

Throughput test report of Cerio's OW-500 A3-MESH for 78,648.27 m² area with 0min ANT-07AN-S Antenna



1. Test Product model

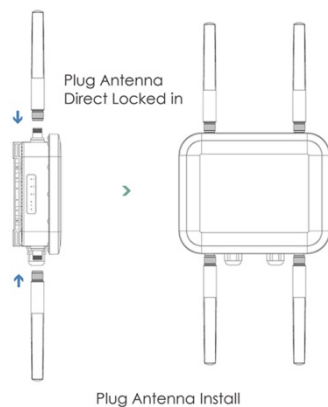
OW-500 A3 Mesh



ANT-07AN-S 5GHZ Outdoor Omni 7dBi Antenna



Dimension : 188 * 23mm (L x W)
Weight : 63.5g



2. Introduction

The purpose of conducting this test was to determine the average throughput and signal stability of Cerio's new product OW-500 A3-Mesh, Outdoor MAN-Mesh Access Point at a distance of 650m (Bundle with 5GHz 7dBi Omni antenna_ANT-07AN-S)

The testing is measured OW-500 A3-MESH equipment point-to-point connections thorough Cerio's CenOS 5.0 Software Core. This testing is operating under 5GHz 802.11ac standards and connecting between two, three, four and five units of OW-500 A3-Mesh.
(With distance 650m)

3. Test Date and Personnel

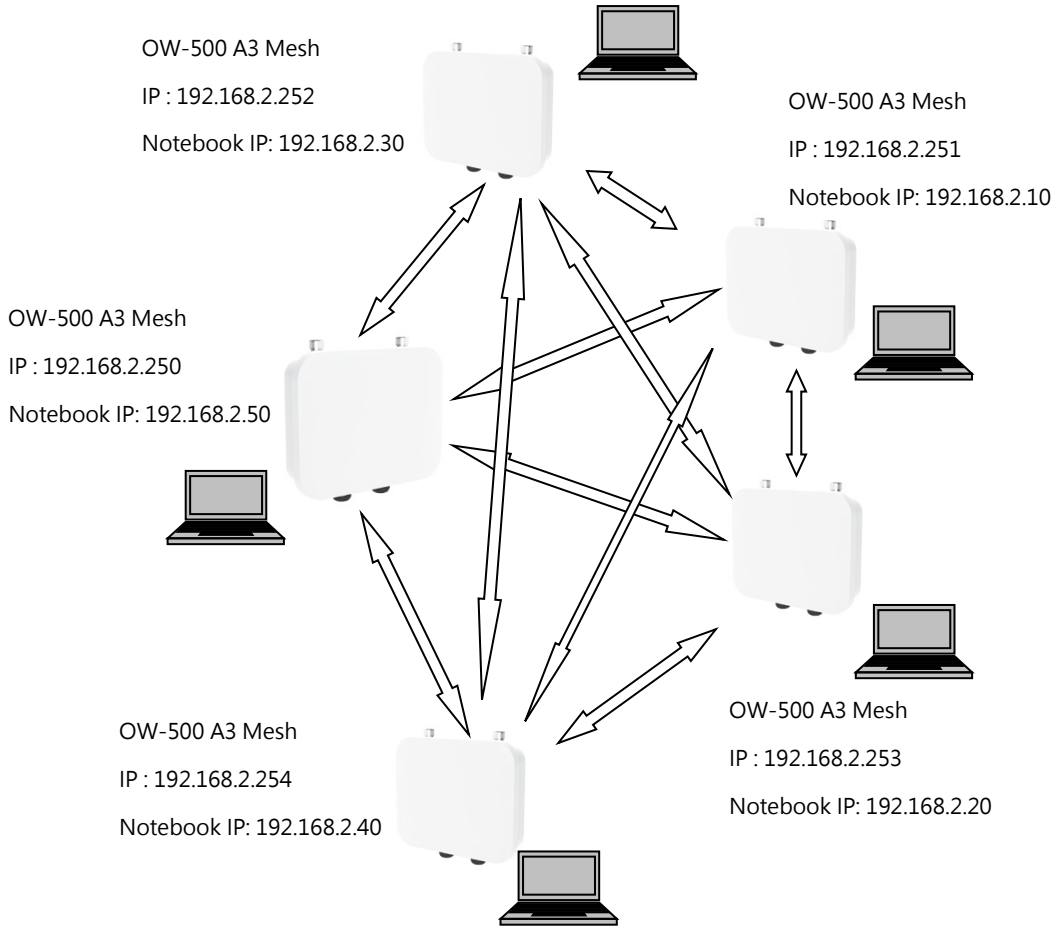
Date: 03 /25/2020			
Test Persons			
	Cathy	Long 3/25	Tommy 3/25/2020

