

GALAXYSPACE LEO SATELLITE

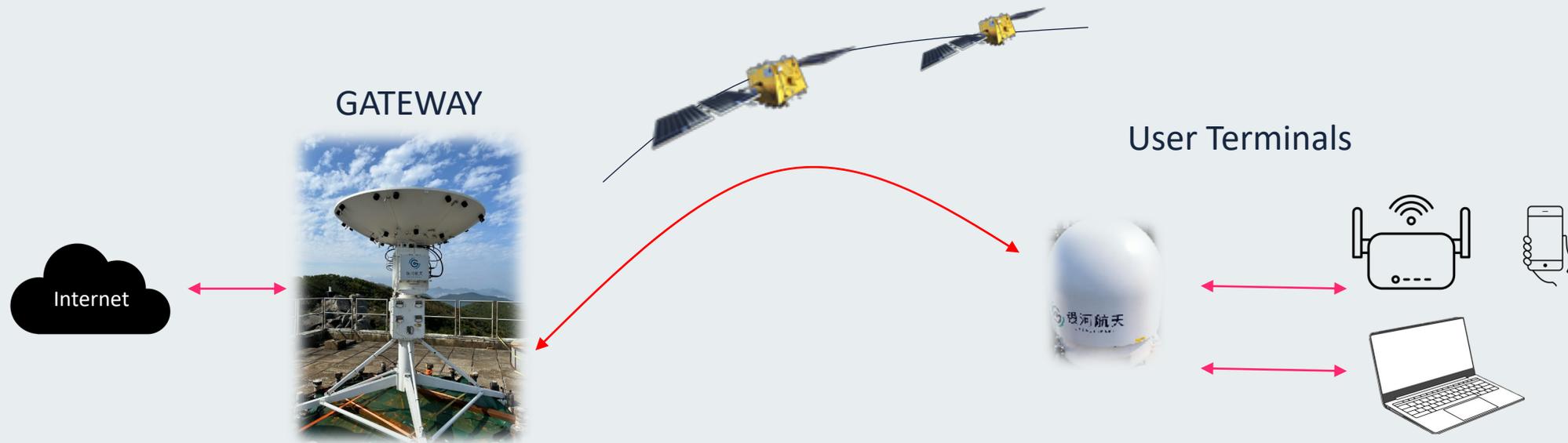
Hong Kong POC Test Report

Media & Satellite Product Team



Hong Kong POC Test Setup

- OFCA Temporary Permit T00870 Granted (Dec 2024 – May 2025)
 - 1.8m Gateway Station set up in Cape D'Aguiar Satellite Earth Station (DES) operating at Q/V band
 - 0.4m parabolic and 0.25m phase array user terminals set up in DES operating at Ka band
 - Q/V band: uplink **48.875 – 49.275 GHz**, downlink **39.525 – 39.875 GHz**
 - Ka band: uplink **28.400 – 28.675, 28.725 – 29.075 GHz**, downlink **18.825 – 19.225, 19.275 – 19.675 GHz**



Hong Kong POC Test Setup

- Installation completed at Cape D'Aguiar Earth Station (DES)

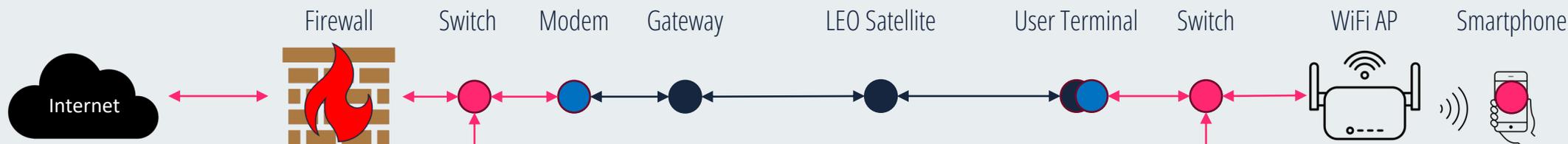


1.8m Gateway antenna



0.4m Terminal
(integrated antenna,
BUC/LNB and
modem in the doom)

