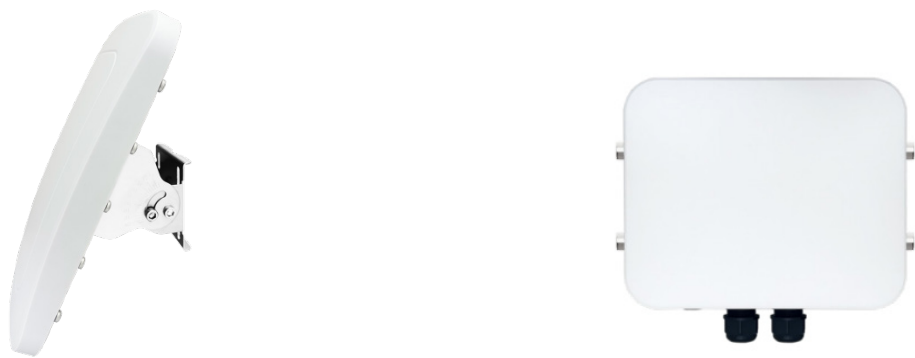


5Ghz Panel Antenna for ANT-10AD(10dBi) with WiFi6 Outdoor (OW-400 4N00) 1.1KM Distance PtP Throughput Test Report



1. Test Product model.



2. Introduction

The purpose of this test is to determine the average throughput and signal stability of the newly developed external 2x2 MIMO 5Ghz antenna (ANT-10AD) with OW-400 4N00 at a distance of 1100M. The test environment is located in an interference-prone metropolitan area, and a metropolitan office setup was used to measure a point-to-point WDS connection set up with Cerio's CenOS 5.0 software package. The test was carried out between two OW-400 4N00 devices operating according to the 802.11ax standard.

