TELANAR

– 1978 –

Introduction of GPON DAS Solution

2025 Products Catalogue

CONTENS

01Deman d Background

The middle & high-rise area of the high-rise buildings are easy to become signal blind areas

Large enclosed building interiors such as tunnels, subways, underground shopping malls., etc. are difficult to receive 4/5G signals

The cellular coverage efficiency of street shop is poor, quite a few blind areas, weak areas and conflict areas existing w/ negative experience

Rural and remote areas need a low-cost and flexible deployment wireless signal improvement solutions

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02 Highlights of GPON DAS Solution

4/5Gsignals go to the home easily w/ existing GPON network, no need of secGW

Dispersion compensation improves the transmission distance (≤10km)

Quickly and effectively resolve the week cellular coverage issues inside high-rise buildings, rural areas and underground packing lots

Supports large-scale networking andwidespace coverage

Meet the needs of high-speed transmission and low-cost coverage of wireless signals in the 5G era

Has the advantages of Flexible deployment, large capacity, high throughput, and long transmission distance

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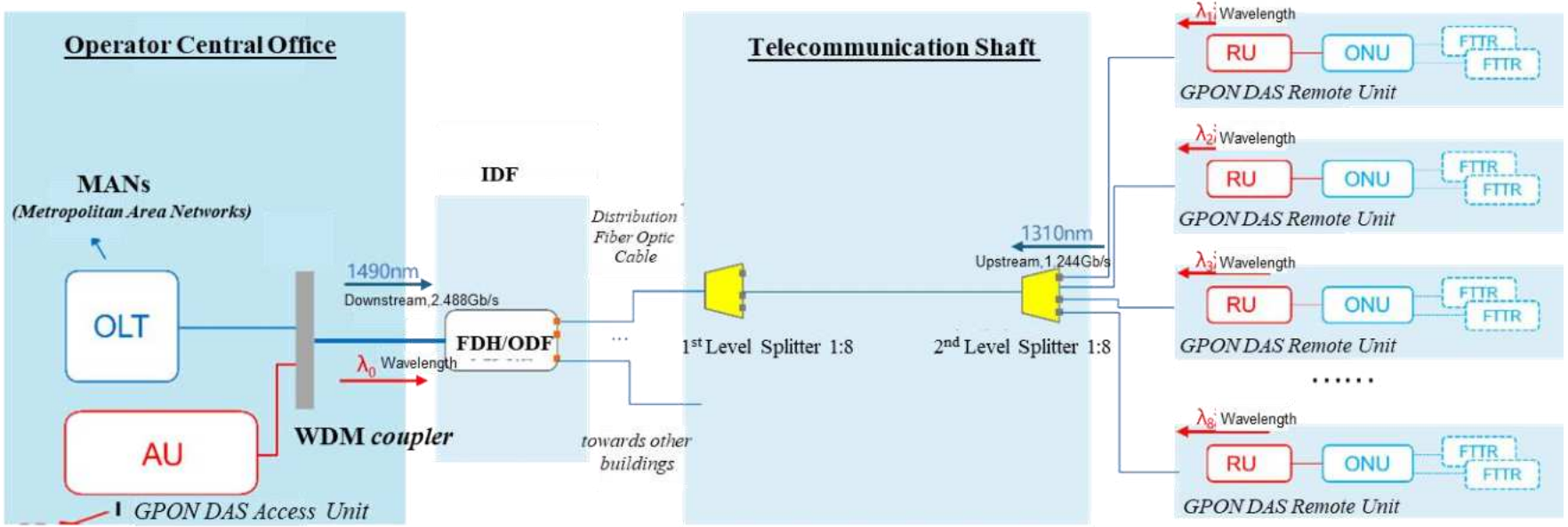
03 Introduction of GPON DAS Solution

The GPON DAS Solution consists of two main units: the access unit(AU) and the remote unit(RU). The AU receives the nearby 4/5G cellular signals through its antennas ,then performs signal processing through the internal modules, further converts the RF signals into optical signals(Radio Over Fiber). In practice, the solution utilizes the WDM to combine the AU optical signal & OLT optical signal into the existing fiber transmission, and later the remote WDM(embedded in RU) recovers the combined of optical signal to ONU signal and RU signal separately to enable both Wifi & 4G/5G at the same time .