DES Test/Demo Configuration

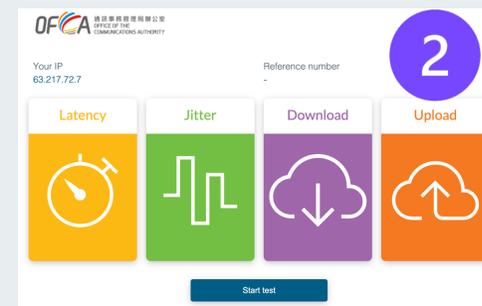
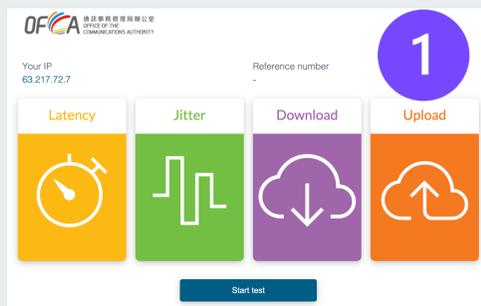


PERFORMANCE TESTS

1. Speed test gateway to Internet
2. Speed test UT to Internet
3. Iperf test betw. gateway and UT

APPLICATION TESTS

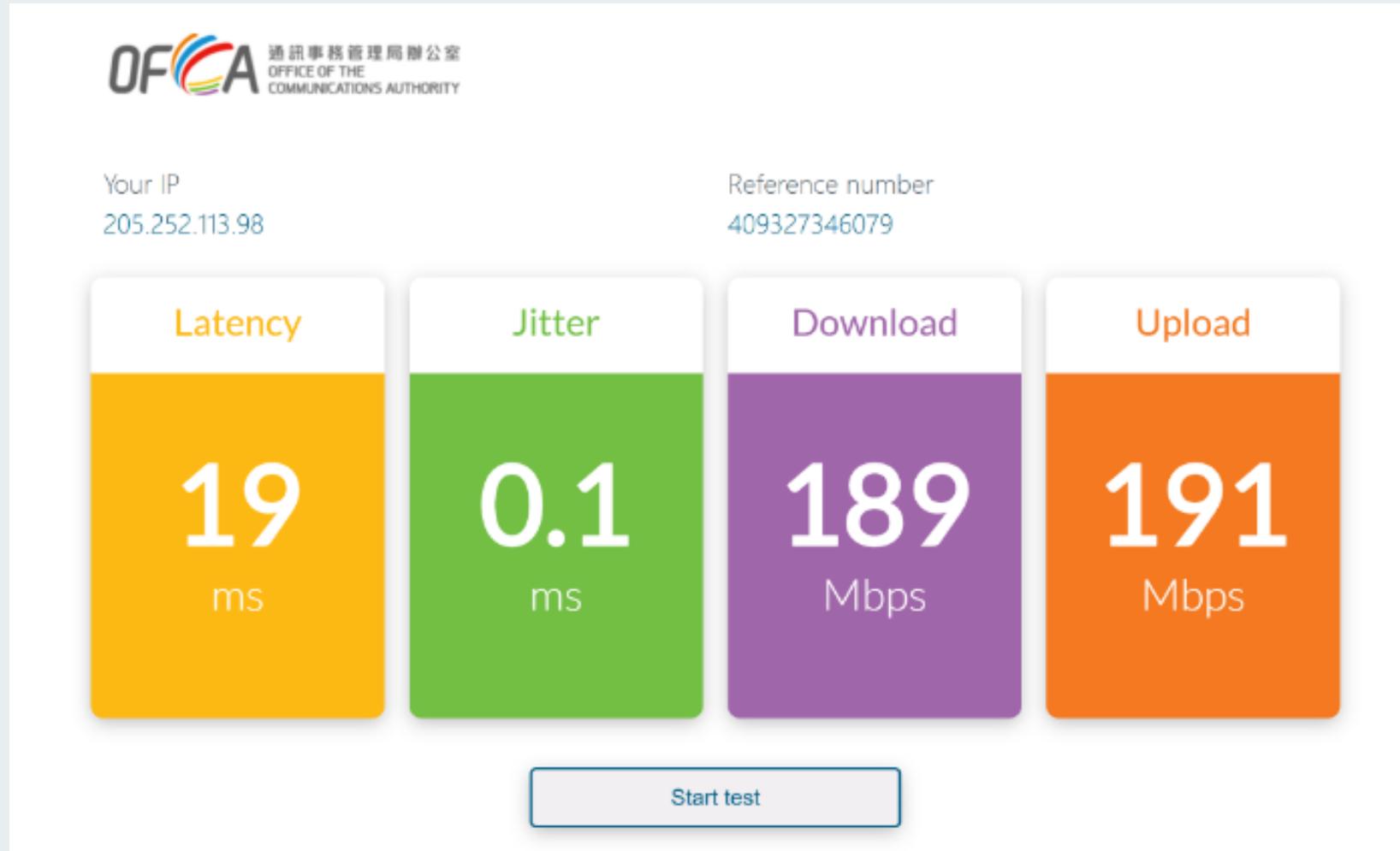
1. WhatsApp voice call
2. YouTube video streaming
3. Zoom video call
4. YouTube Live Streaming