3. Test Date and Personnel

Date : 08/16/2023			
Test Persons			
	Mark	Key	Wei

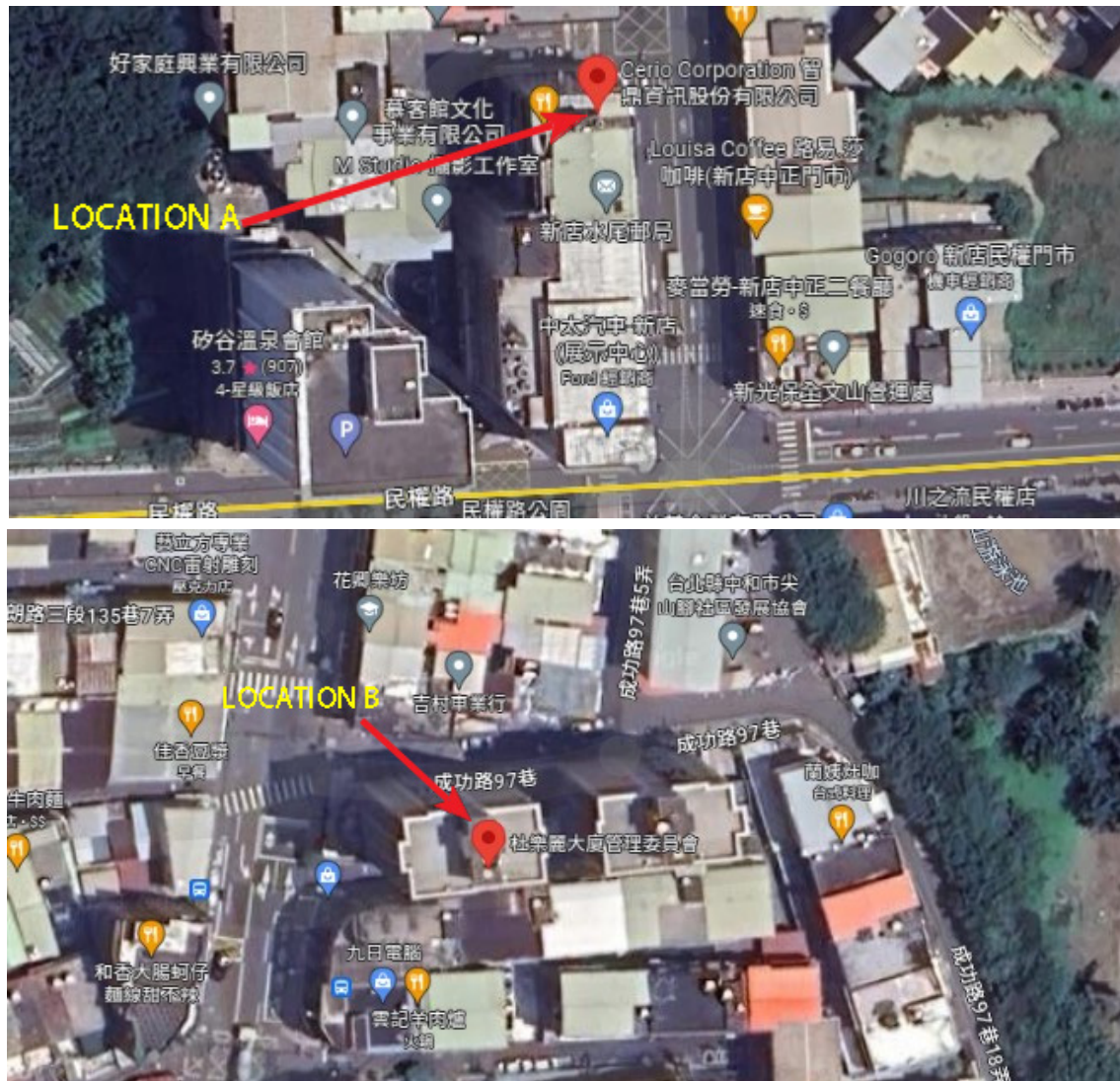
4. Test Environment

Location A: XinDian Cerio office Building top floor.

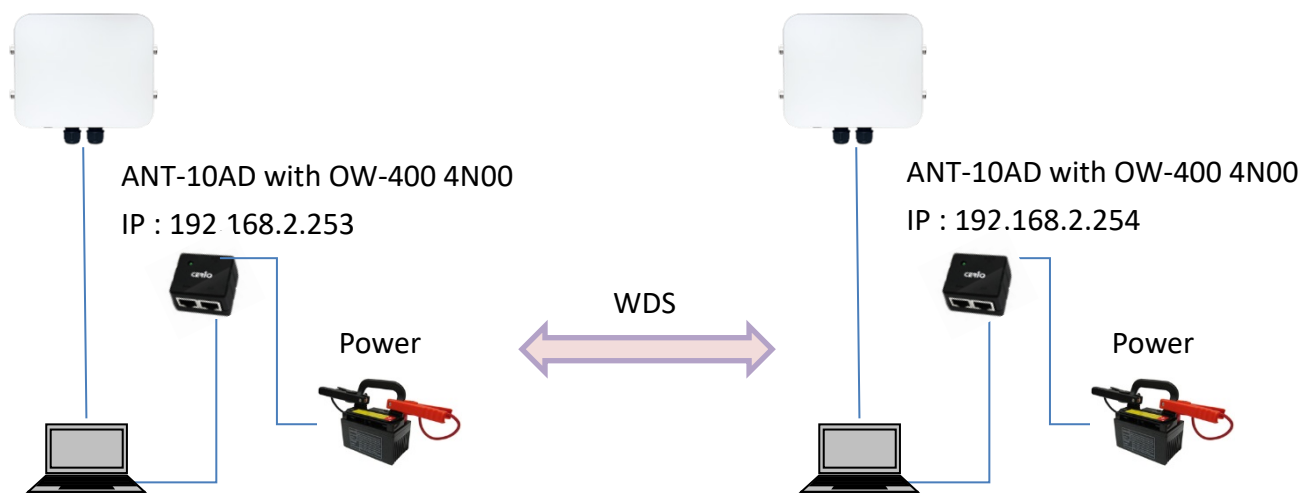
Location B: Zhonghe Community Building top floor.