03 Introduction of GPON DAS Solution

Main Units

- Access Unit(AU)
- Remote Unit(RU) for coverage

Channel Mode

- 4/5G Dual mode
- 1T1R for each

Signal Option

- Wireless coupling
- Wired coupling

Power Consumption

- AU≤40W
- RU(H)≤18W
- RU(E)≤28W

Coverage Ant

- Built-in Ant
- External Ant(Optional)

Max. input Level

- DL: +10dBm
- UL: -10dBm

Spectrum

- B3+N78 /B3+N41
- Customizable to support other bands

Latency

- ≤300ns

Networking

- Each OPT port supports 16 RU connection(Star)
- Up to 128 RU connection per AU

Remote Monitoring

- Supports both wired and wireless monitoring

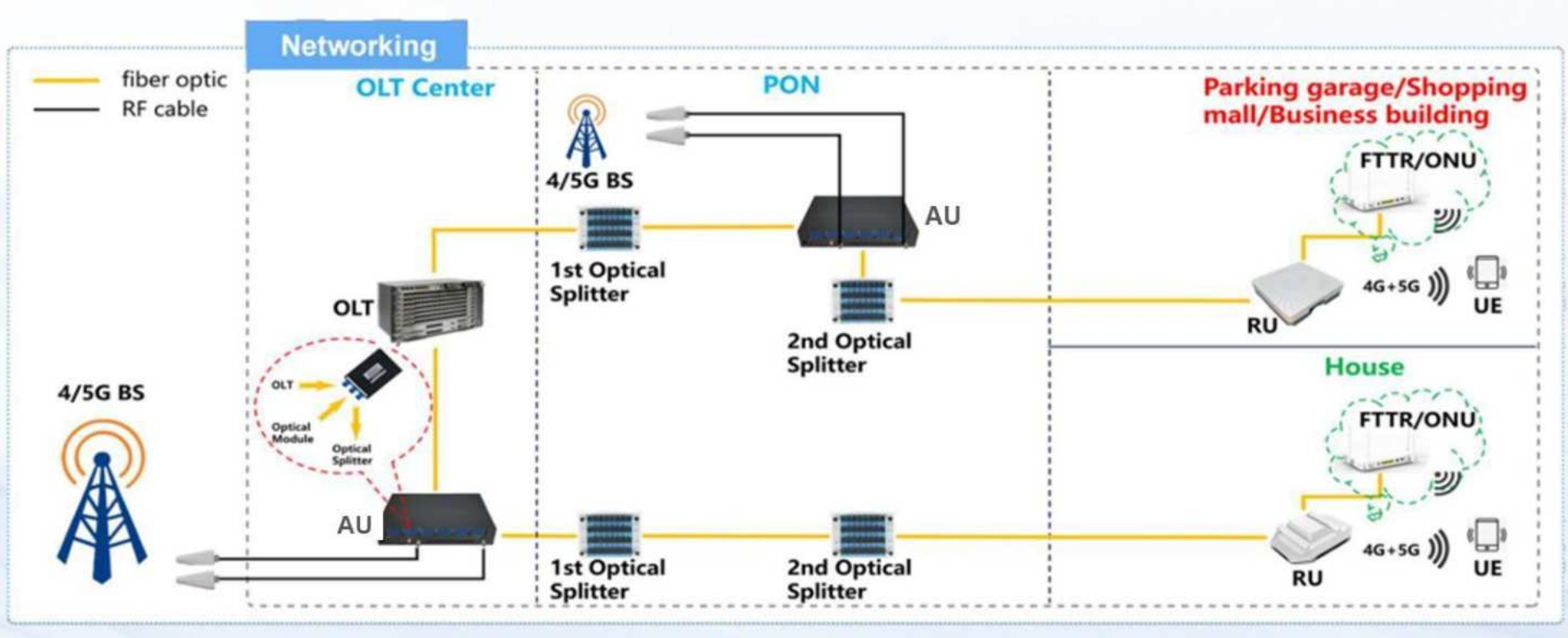
Distance

- Distance between AU and RU: Up to 10KM

Sync Sensitivity

- TDD Downlink RSRP≤-115dBm

03Product Introduction-Networking



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2 Core Value of GPON DAS

3 Solution Details

4 Pilot Cases for CMCC

04 Application Scenarios

Residential building

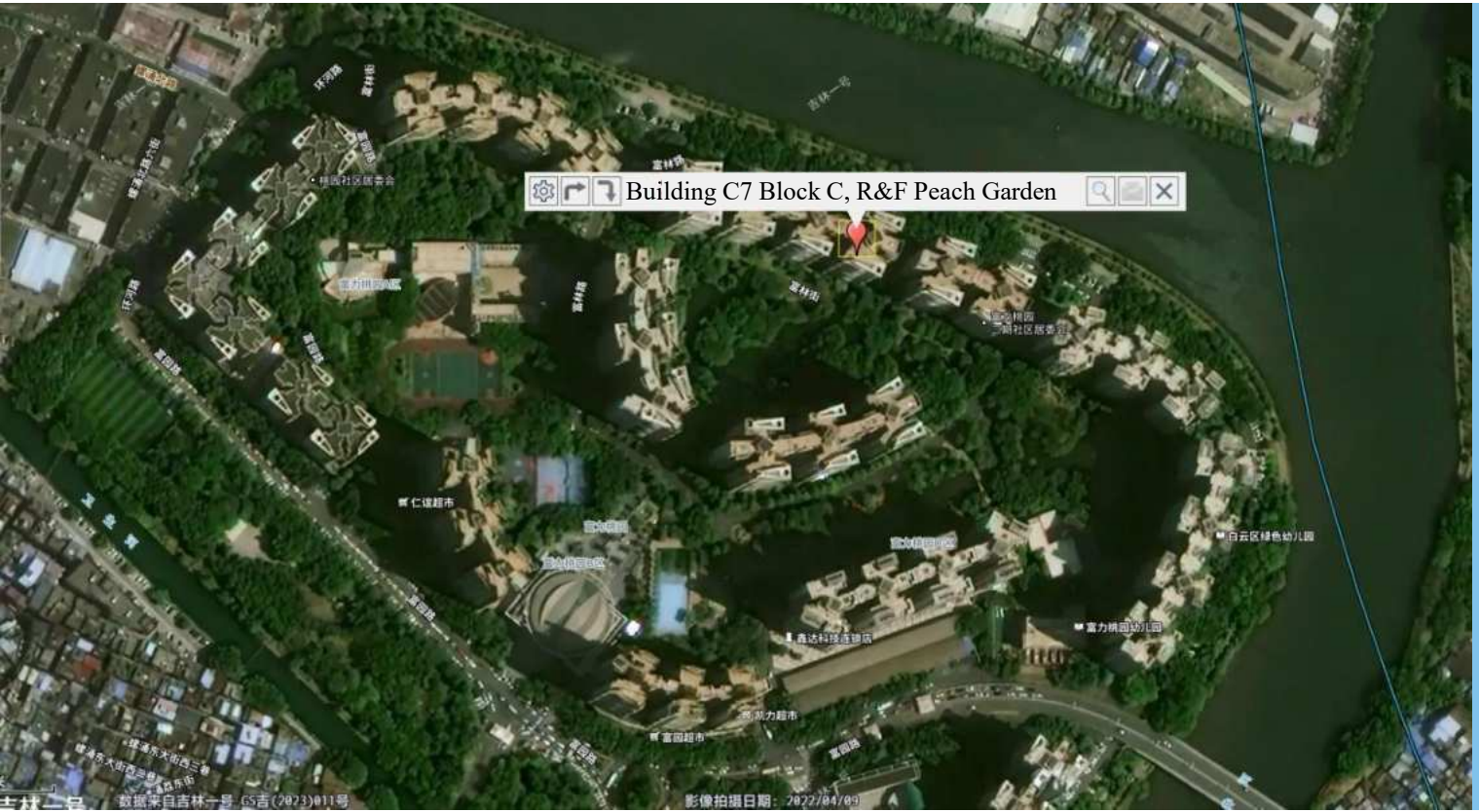
Steet Shops

Villa

Office building

① Resolving user complaints
② Rapid blind spot remediation
③ Quick weak coverage enhancement
④ Improve user experience on 4G/5G

