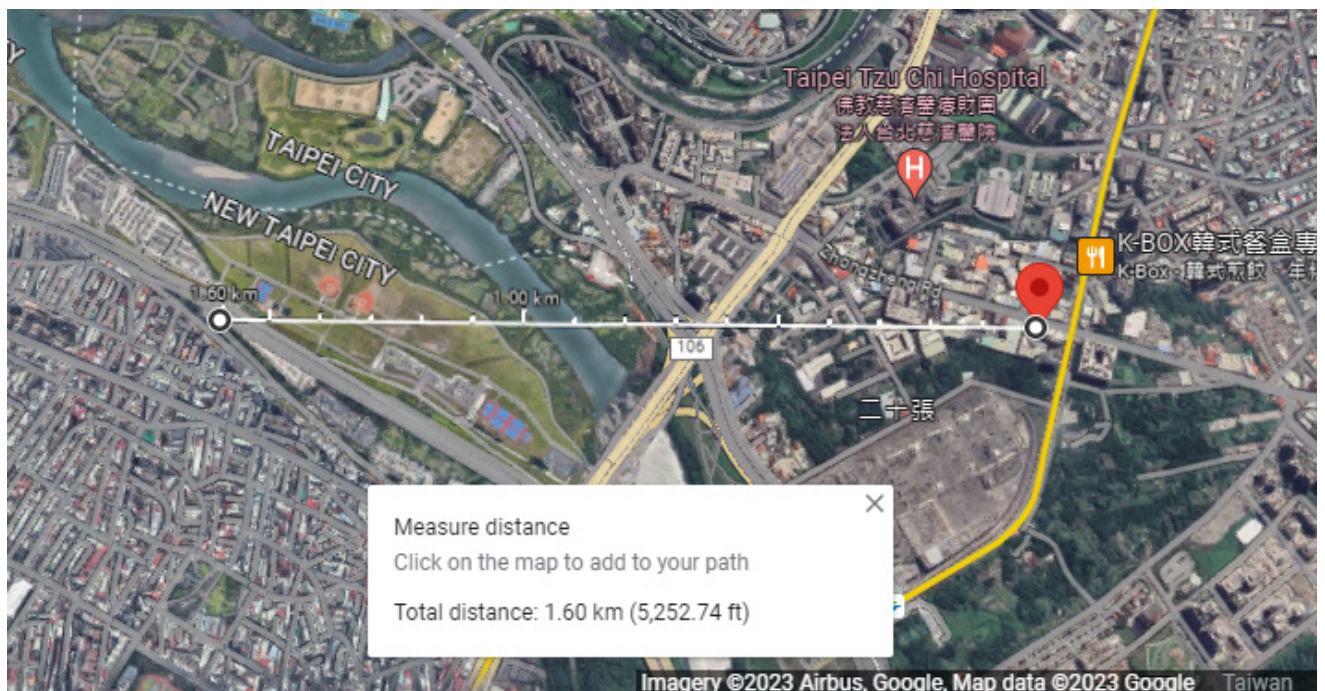


# 5Ghz Panel Antenna for ANT-18AD(18dBi) with WiFi6 Outdoor (OW-400 4N00) 1.6KM Distance PtP Throughput Test Report.



1. Test Product model.



2. Introduction

The purpose of this test is to determine the average throughput and signal stability of an external 5Ghz 2x2 MIMO long-range antenna (ANT18AD) at a distance of 1600M. This test specifically measures point-to-point WDS connections set up with Cerio's CenOS 5.0 package. The test was conducted between two OW-400-4N00 devices paired with 802.11ax operation.

3. Test Date and Personnel

Date : 06/28/2023			
Test Persons			
			



## 4. Test Environment

Location A: XinDian Cerio office building top floor.

Location B: Yonghe Xinbei huanhe Expy at pedestrian bridge.

The distance from Location A to Location B is roughly 1600.88m, determined by Google Earth.