The distance from Location A to Location B is roughly 1153.7 m, determined by Google Earth.





5. System Network Configuration



6. OW-400 4N00 UI Screen

Location A : MAC Address and WDS

The screenshot shows a web browser interface for the OW-400-4N00 device. The address bar displays "192.168.2.254/#". The page title is "OW-400-4N00". The navigation menu includes "System", "Wireless", "Utility", and "Status". The "WDS Status" section is active, showing a table for "Radio0 Client" and "Radio1 Client". The "Radio0 Client" table is empty. The "Radio1 Client" table has one entry with MAC Address "8c:4d:ea:06:2e:e8", Rate(RX/TX) "864Mb / 720Mb", and RSSI "30". A green "Refresh" button is at the bottom.

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

MAC Address	Rate(RX/TX)	RSSI
8c:4d:ea:06:2e:e8	864Mb / 720Mb	30

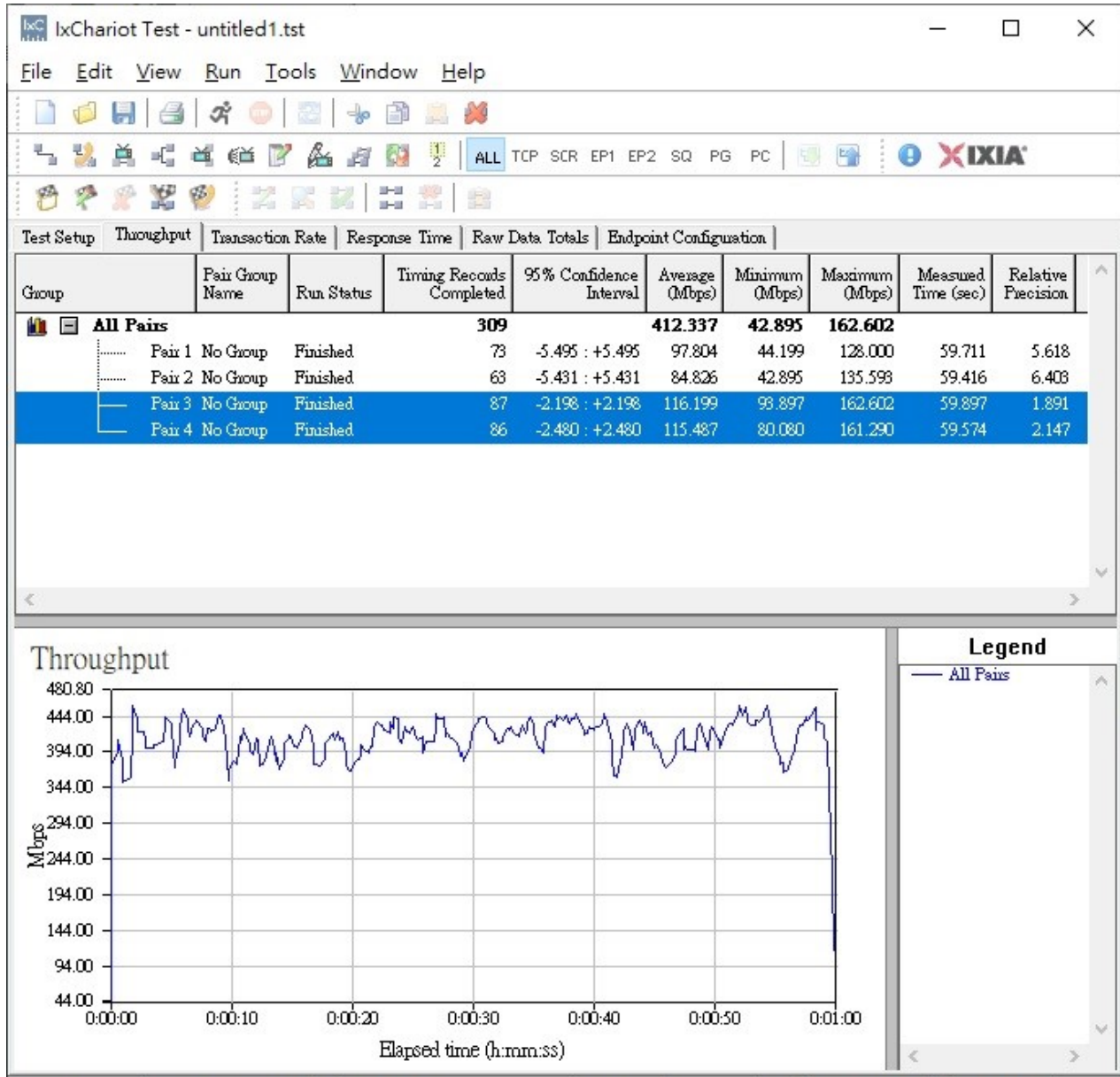
Location B : MAC Address and WDS

The screenshot shows a web browser interface for the OW-400-4N00 device. The address bar displays "192.168.2.253/#". The page title is "OW-400-4N00". The navigation menu includes "System", "Wireless", "Utility", and "Status". The "WDS Status" section is active, showing a table for "Radio0 Client" and "Radio1 Client". The "Radio0 Client" table is empty. The "Radio1 Client" table has one entry with MAC Address "80:4d:ea:06:2e:e4", Rate(RX/TX) "864Mb / 864Mb", and RSSI "29". A green "Refresh" button is at the bottom.

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

MAC Address	Rate(RX/TX)	RSSI
80:4d:ea:06:2e:e4	864Mb / 864Mb	29