Test1 – Local Internet Speed Test &

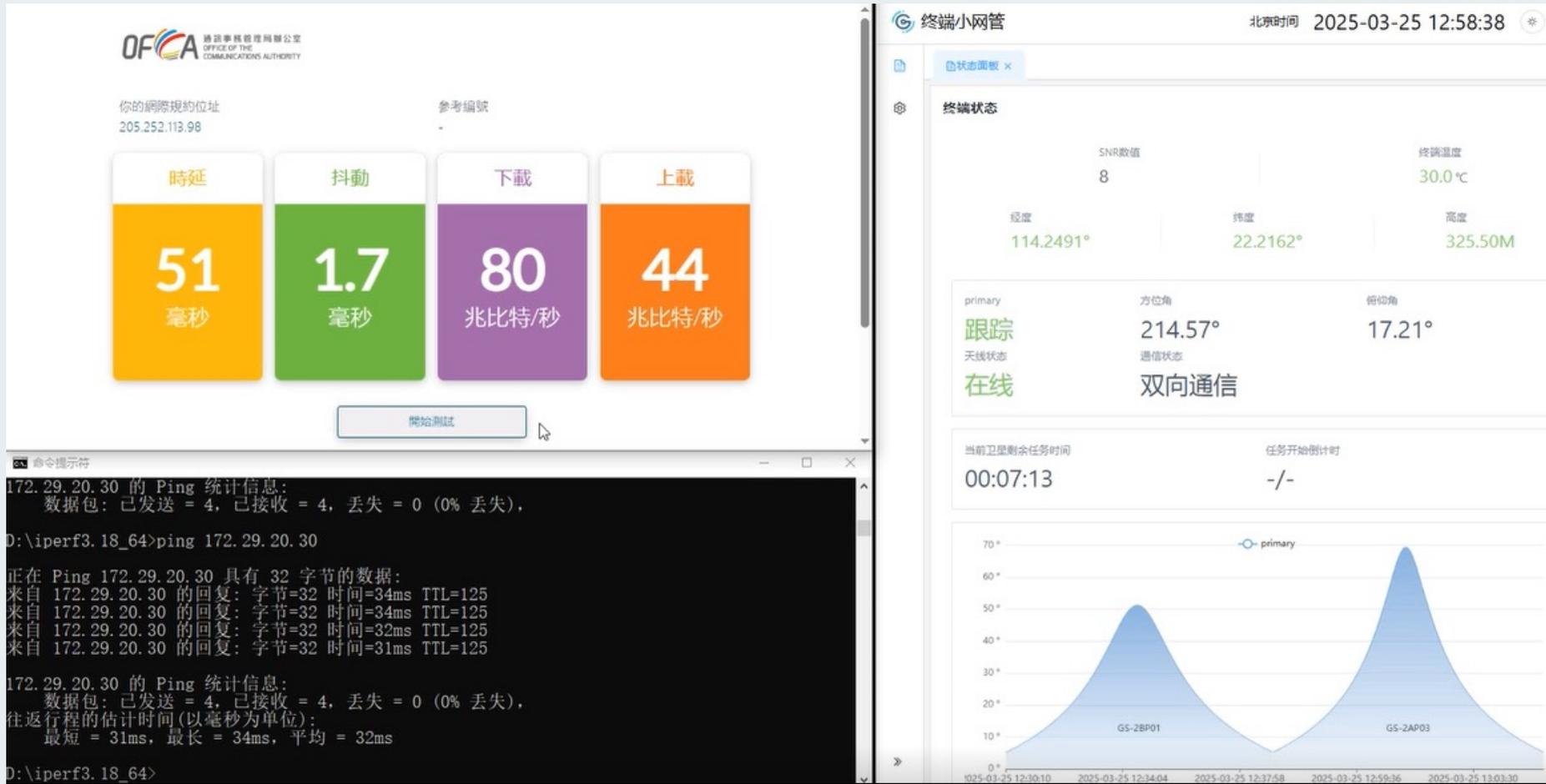
PCCW Global

consoleconnect



