

# 5G AX1200 for OW-450 (4N00) with 5GHz Panel Antenna for ANT-14AD(14dBi) 2KM Distance PtP Throughput Test Report



1. Test Product model.



2. Introduction

The purpose of this test is to determine the average throughput and signal stability of OW-450 (4N00) + external 5Ghz 2x2 MIMO long-distance antenna (ANT-14AD) at a distance of 2KM. This test specifically measures point-to-point WDS connections set up with Cerio's CenOS 5.0 software core. The test was conducted between two OW-450-4N00 + external 5Ghz 2x2 MIMO long-distance antenna (ANT-14AD) devices paired with 802.11ax operation.

3. Test Date and Personnel

Date: 2024 8.22				
Tester				
	8/22	08.22	Eric	8.22
	ly	mark	Judy	Eric



## 4. Test Environment

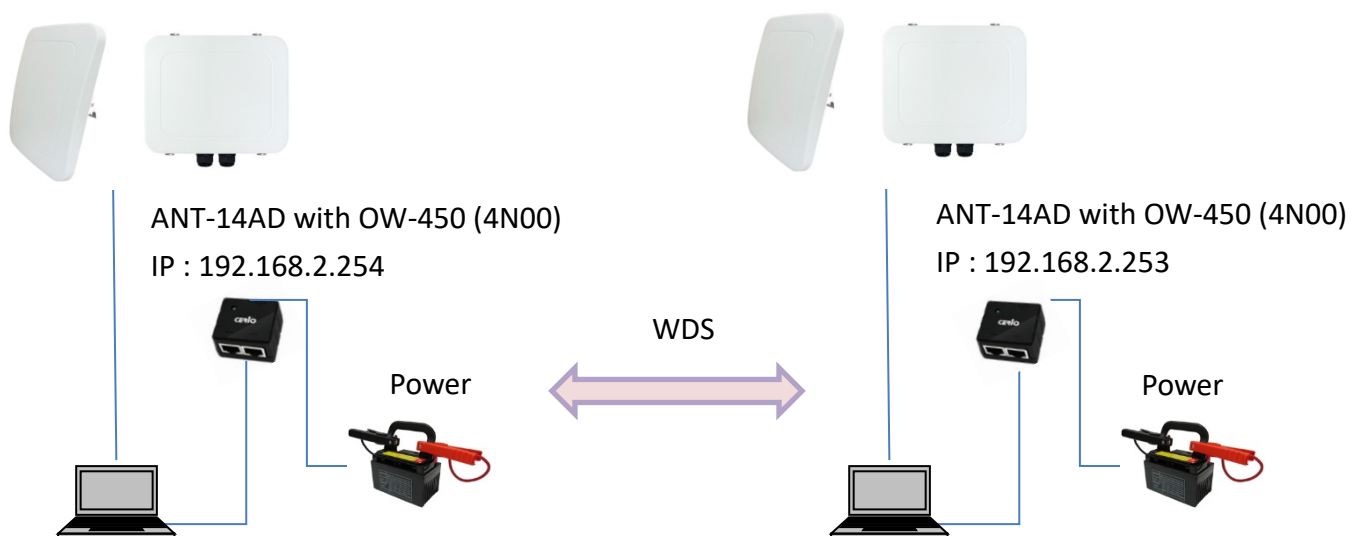
Location A: Second nuclear power plant breakwater.

Location B: Yehliu Tunnel entrance platform.

The distance from Location A to Location B is roughly 2178.24m, determined by Google Earth.



