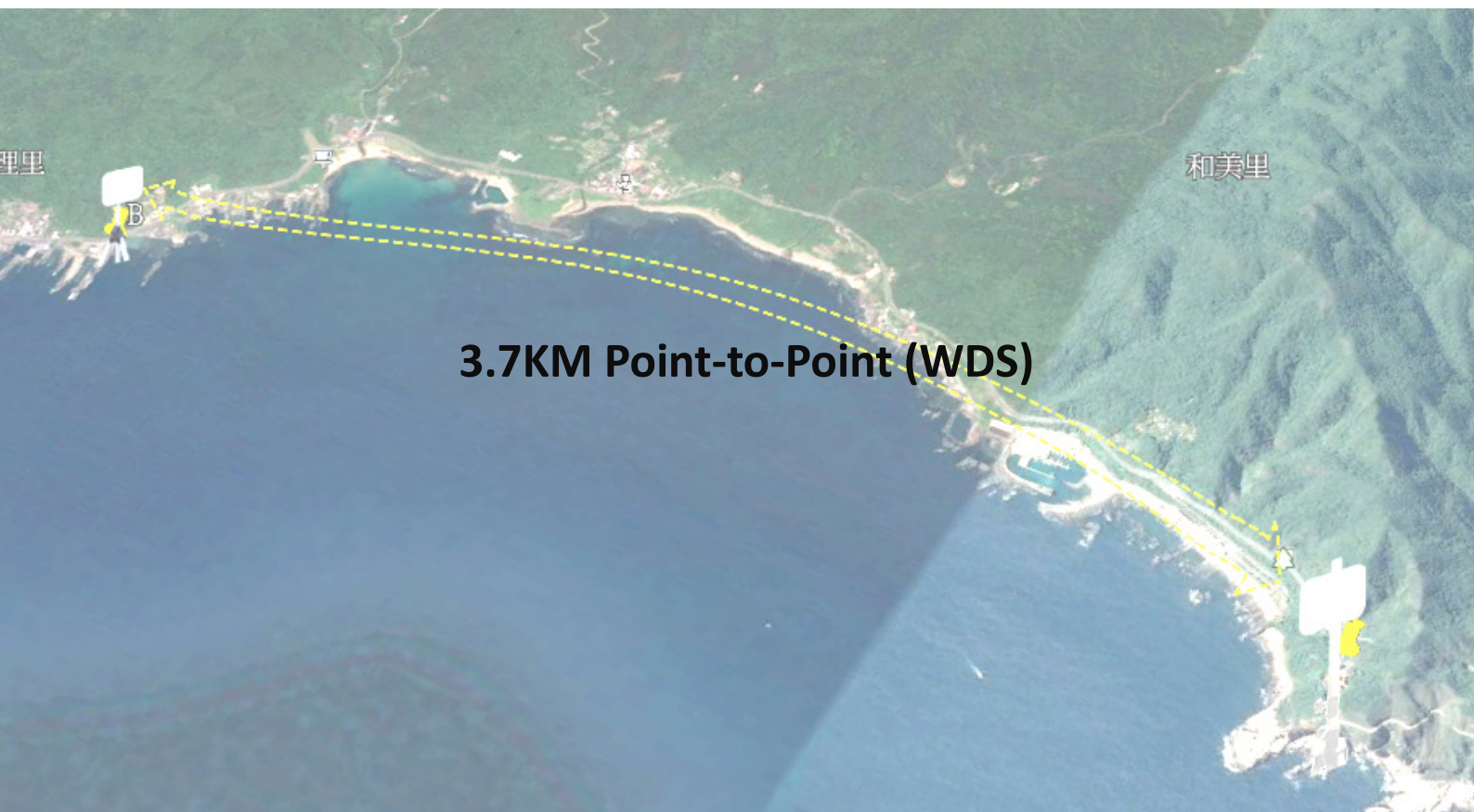


# 5GHz throughput test report Of Cerio's OW-400 A1



## 1. Test Product model.

OW-400 A1



## 2. Introduction

The purpose of conducting this test was to determine the average throughput and signal stability of Cerio's new products Outdoor Access Point at a distance of 3.7km.