4. Test Environment

These 5 units of OW-500 A3-MESH equipment are the backbone of the WiFi Mesh network in 5 different locations, the total coverage area are over 78,648.27m² (Determined by Google Earth)



5. System Network Configuration



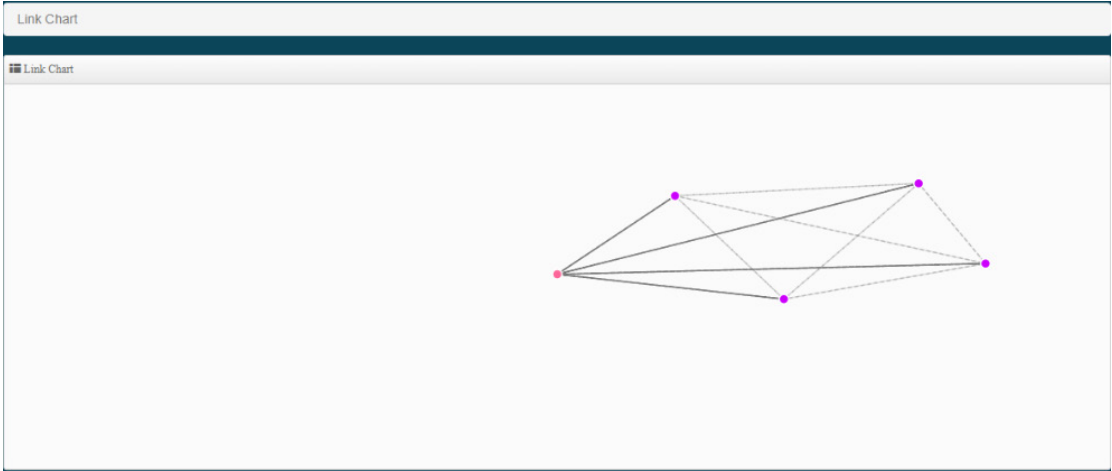
6. Test Tools and other information

Test Equipment			
Notebook	HP 242 G1 x1	System OS	Windows 10 (x64)
	HP 15-j031TX x1		
	HP ProBook 430 G1 x1		
	HP ProBook 430 G2 x1		
	HP ProBook 440 G4 x1		
Power (battery)	ALPHALINE MF85D23R x3,MP818AC30 x1,VEMO V90AGM x1 12V Battery		
Inverter	DC to AC 350W Inverter x5		
Tripod	2		
PoE Injector	Gigabit Injector (PoE-PE03GE-24W) x5		
RJ-45 Cables	Cat.5e x 10		
Antenna	2x2 ANT-07AN-S x20		
Test products	2x2 Tri-Band MAN-MESH Outdoor Bridge/AP (OW-500 A3-MESH) x 5		
Test Software and setting information			
Application tools	Chariot Version 6.7		
Running time	60 sec		
software	CenOS 5.0 with MAN-MESH Softcore Core Firmware version : v1.0.6		
Operation mode	Using MAN-Mesh Mode		
Radio and Channel	Radio 1 (5G) test channel: 36-52 Radio 2 (5G) test channel: 128-161		

7. MAN-Mesh equipment are the backbone of the WiFi Mesh network in 5 different locations

7.1 5 units of OW-500 A3-MESH equipment are the backbone of the WiFi Mesh network in 5 different locations, the total coverage area are over 78648.27 m². This is successful connection screen of OW-500 A3-MESH which is using 5GHz Radio 1 CH 36-52 and CH 128-161