04 Pilot Case for CMCC



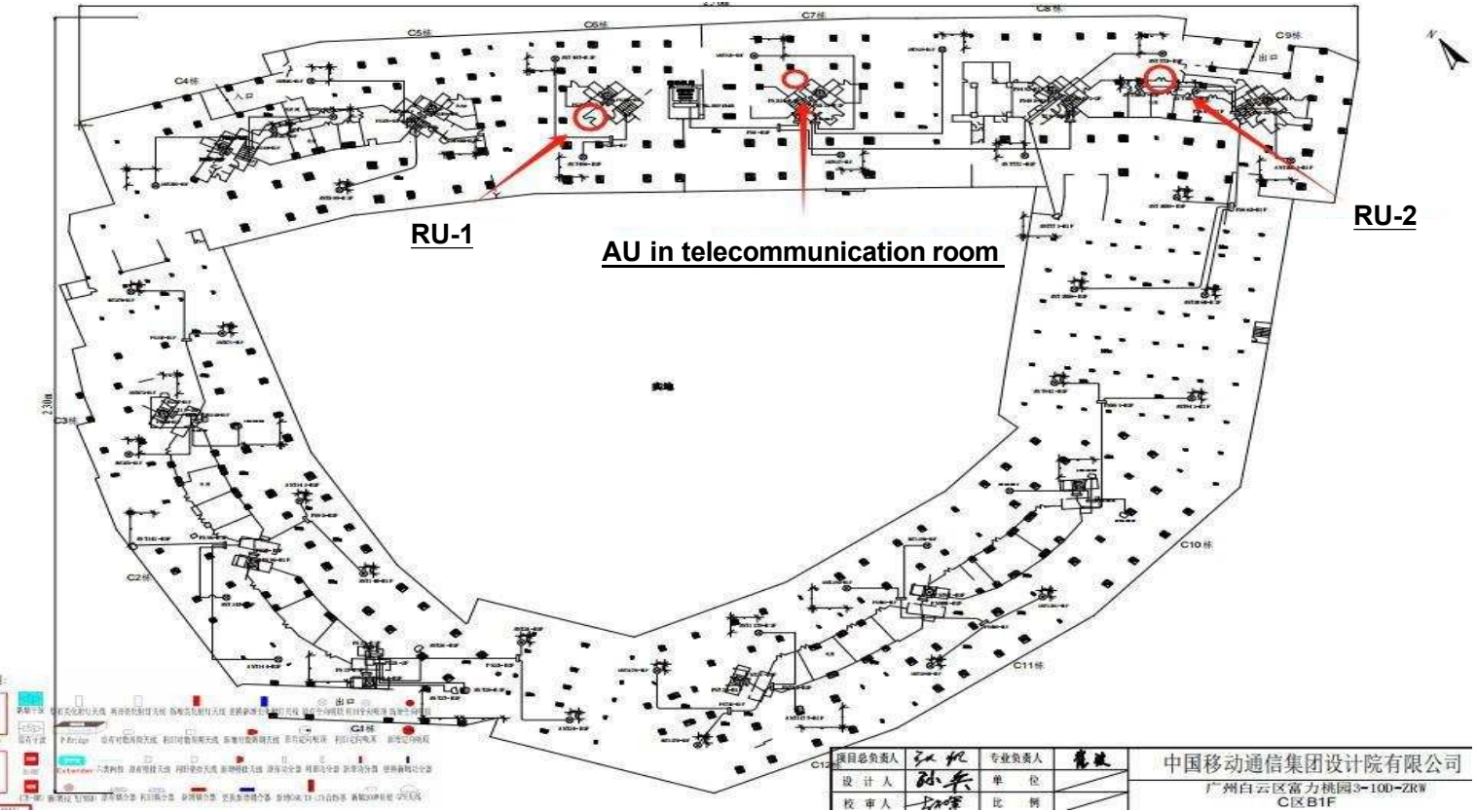
1 . The pilot location:

Area C, R&F Peach Garden, Huanhe Road, Baiyun District, Guangzhou City

2 . GPON Networking:

GPON network available for all household rooms located from block C01 to C12, w/ optical fiber connecting through GJ-03 splitter in Telecommunication room

04 Pilot Case for CMCC



Equipment

Installation

Position

04 Pilot Case for CMCC

Signal Status Before installation

No 5G(2600MHz) Signal

No LTE(1800MHz) Signal

GPON DAS Type

2.6G_NR 1T1R 200mW

1.8G LTE 1T1R 50mW

GPON Link

Fiber optic remote

distance:10km

1:64 spectral ratio

Testing Result

#NR Peak Rate:

