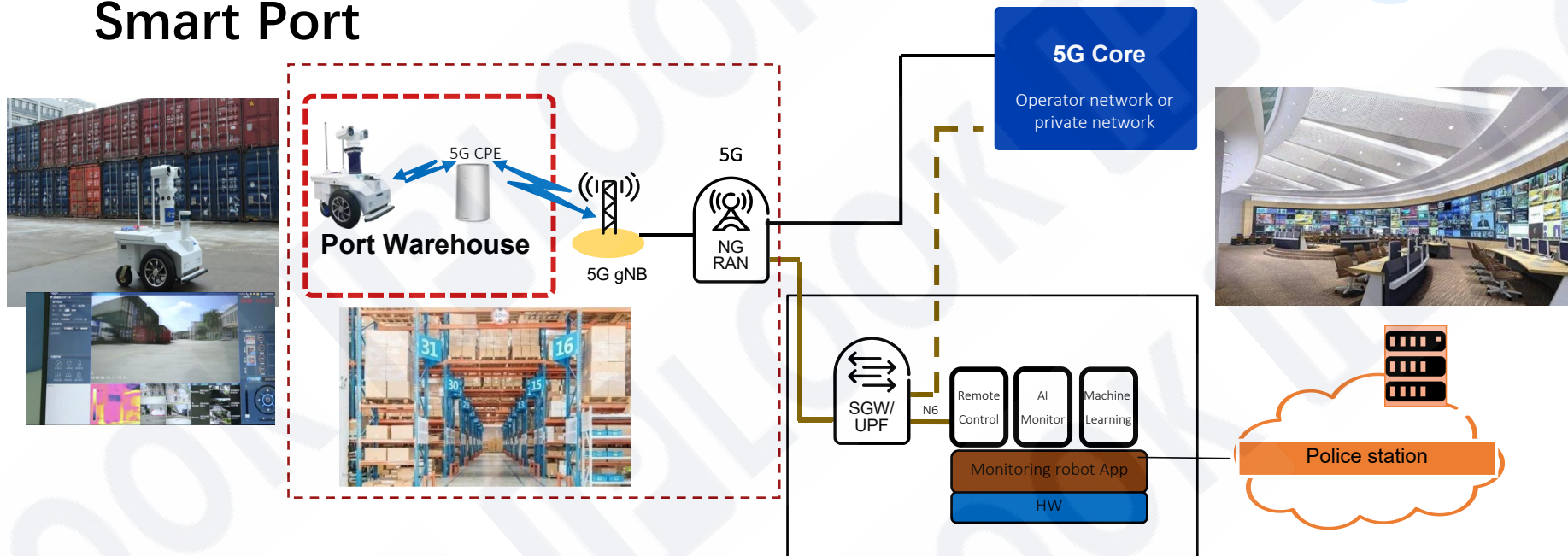
AI Security Robot

The remote control on the robot with less than 10ms latency.
The HD video transmission through 5G wireless network

Gantry Crane

Romote control on the gantry crane

AI Scan Machine

Counting the container or packages automatically

Scenario 2- Manufactory
Smart Manufactory

Inspection   Supplier

QC   Surveillance

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Production surveillance and management

Internet

Cameras   Auto forklift   AR smart glass   Sensors

Inspection Robot   Smart AGV   QC equipment   Production Equ

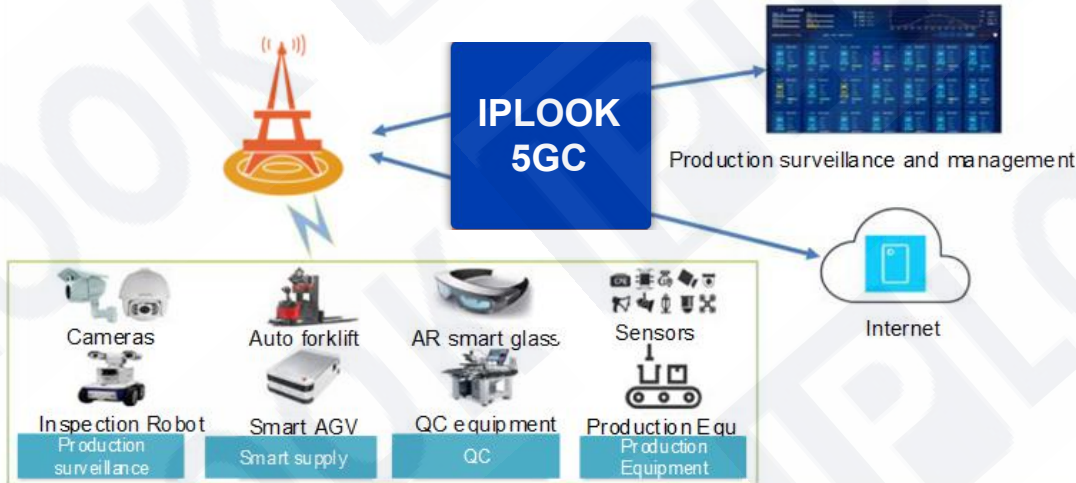| Production surveillance | Smart supply | QC | Production Equipment |

Surveillanc

The Reliable surveillance system in factory

Supply

The Autonomous supply system to improve the efficency

Sensors

The smart AI production equipment control by cloud brain。

Scenario 3- Farming
Smart Farming

Growth check Auto farming

Surveillance Consumption Magt

IPLOOK 5GC

5G gNB

Remote control and management

Data management

AI equipment

Auto water Auto plough Auto seeding Auto fertilizer

Surveillance
Temperature Cameras UAV

Sensors

Massive sensors connected. NB-IoT or common IoT terminals supported

Unmaned

The remote control near terminals to redunce latency but the data management system on cloud

Compatiable

Compatible core to support other platform or radio equipment vendor

04

Why choose IPLOOK

Why choose IPLOOK

IPLOOK

Cases all over the world
IPLOOK has accumulated 500+ commercial deployment in the last 9 years. Its 3GPP-compliant 3G/4G/5G core network could be easily integrated with legacy network.

The full stack core network
It has 3G, 4G and 5G full core network to ensure a smooth upgrade. With its open architecture, IPLOOK's core network supports multi-vendor bases stations and CPEs

Tailor-made solution
Focus on customer needs, IPLOOK provides all size scalable networks to satisify various requirements of operators and enterprises. Onsite services and 7*24 support are included.

Save CAPEX & OPEX
With the compact deployment and virtualized deployment, our NFV-based core network software is scalable, flexible, easy to deploy and manage at a low cost.

THANK YOU

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