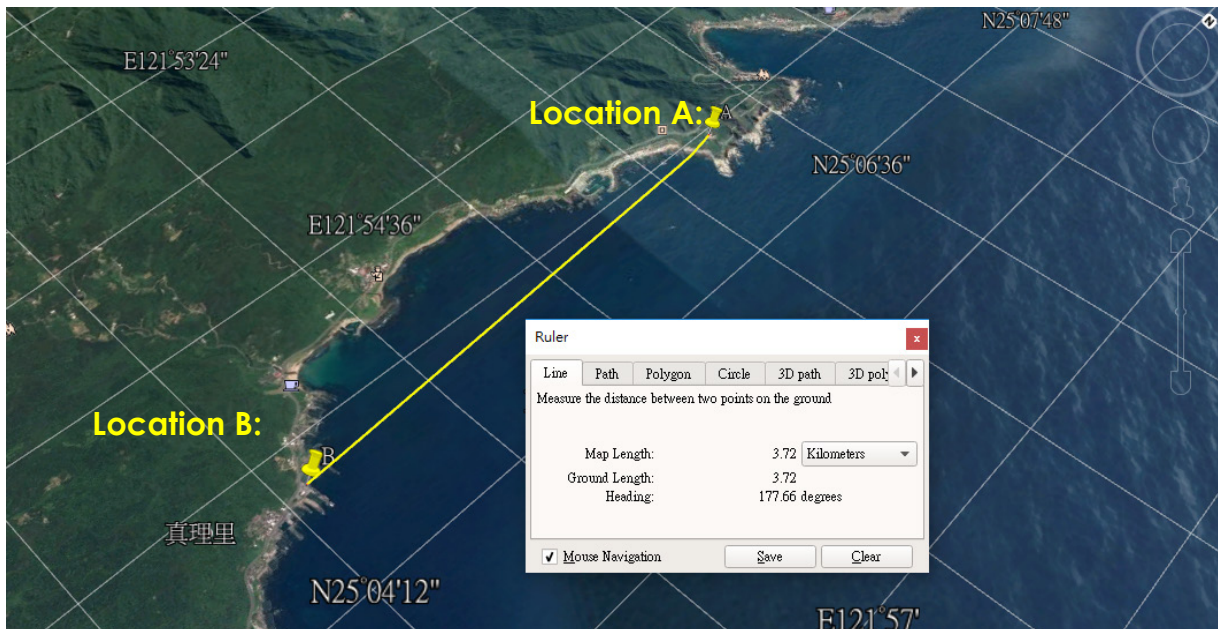
The test specifically measured point-to-point WDS connections set through Cerio's CenOS 5.0 Software Bundle. Test was conducted between two units of OW-400 A1 operating under 5GHz 802.11ac standards. (3.7Km).