Download 320.1 Mbps
Upload 50.3 Mbps

#LTE Peak Rate

Download 73.2 Mbps
Upload 36.2 Mbps

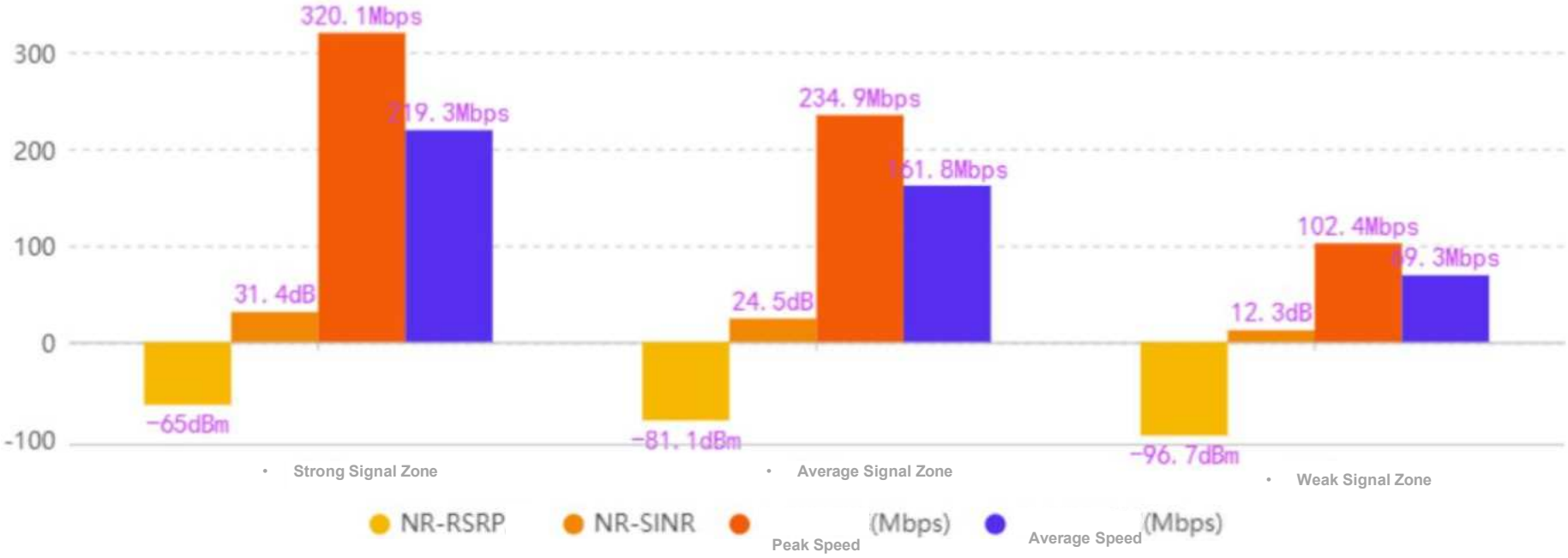
#Coverage radius

25meters

#No impact to GPON services