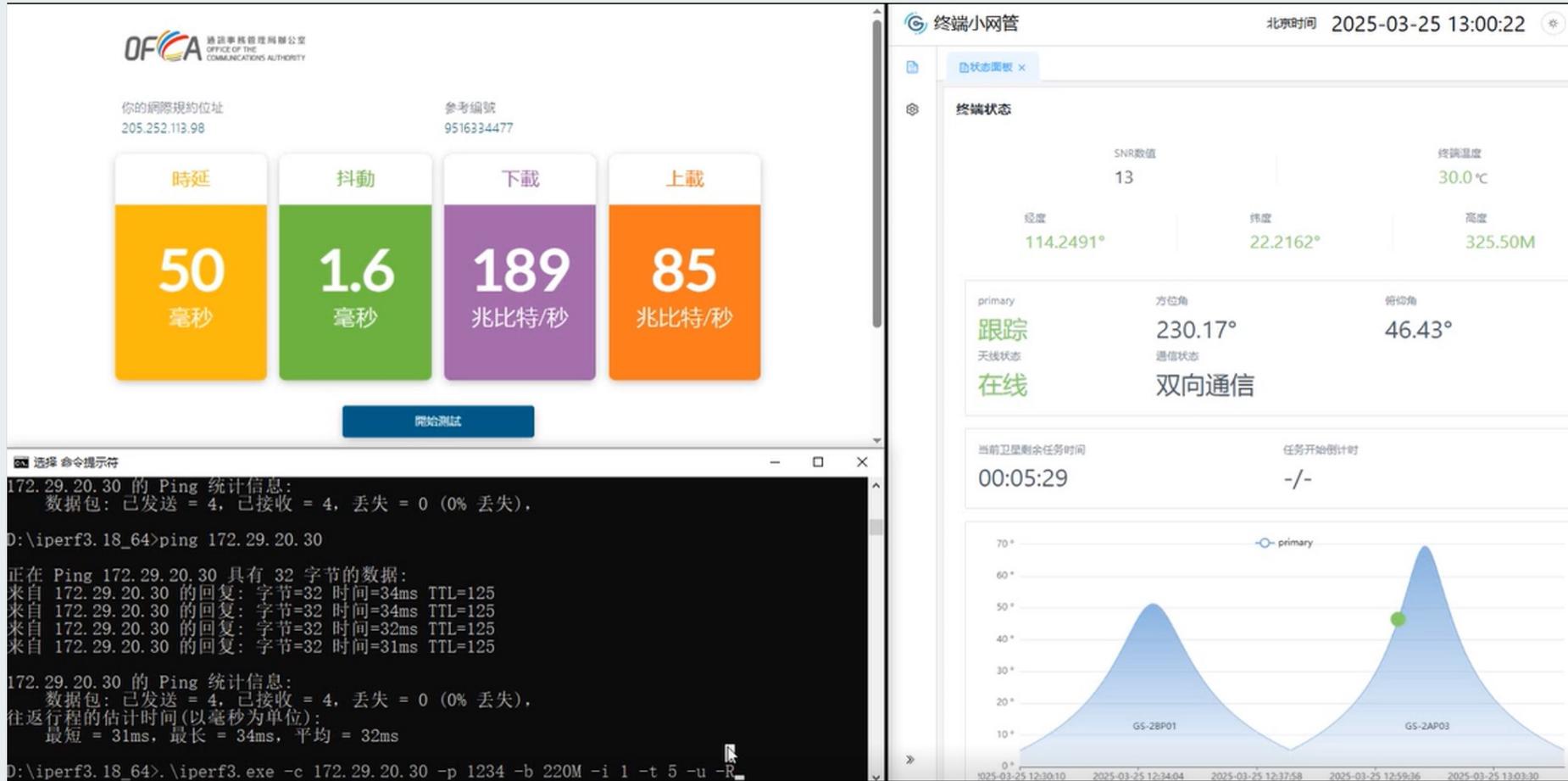
Download 189Mbps, Upload 191Mbps, Latency 19ms, Jitter 0.1ms, between gateway and Internet