Band Mode	Channel	Throughput	Antenna
802.11ax	60	412.337	ANT-10AD



7. TEST Tools

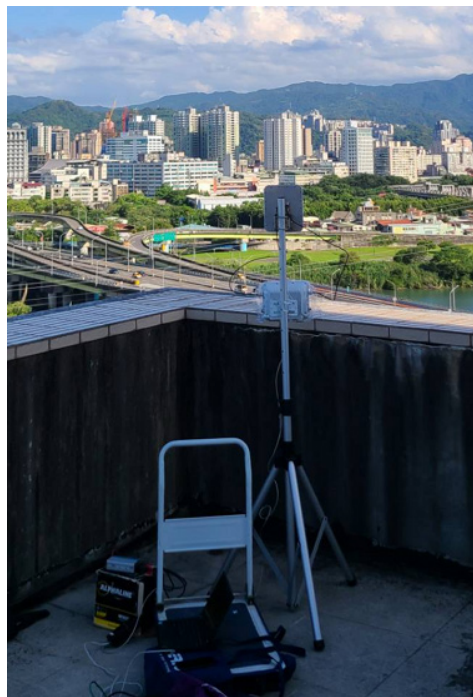
Test Equipment			
Notebook	HP 242 G1 x1 Lenovo X230 x1	System OS	Windows 10 (x64)
Power (battery)	ALPHALINE MF85D23R x2		
Inverter	DC to AC 350W Inverter x2		
Tripod	2		
PoE Injector	Gigabit Injector (FPOE-PE-60W) x2		
RJ-45 Cables	Cat.5e x 4		
RF Cables	LLMR-NNP-1M x2		
Test product	1. External type : ANT-10AD 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) channel range : 36-128CH		

8. On-site status

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



Location B: Zhonghe Community Building of top floor (中和杜樂麗社區大樓)



Conclusion



In order to verify the complete capability and performance of our newly developed 5Ghz 2x2 MIMO wireless antenna product, we have conducted a long-distance throughput test on this outdoor antenna with an outdoor wireless access point. The entire test is to use an outdoor access with an external antenna. The results of a peer-to-peer test of the model.

According to our test results of 5Ghz external antenna (ANT-10AD) 10dbi antenna with OW-400 4N00 at 1100M, we concluded that although the urban office area is full of interference signals, due to the perfect hardware design, the performance in the 5Ghz environment is excellent. The best and effective data transmission is up to 412Mbps after adjusting the antenna direction, horizontal or vertical angle and setting parameters.

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.