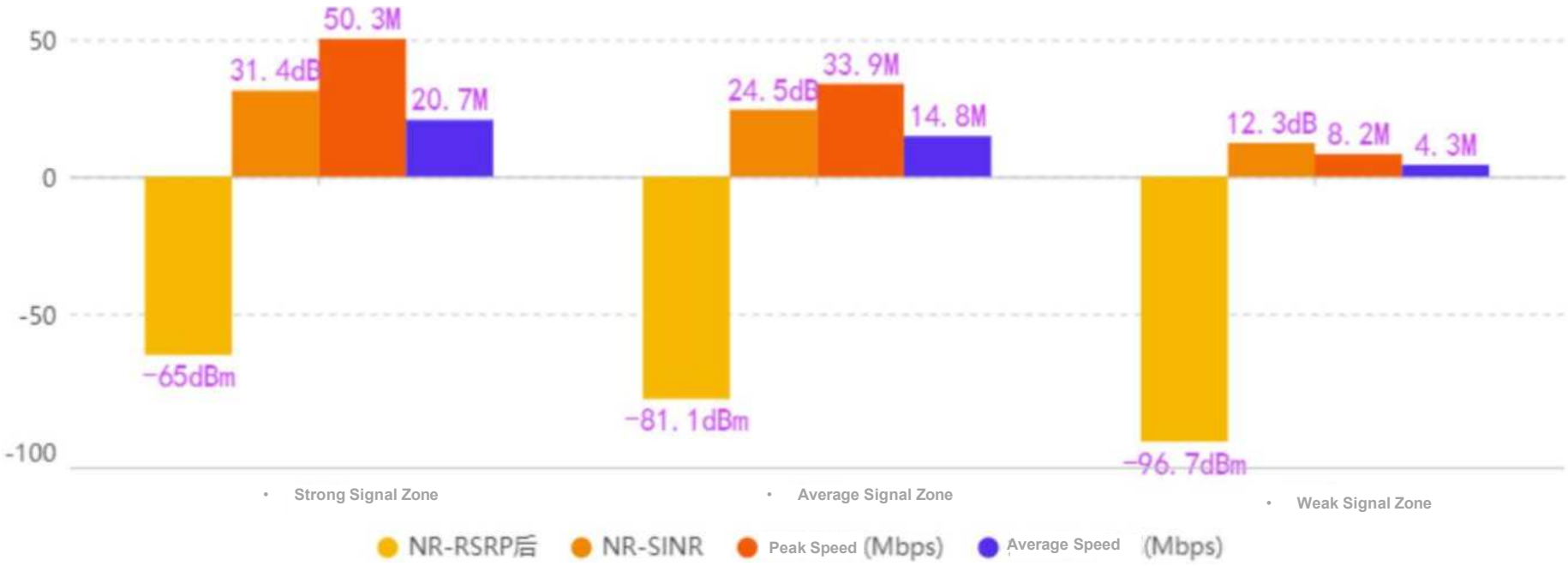
04 Pilot Case for CMCC

NR-DL



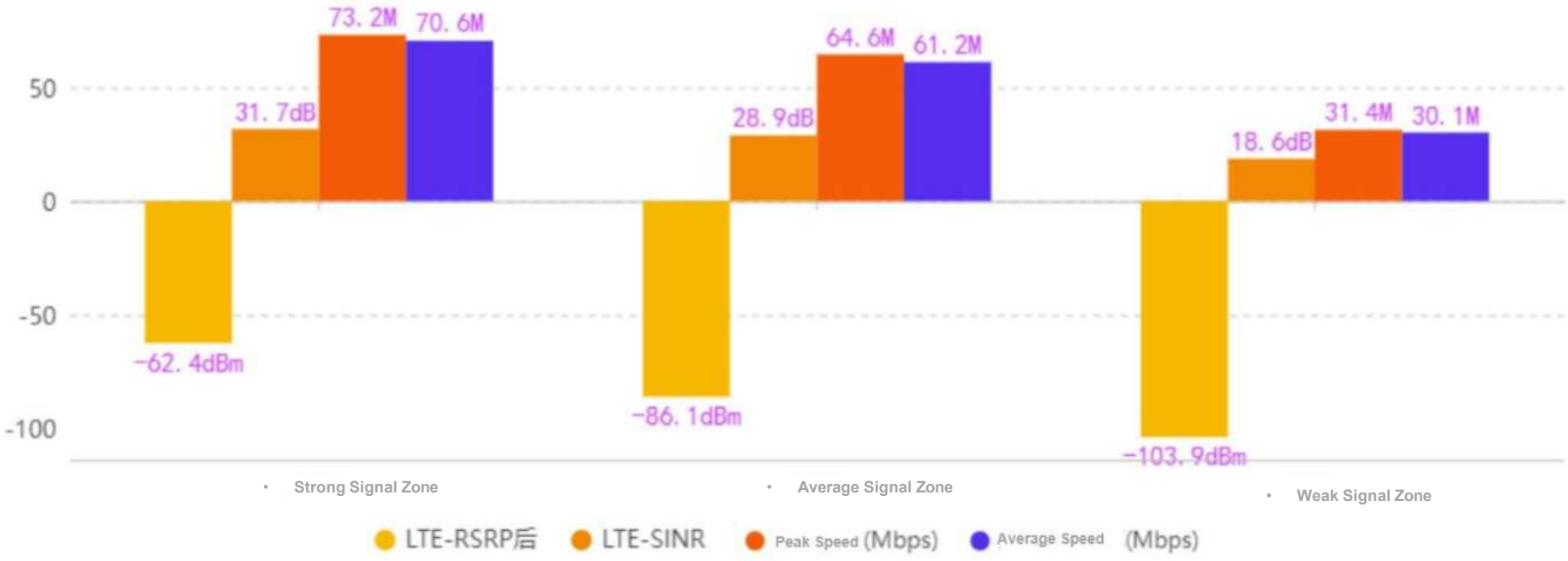
04 Pilot Case for CMCC

NR-UL



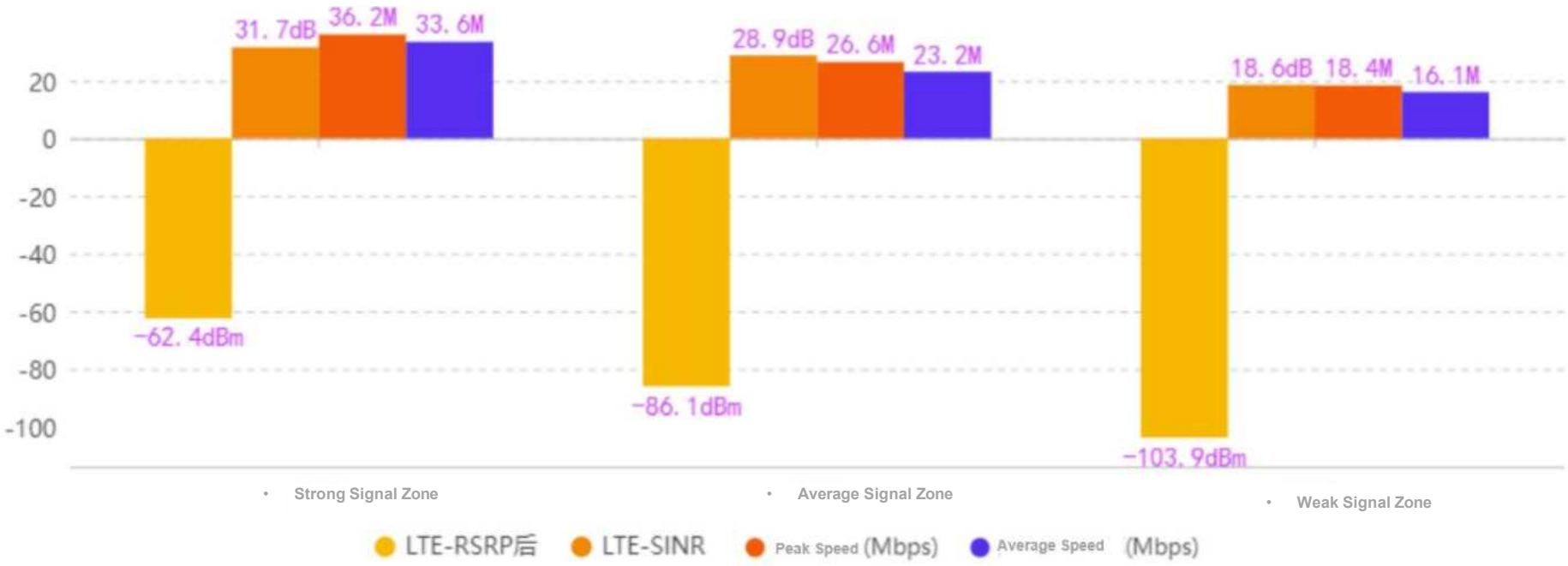
04 Pilot Case for CMCC

LTE-DL