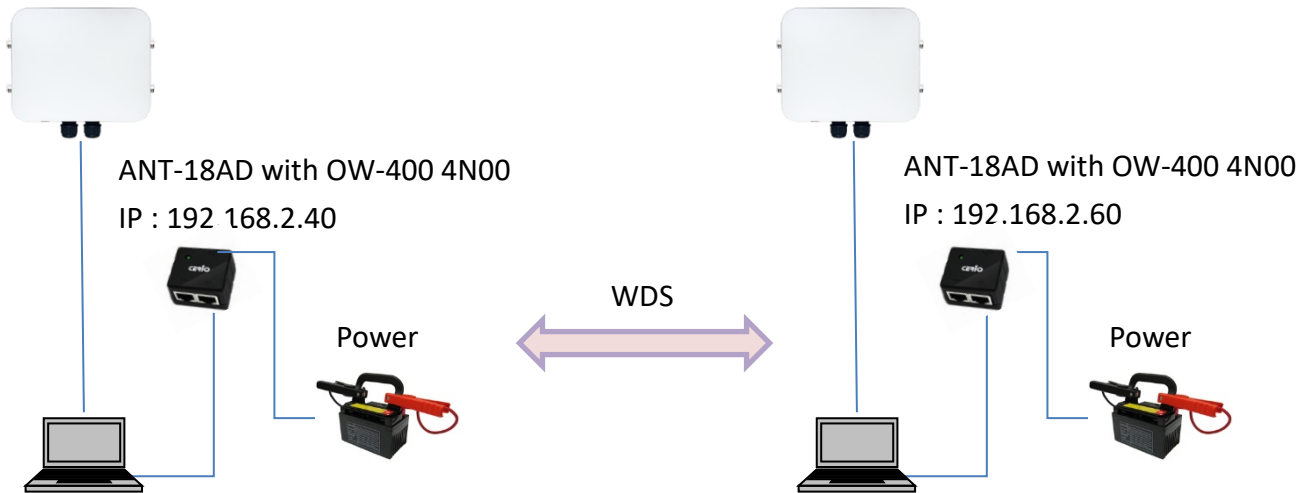








## 5. System Network Configuration



## 6. OW-400-4N00 UI Screen

Location A : MAC Address and WDS

MAC Address			
Radio 0	8c:4d:ea:06:2b:a3		
Radio 1	8c:4d:ea:06:2b:a4		

WDS Client Setup			
Radio 0		Radio 1	
Enable	MAC Address	Enable	MAC Address
<input type="checkbox"/>		<input checked="" type="checkbox"/>	8c:4d:ea:06:2b:30

Radio1 Client		
MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:06:2b:30	1297Mb / 1441Mb	34

Location B : MAC Address and WDS

MAC Address	
Radio 0	8c:4d:ea:06:2b:29
Radio 1	8c:4d:ea:06:2b:30


WDS Client Setup			
Radio 0		Radio 1	
Enable	MAC Address	Enable	MAC Address
<input type="checkbox"/>	<input type="text"/>	<input checked="" type="checkbox"/>	<input type="text" value="8c:4d:ea:06:2b:a4"/>

Radio1 Client		
MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:06:2b:a4	1441Mb / 1297Mb	34