Test2 – Terminal Internet Speed Test & at low elevation angle



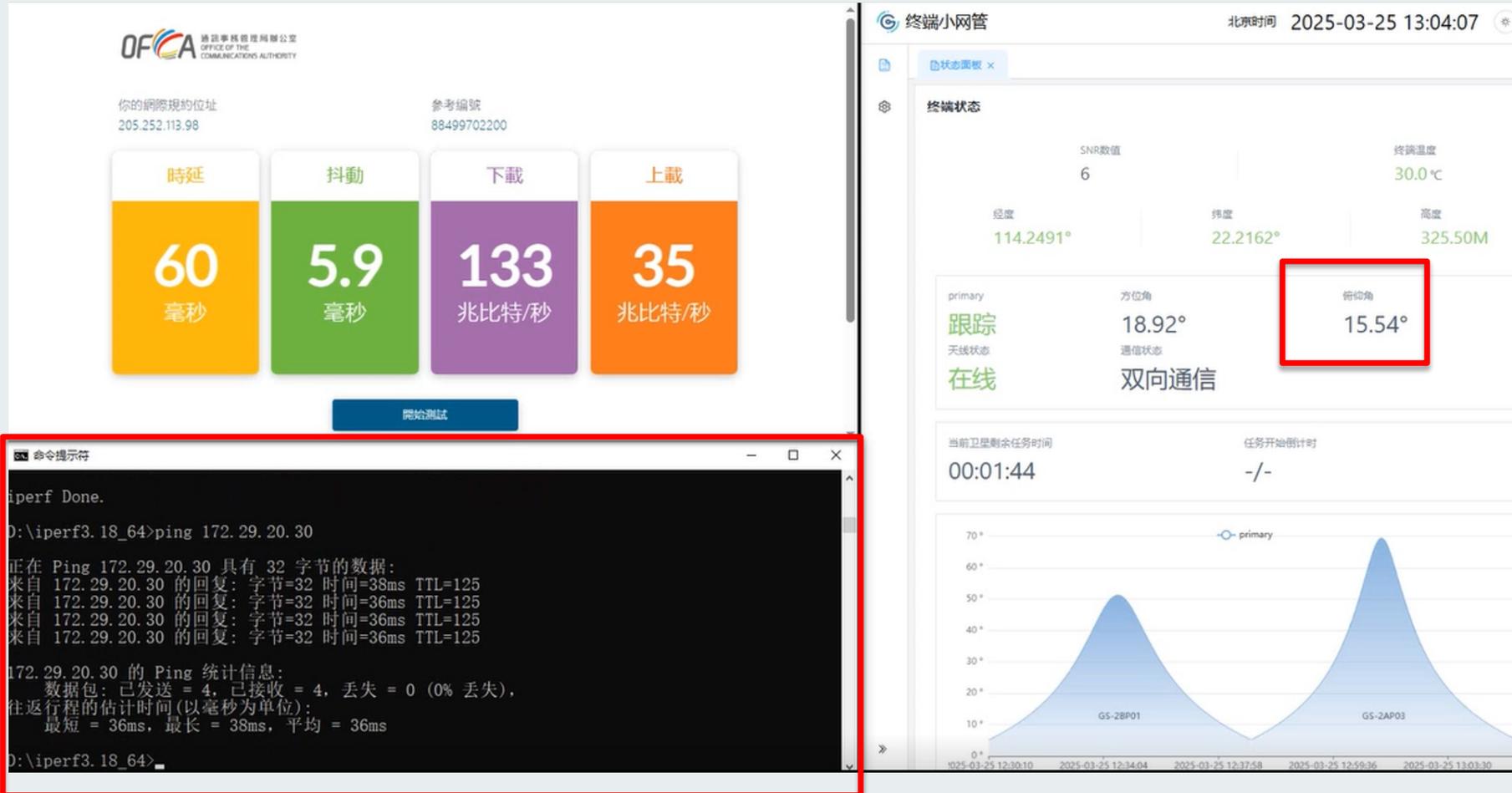
Download 80Mbps, Upload 44Mbps, Latency 51ms, Jitter 1.7ms @ 17°, between UT and Internet