## 3. Test Date and Personnel

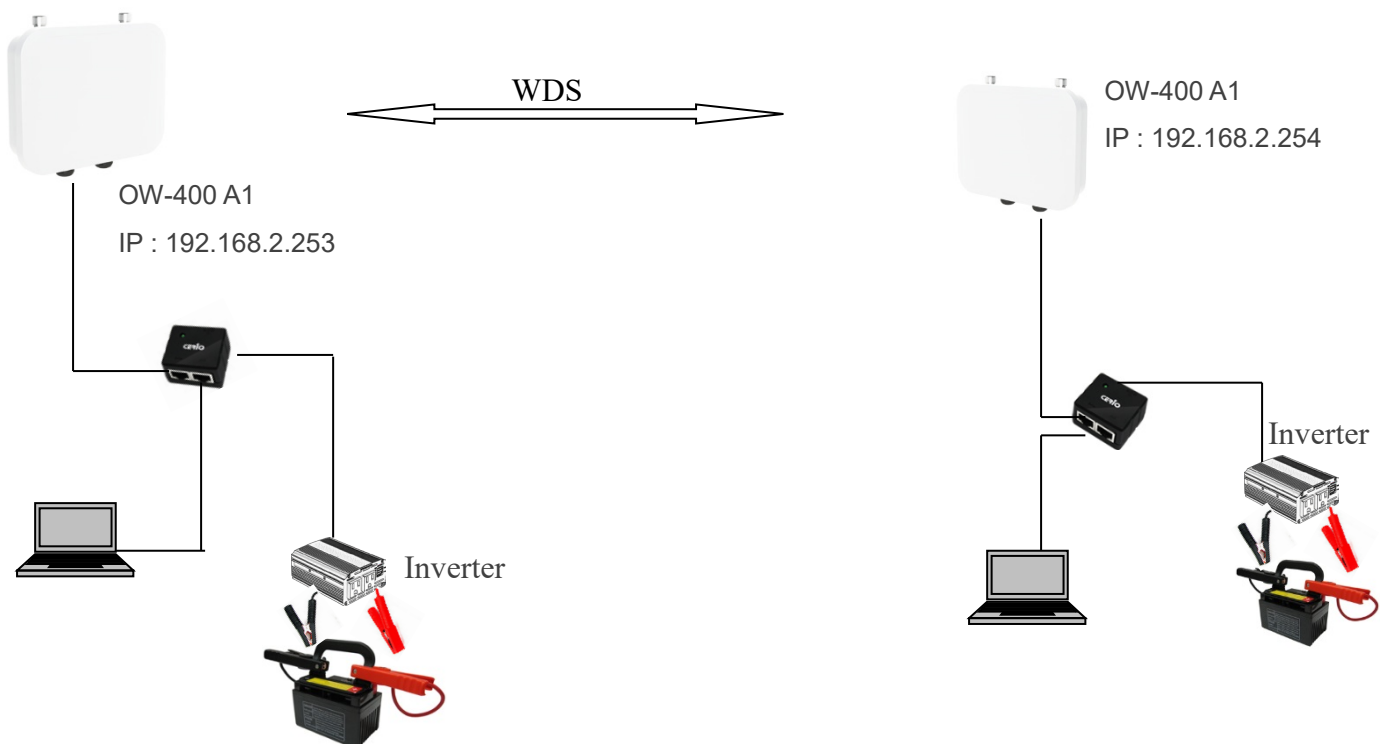
Test Date	2018 / 05 / 04		
Tested products	OW-400 A1		
Test purposes	Throughput test of 3.7Km Long-distance		
Test Personnel			
		Kong E/C	Sheng E/C

## 4. Test Environment

The distance from Location A to Location B is roughly 3.7km, determined by Google Earth



## 5. System Network Configuration





## 6. Test Tools and other information

Test Equipment			
Notebook	HP 242 G1 x1	System OS	Windows 10 (x64)
	HP ProBook 430 G2 x1		
Power (battery)	4		
Inverter	DC to AC 350W Inverter x2		
Tripod	2		
PoE Injector	Gigabit Injector (PoE-PE03GE-24W) x2		
RJ-45 Cables	Cat.5e x 6		
Antenna	2x2 Built-in 18dBi (5G) Directional Panel Antennas		
Test products	OW-400 A1 x2		
Test Software and product setup information			
Application tools	Chariot Version 6.7		
Running time	60 sec		
OW-218 A1 software OS	CenOS 5.0 Firmware v1.0.0		
OW-218 A1 setting	Use WDS function (Point-to-Point)		
Radio and channel testing	5G test channel: 52 (5260Mhz)/ 100 (5500Mhz)/ 157 (5785Mhz)		

## 7. point-to-point(WDS) for Throughput test

### 7.1 Successful connection screen of WDS used CH 52

CERIO

OW-400 A1    CentOS 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:05:1c:6e	650Mb / 650Mb	25