## 7. Throughput test

### Successful connection screen of WDS used CH 64


OW-400-4N00 CenOS 5.0
System Wireless Utility Status

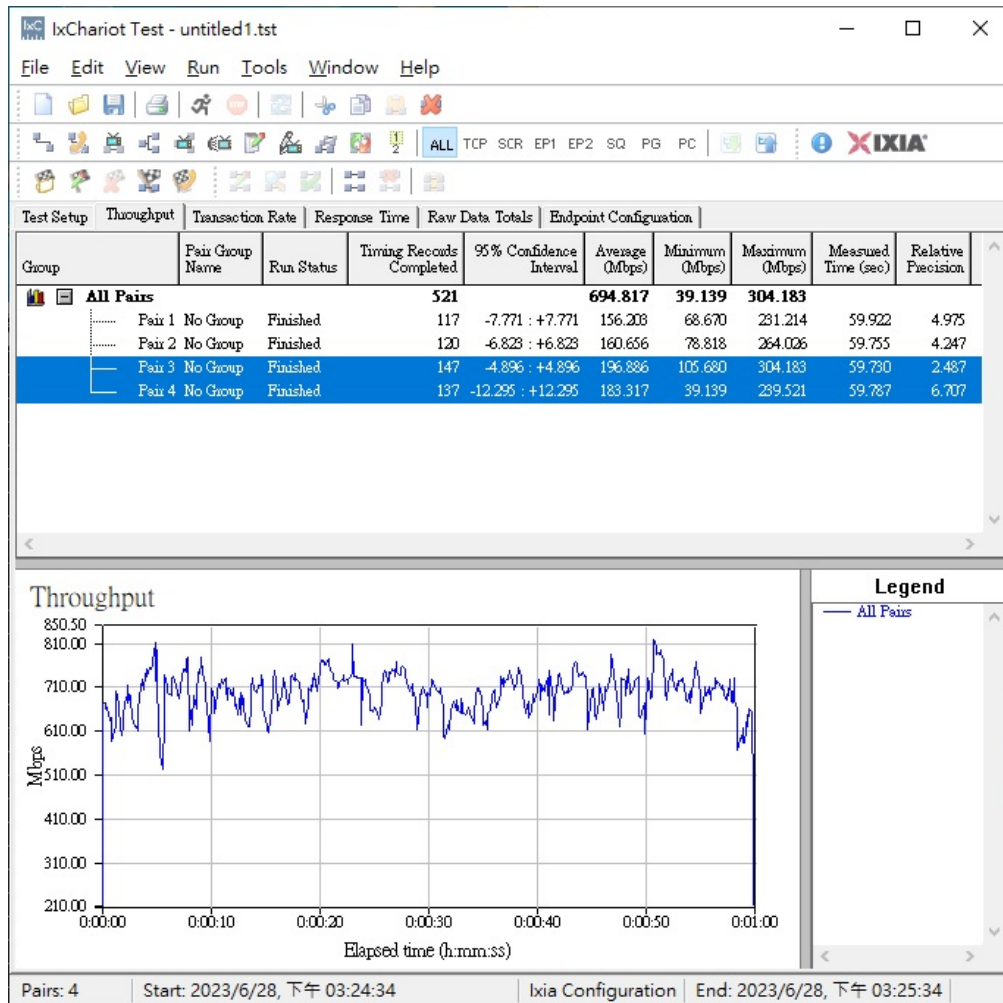
WDS Status

Radio0 Client		
MAC Address	Rate(RX/TX)	RSSI
-	-	-

Radio1 Client		
MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:06:2b:30	1441Mb / 1297Mb	34

Refresh

Band Mode	Channel	Throughput	Antenna
802.11ax	64	694.817	ANT-18AD



## 8. TEST Tools

Test Equipment			
Notebook	HP 242 G1 x1	System OS	Windows 10 (x64)
	Lenovo X230 x1		
Power (battery)	ALPHALINE MF85D23R x2		
Inverter	DC to AC 350W Inverter x2		
Tripod	2		
PoE Injector	Gigabit Injector (PoE-PE-60W) x2		
RJ-45 Cables	Cat.5e x 4		
RF Cables	LLMR-NNP-1M x2		
Test product	1. External type : ANT-18AD x2		

	2. eXtreme High Power WiFi6 Dual-Radio external-ANT Outdoor PoE Bridge/AP (OW-400 4N00) x2
Test Software and setting information	
Application tools	Chariot Version 6.7
Running time	60 sec
software	CenOS 5.0 Layer2 Softcore Core Firmware version : Pme-CPE-CERIO V0.01
Operation mode	Using Access Point mode with WDS function
Radio and Channel	Radio 1 (5G) test channel: 36-64CH

## 9. On-site status

Location A: XinDian Cerio office building top floor. ( 新店 智鼎資訊 辦公室 )









Location B: Yonghe Xinbei huanhe Epy at pedestrian bridge.





## Conclusion

In order to verify the performance capability of our Cerio wireless 2x2 MIMO 18dBi long-distance antenna product, we conducted a long-distance throughput test on this long-distance 18dBi outdoor antenna with a wireless access point. Outdoor access models with external antennas were tested point-to-point.

According to the results of our 1600Meter distance test on the 5Ghz 2x2 external antenna (ANT-18AD) paired with OW-400 4N00, we concluded that under the same environment and conditions, its long-distance connection transmission performance is significantly better than that of wide-range for ANT-14AD (14dbi) antenna with wide angle design. If you adjust the transmission direction, horizontal or vertical angle, it can show its best and effective data transmission.

The Cerio Outdoor Wireless Test has proven to be an invaluable reference tool for users planning to deploy our products in a variety of outdoor environments. Through this test, we have full confidence in our team's development and design capabilities.

Our extensive experience enables us to create quality wireless network hardware and software products that consistently meet our customers' needs and deliver superior products to our customers.