## 5. System Network Configuration



## 6. OW-450 (4N00) UI Screen

Location A : MAC Address and WDS

Warning: 不安全 | 192.168.2.254/#

OW-450-4N00

System Wireless Utility Status

WDS Status

Radio0 Client

MAC Address	Rate(RX/TX)	RSSI
-	-	-

Radio1 Client

MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:05:1c:87	864Mb / 432Mb	31

Location B : MAC Address and WDS

⚠ 不安全 | 192.168.2.253/#

System Wireless Utility Status

OW-450-4N00

WDS Status

Radio0 Client

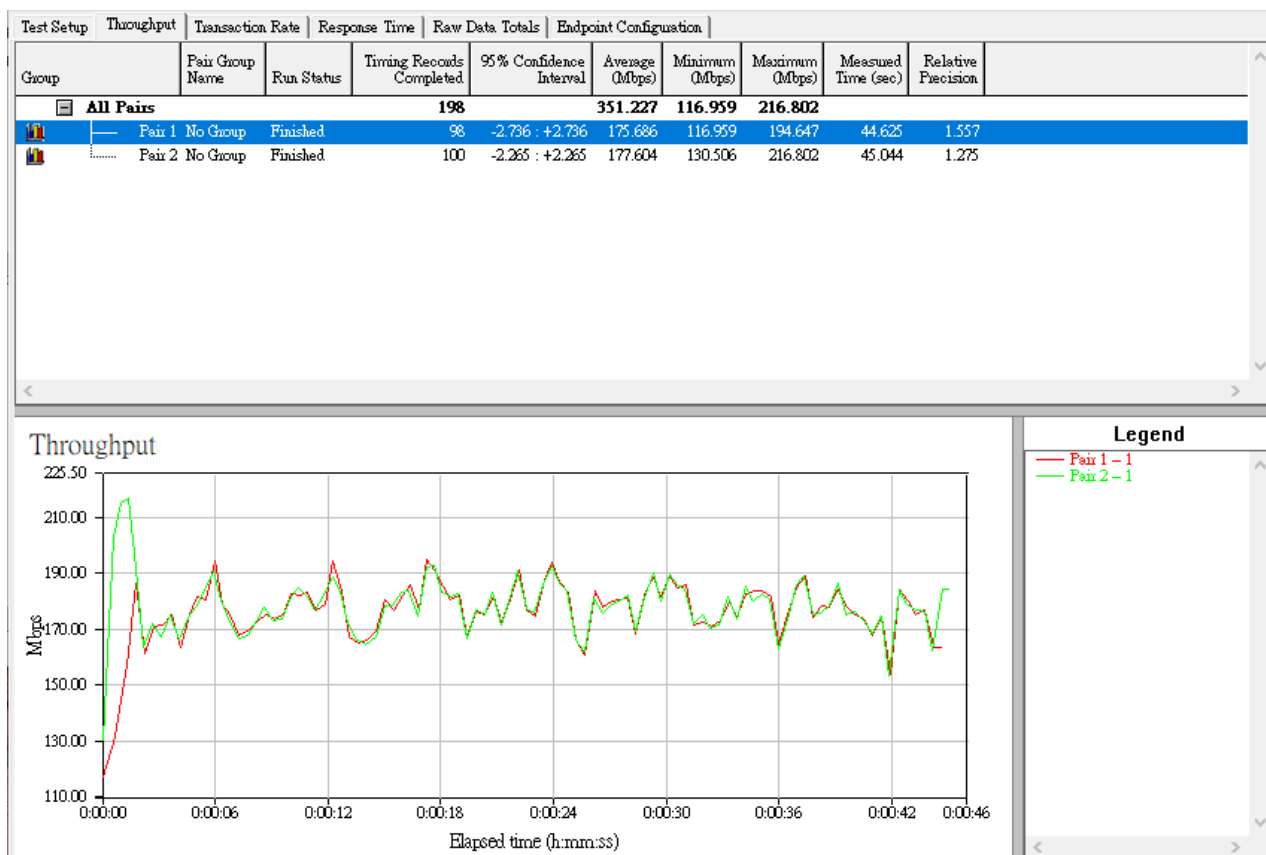
MAC Address	Rate(RX/TX)	RSSI
-	-	-

Radio1 Client

MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:ff:ff:04	576Mb / 720Mb	32

Band Mode	Channel	Throughput	Antenna
802.11ax	161	351.227	ANT-14AD





5G1\_14dBi\_CH161

## 7. TEST Tools

Test Equipment			
Notebook	DESKTOP-IAEI2Q1 x1 Lenovo X230 x1	System OS	Windows 10 (x64)
Power (battery)	ALPHALINE MF85D23R x2		
Inverter	DC to AC 350W Inverter x2		
Tripod	2		
PoE Injector	Gigabit Injector (PoE-PE03GE-30W) x2		
RJ-45 Cables	Cat.5e x 4		
RF Cables	LLMR-NNP-1M x2		

Test product	1. External Antenna : ANT-14AD x2 2. OW-450 Series eXtreme High Power WiFi6 Dual-Radio Outdoor PoE Bridge/AP x2
Test Software and setting information	
Application tools	Chariot Version 6.7
Running time	46 sec
software	CenOS 5.0 Layer2 Softcore Core Firmware version : Pme-CPE-CERIO V0.02
Operation mode	Using Access Point mode with WDS function
Radio/Bandwidth / Channel	Radio1 (5G 2X2) / HE80/ CH161

## 8. On-site status

Location A: Second nuclear power plant breakwater. ( 核二廠消波提 )





Location B: Yehliu Tunnel entrance platform. ( 野柳隧道口平台 )







## Conclusion

In order to verify the performance of our Cerio newly designed Dual-Radio outdoor wireless AP and enhance the reliability of the product, our wireless access point was equipped with an outdoor wireless antenna and conducted a long-distance throughput test. This time we used The outdoor access point OW-450 (4N00) model with an external antenna (ANT-14AD) for PtP testing under WDS function.

According to the results of 2KM distance test on the OW-450 (4N00) + 14dBi external antenna (ANT-14AD), due to the hardware design of the ANT-14AD's wide-range signal characteristics, it is easy to fine-tune the horizontal or vertical angle and select Optimal channel settings. With a gain of 14dBi, the best and most effective data transmission speed can reach 351.227Mbps. Our transmission performance is extremely stable, with significant throughput levels over long distance connections.

Cerio Outdoor Wireless Testing has proven to be an invaluable reference tool for users planning to deploy our products in a variety of outdoor environments. Our unparalleled experience in creating high-quality wireless networking hardware and software products allows us to consistently meet user needs and satisfy consumer demands through our extensive knowledge and product design.