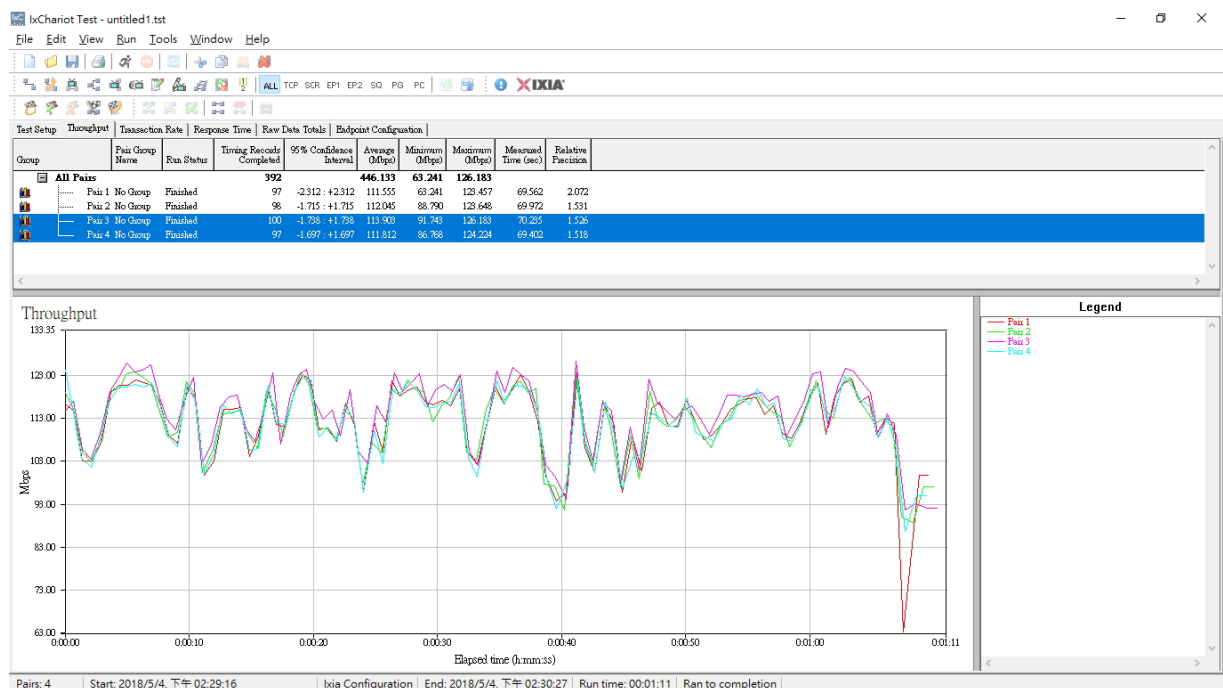
Refresh

### Throughput test(2Tx+2Rx)

Test Channel: 52 (5260Mhz)

Set 2Tx and 2Rx running throughput

Throughput	446.133 Mbps
------------	--------------



## 7.2 Successful connection screen of WDS used CH 100(DFS)

CERIO

OW-400 A1    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:05:1c:6e	650Mb / 650Mb	25