Test2 – Terminal Internet Speed Test & at high elevation angle



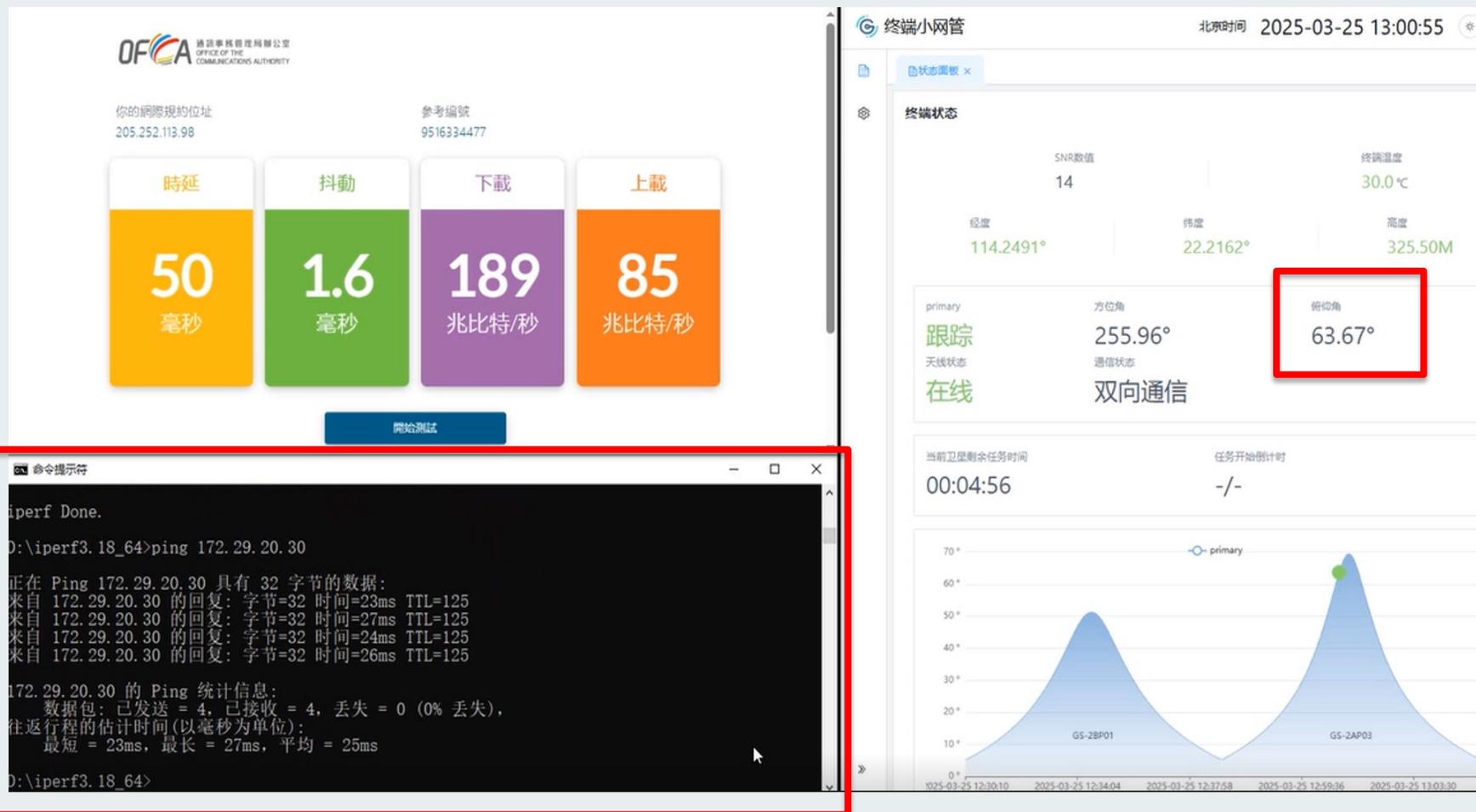
Download 189Mbps, Upload 85Mbps, Latency 50ms, Jitter 1.6ms @ 46°, between UT and Internet