04 Pilot Case for CMCC

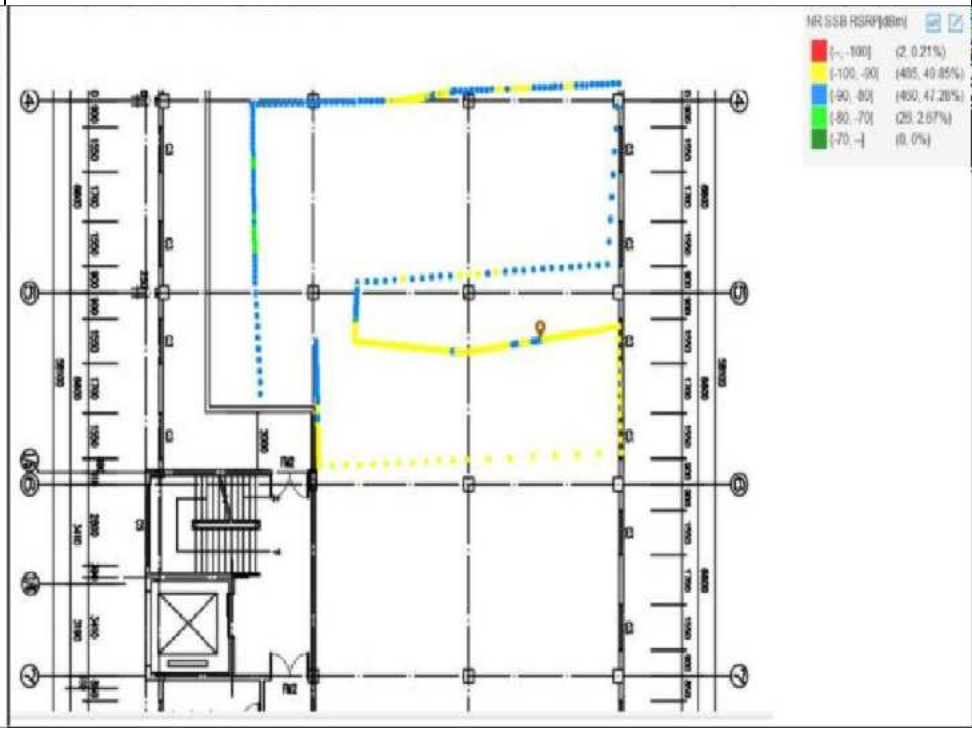
LTE-UL



04 Pilot Cases for CM CC

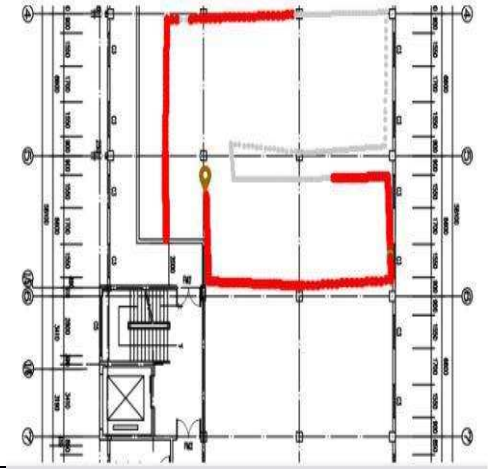
RSRP (before installation)

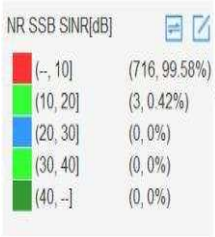