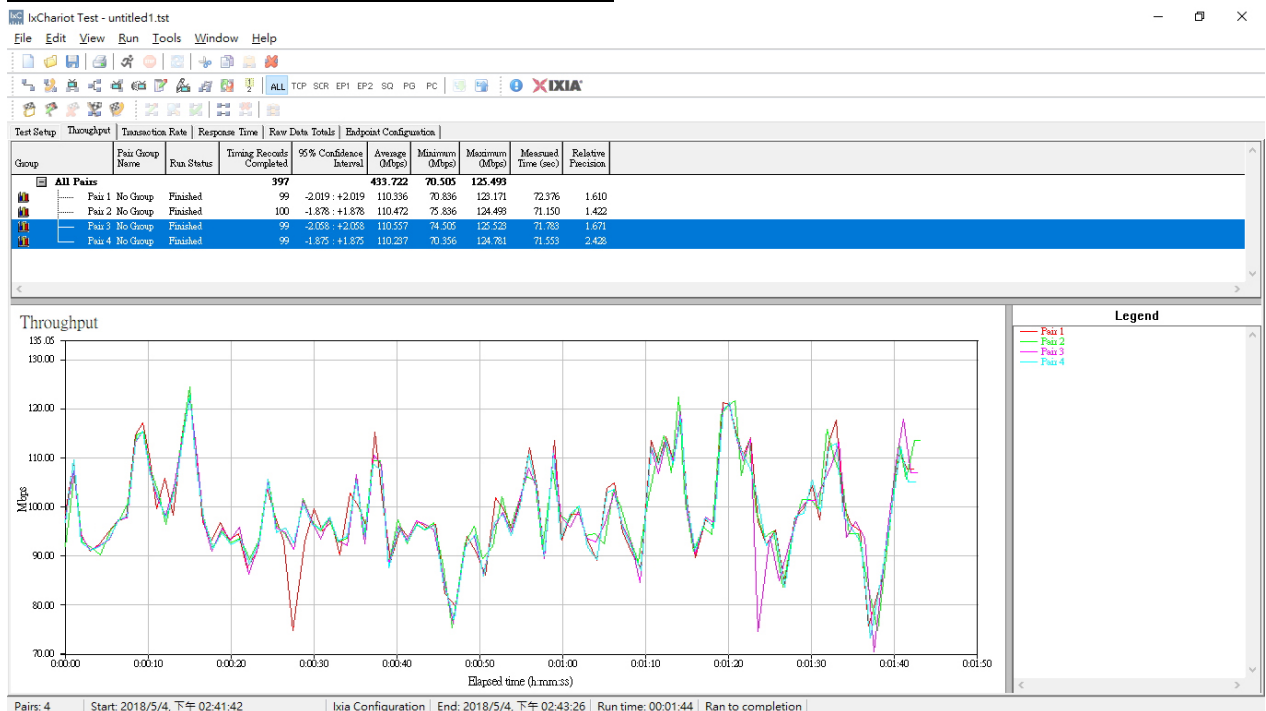
Refresh

## Throughput test(2Tx+2Rx)

Test Channel: 100 (5500Mhz)

Set 2Tx and 2Rx running throughput

Throughput	433.722 Mbps
------------	--------------



## 7.3 Successful connection screen of WDS used CH 157

CERIO

OW-400 A1CenOS 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:05:1c:6e	566Mb / 585Mb	26