Test3 – Satellite Link Latency Test & at low elevation angle



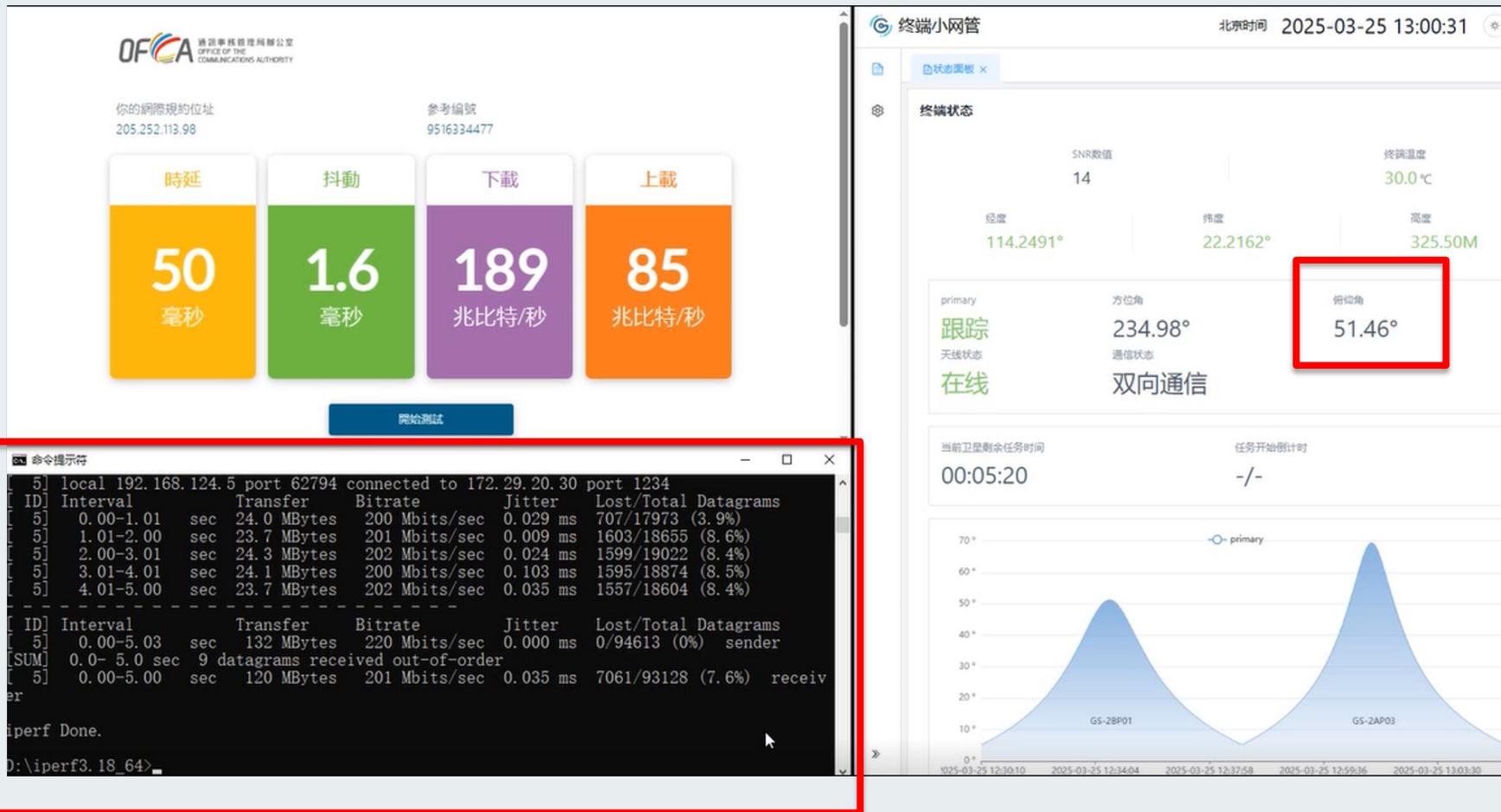
Latency 36ms @ 16°, between gateway and UT (

Test3 – Satellite Link Latency Test at high elevation angle



Latency 25ms @ 63°, between gateway and UT

Test3 – Satellite Link iperf Test at high elevation angle (forward link)



Forward link 201Mbps, Jitter 0.035ms @ 51°, between gateway and UT

Test3 – Satellite Link iperf Test at high elevation angle (return link)

The screenshot displays a satellite link test interface and a terminal window. The interface includes a header for the Office of the Communications Authority (OFCA) and a section for test options: 時延 (Delay), 抖動 (Jitter), 下載 (Download), and 上傳 (Upload). A terminal window shows the iperf test results for a return link at 59 degrees elevation angle.

