

# Nybsys ML-2520: Outdoor 5G Integrated Small Cell

## 2T2R Outdoor 5G Base Station

### OVERVIEW

The Nybsys ML-2520 is an advanced outdoor 5G integrated small cell. It supports the growing demand for mobile data in dense urban areas.

This gNodeB provides users with high-speed broadband wireless access to the Internet using 2x20W output power (2x2 MIMO with 20W output each channel). It can operate in maximum 100 MHz bandwidth. Also, it supports 192 active users and 384 RRC-connected users.

The compact design of 2520 allows for deployment on lamp posts or poles, building walls, or other existing structures. So, it is ideal for filling coverage gaps in urban areas, parks, and even outdoor stadiums.



### KEY FEATURES

- Standard NR Band 78
- Complies with 3GPP 5G-NR Rel-15
- Supports Standalone (SA) mode
- Supports 20/40/50/60/70/80/90/100 MHz bandwidth
- GUI-based local and remote Web management
- TR069 network management interface support
- Peak rate:
  - DL 830 Mbps/ UL 170 Mbps (DDDDD DDSUU)
  - DL 750 Mbps / UL 250 Mbps (DDDSU DDSUU)
- 64 VoNR users ,192 active users, and 384 RRC-connected users
- Integrated antenna lightning protection function
- Passive Cooling IP65



## APPEARANCE



## SPECIFICATIONS

TECHNOLOGY	
<b>Standard</b>	5G NR TDD (3GPP R15 compliant)
<b>Number of Cells</b>	1 x 2T2R
<b>TDD UL/DL Configuration</b>	DDDDD DDSUU; DDDSU DDSUU; DSUUU
<b>Frequency Band</b>	N78: 3400-3600Mhz (customizable frequency range)
<b>Channel Bandwidth</b>	20/40/50/60/70/80/90/100 MHz
<b>Multiplexing</b>	2x2 MIMO

PERFORMANCE	
<b>Cell Capacity</b>	<ul style="list-style-type: none"> <li>• 64 VoNR users</li> <li>• 192 active users</li> <li>• 384 RRC-connected users</li> </ul>
<b>Cell Throughput</b>	DL 850 Mbps, UL 170 Mbps (DDDDD DDSUU) DL 730 Mbps, UL 260 Mbps (DDDSU DDSUU) DL 380 Mbps, UL 510 Mbps (DSUUU)
<b>Modulation</b>	DL: QPSK, 16QAM, 64QAM, 256QAM UL: QPSK, 16QAM, 64QAM, 256QAM
<b>Max Output Power</b>	43 dBm / channel
<b>Synchronization</b>	GPS, 1588, BD
<b>Receive Sensitivity</b>	< -102dBm



INTERFACE	
<b>ANT-A</b>	N-K: primary antenna
<b>ANT-B</b>	N-K: secondary antenna
<b>GPS</b>	N-K: GPS antenna
<b>LAN</b>	Local commissioning network port, used to log in to the local web or telnet
<b>WAN</b>	RJ45 1Gbps Backhaul network port
<b>SFP</b>	SFP 10Gbps Optical port backhaul interface
<b>AC</b>	Power supply interface AC 220V



HARDWARE INTERFACE	
<b>Fronthaul (Connect to Remote RRU) /Backhaul /Cascade Interface</b>	10G SFP+ optical port
<b>DEBUG/RGPS Interface</b>	Cable port
<b>Backhaul</b>	One Optical and one RJ45 Ethernet interface (WAN)
<b>Radio Frequency Interface ANT1 ANT2</b>	N-K
<b>GPS Antenna Connector</b>	GPSN

SOFTWARE	
<b>Voice</b>	VoNR, EPSfallback
<b>SON</b>	Automatic Neighbor Relation (ANR)
<b>Network Management</b>	TR069
<b>Maintenance</b>	Remote or local maintenance Online status management Performance statistics Fault management Local or remote software upgrade Logging Connectivity diagnosis Automatic start and configuration Alarm reporting Signaling trace
<b>Power Control</b>	UL Open-loop/Closed-loop Power Control, DL Power Allocation



PHYSICAL PARAMETERS	
<b>Power Supply</b>	220V AC (DC can be customizable)
<b>Power Consumption</b>	≤ 200W
<b>Backhaul Interfaces</b>	One optical (SFP) and one RJ-45 Ethernet interface (WAN)
<b>Total Weight</b>	< 13kg
<b>Dimension</b>	355 x 295 x 151 mm
<b>Installation Method</b>	Supports pole, hanging, and wall installation
<b>MTBF</b>	> 150,000 hours

ENVIRONMENT	
<b>Protection Level</b>	IP65
<b>Operating Temperature</b>	-40 °C ~ +55 °C   -40 °F ~ +131 °F
<b>Working Humidity</b>	5% ~ 95%
<b>Lightning Protection</b>	GB/T 17626.5 standard