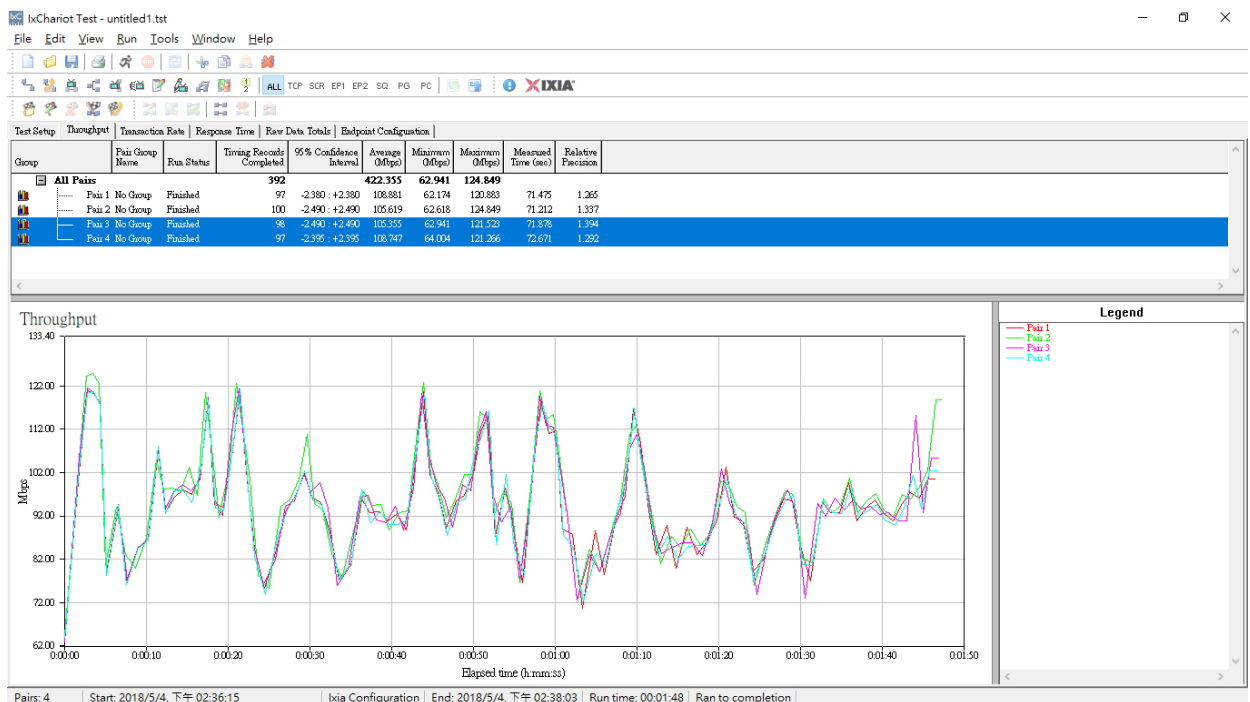
Refresh

## Throughput test(2Tx+2Rx)

Test Channel: 157 (5785Mhz)

Set 2Tx and 2Rx running throughput

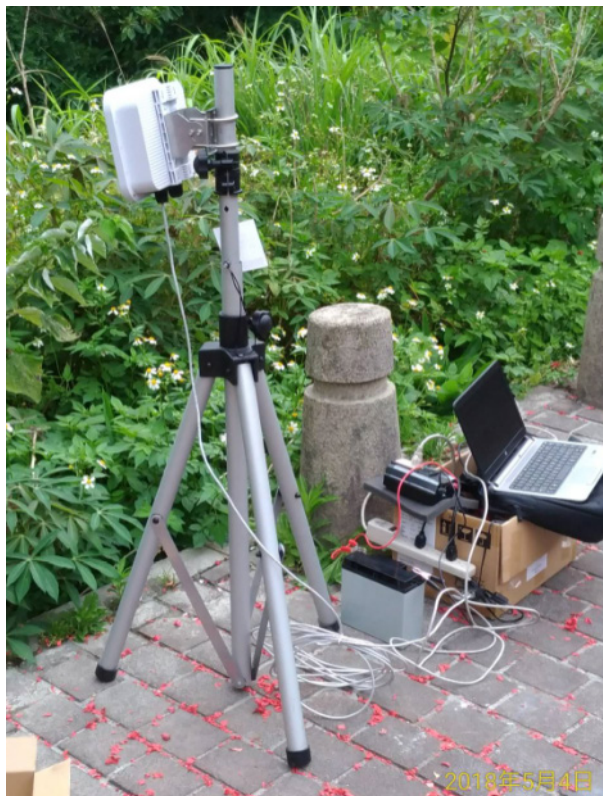
Throughput	422.355 Mbps
------------	--------------





## 8. On-site status:

Location A:





Location B:



## Conclusion

In order to verify our Cerio wireless product performance and instill consumer confidence, we conducted long distance throughput testing for our outdoor wireless access points. We conducted point-to-point testing using our Outdoor Access Point models with built-in 18dBi dual-polarization directional antennas.

From the results of our OW-400 A1 3.7km tests, we conclude that our transmission performance is extremely stable, with significant throughput levels at long distance connections. Our outdoor wireless testing proves to be a very valuable reference tool for users planning on deploying our products in a variety of outdoor environments. (Examples: Remote mountainous areas, long distance network extensions, long distance backhaul, remote surveillance centers)

This test demonstrates confidence in our team's ability to provide quality performance and design. Our unsurpassed experienced creating quality wireless networking hardware and software products allows us to consistently meet user demands and satisfy consumer through our wealth of knowledge and product design.