ID	Interval	Transfer	Bitrate	Total Datagrams
5]	0.00-1.00	sec 11.8 MBytes	98.7 Mbits/sec	8487
5]	1.00-2.02	sec 12.0 MBytes	100 Mbits/sec	8653
5]	2.02-3.00	sec 11.8 MBytes	100 Mbits/sec	8464
5]	3.00-4.01	sec 12.0 MBytes	99.9 Mbits/sec	8645
5]	4.01-5.01	sec 11.9 MBytes	99.9 Mbits/sec	8533

ID	Interval	Transfer	Bitrate	Jitter	Lost/Total Datagrams
5]	0.00-5.01	sec 59.6 MBytes	99.7 Mbits/sec	0.000 ms	0/42782 (0%) sender
5]	0.00-5.15	sec 56.5 MBytes	92.1 Mbits/sec	0.820 ms	2178/42782 (5.1%) receiver

iperf Done.
D:\iperf3.18_64>

Terminal window output (highlighted in red):

```
Connecting to host 172.29.20.30, port 1234
5] local 192.168.124.5 port 50675 connected to 172.29.20.30 port 1234
ID] Interval      Transfer      Bitrate      Total Datagrams
5]  0.00-1.00    sec 11.8 MBytes  98.7 Mbits/sec  8487
5]  1.00-2.02    sec 12.0 MBytes  100 Mbits/sec  8653
5]  2.02-3.00    sec 11.8 MBytes  100 Mbits/sec  8464
5]  3.00-4.01    sec 12.0 MBytes  99.9 Mbits/sec  8645
5]  4.01-5.01    sec 11.9 MBytes  99.9 Mbits/sec  8533
-----
ID] Interval      Transfer      Bitrate      Jitter      Lost/Total Datagrams
5]  0.00-5.01    sec 59.6 MBytes  99.7 Mbits/sec  0.000 ms    0/42782 (0%) sender
5]  0.00-5.15    sec 56.5 MBytes  92.1 Mbits/sec  0.820 ms    2178/42782 (5.1%) receiver
iperf Done.
D:\iperf3.18_64>
```

Dashboard metrics (highlighted in red):

- 仰角: 59.09°
- 方位角: 347.35°
- 终端温度: 30.0°C
- SNR数值: 11
- 高度: 325.50M
- 纬度: 22.2162°
- 经度: 114.2491°
- 跟踪: 在线
- 天线状态: 双向通信
- 当前卫星剩余任务时间: 00:04:07
- 任务开始倒计时: -/-

Graph showing elevation angle over time for GS-28P01 and GS-2AP03.

Return link 92.1Mbps, Jitter 0.82ms @ 59°, between gateway and UT

Application Tests

Application	Good	Poor	Failed
WhatsApp voice call	✓		
YouTube video streaming	✓		
Zoom video conferencing	✓		
YouTube live streaming	✓		

Thank you

Australia

Level 3 | 200 Mary Street | Brisbane QLD 4000 | Australia

United Kingdom

7/F 63 St. Mary Axe | London EC3A 8AA | UK

France

2/F 16 rue Washington | 75008 Paris | France

Greece

340 Kifisias Avenue/340 Olimpionikon | Neo Psychiko 154 51 | Athens | Greece

Germany

Schillerstr. 31 | 60313 Frankfurt/M. | Germany

United States

475 Springpark Place | Suite 100 | Herndon | VA 20170 | USA

Singapore

6 Temasek Boulevard | #41-04A/05 | Suntec Tower Four | 038986 | Singapore

Hong Kong

20/F, Telecom House | 3 Gloucester Road | Wan Chai | Hong Kong

Japan

3/F Marunouchi Mitsui Building | 2-2, Marunouchi 2-chome | Chiyoda-ku | Tokyo 100-0005 | Japan

South Africa

Building 12 | 1 Woodmead Drive | Woodmead | Johannesburg 2191 | South Africa

UAE, Dubai

Office 504 & 505 | Level 5 | Arjaan Business Tower | Dubai Media City | Dubai

Talk to us: sales@consoleconnect.com