RSRP (after installation)

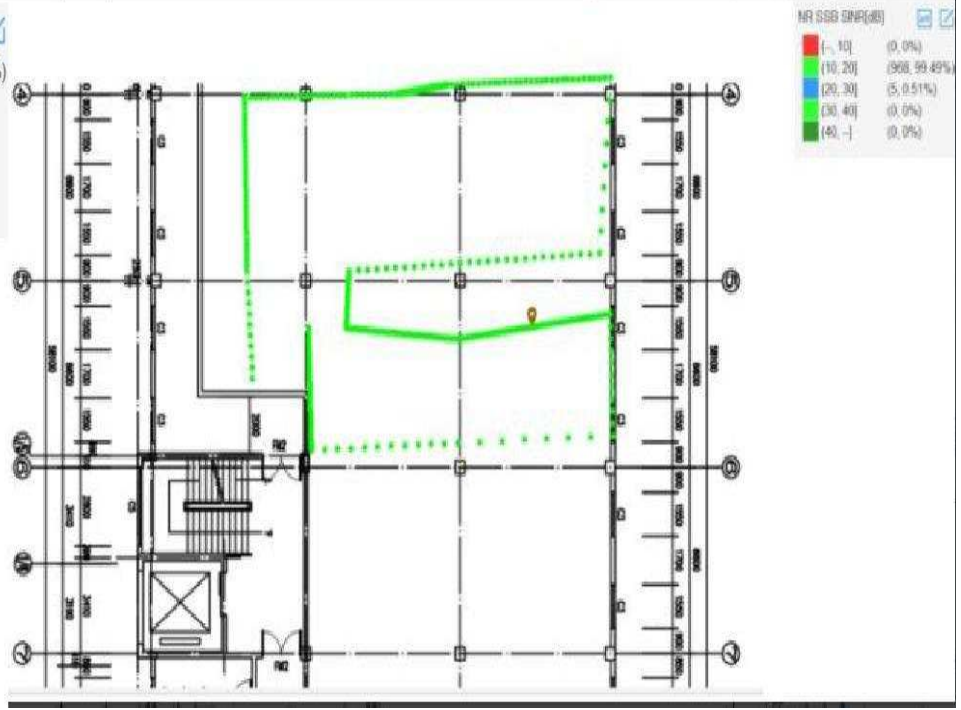


04 Pilot Cases for CM CC

SINR (before installation)	SINR (after installation)





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