MAN-Mesh Client

radio 0	MAC Address	Rate(RX/TX)	RSSI
	-	-	-

radio 1	MAC Address	Rate(RX/TX)	RSSI
	8c:4d:ea:05:33:fd	6Mb / 292Mb	28
	8c:4d:ea:05:34:02	6Mb / 390Mb	35
	8c:4d:ea:05:34:11	325Mb / 325Mb	27
	8c:4d:ea:05:34:07	6Mb / 433Mb	30

radio 2	MAC Address	Rate(RX/TX)	RSSI
	-	-	-

From IP 192.168.2.30 Laptops to each node Laptops

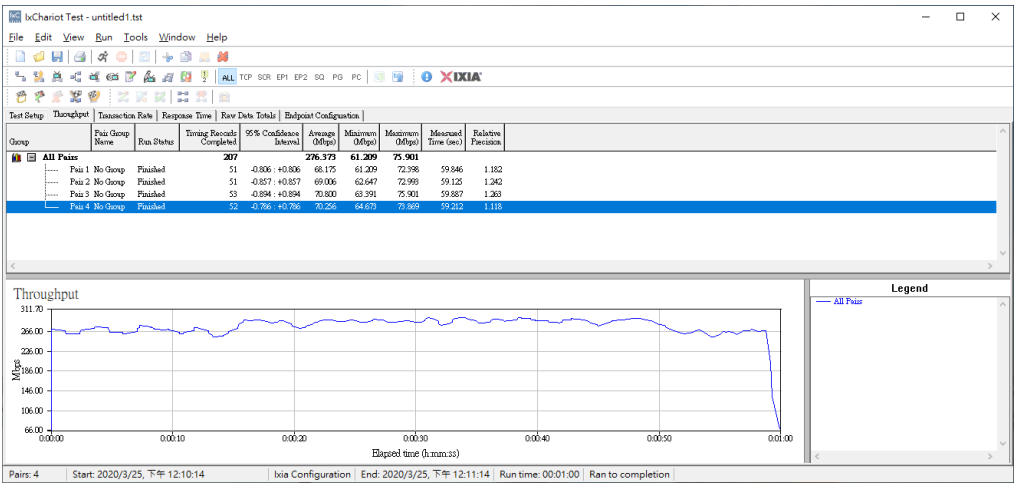
Throughput test(2Tx+2Rx)

Test Channel: Radio 1 CH 36-52, Radio 2 CH 128-161

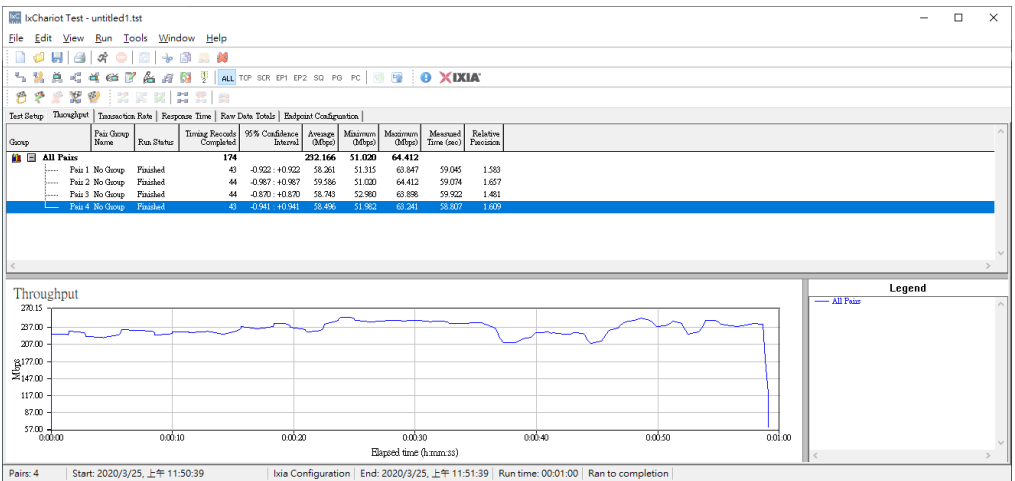
Set 2Tx and 2Rx running throughput

IP 30 to 10	Throughput	276.373 Mbps
IP 30 to 20	Throughput	232.166 Mbps
IP 30 to 40	Throughput	198.345 MBPS
IP 30 to 50	Throughput	271.731 Mbps

From IP 192.168.2.30 to IP 192.168.2.10 Throughput



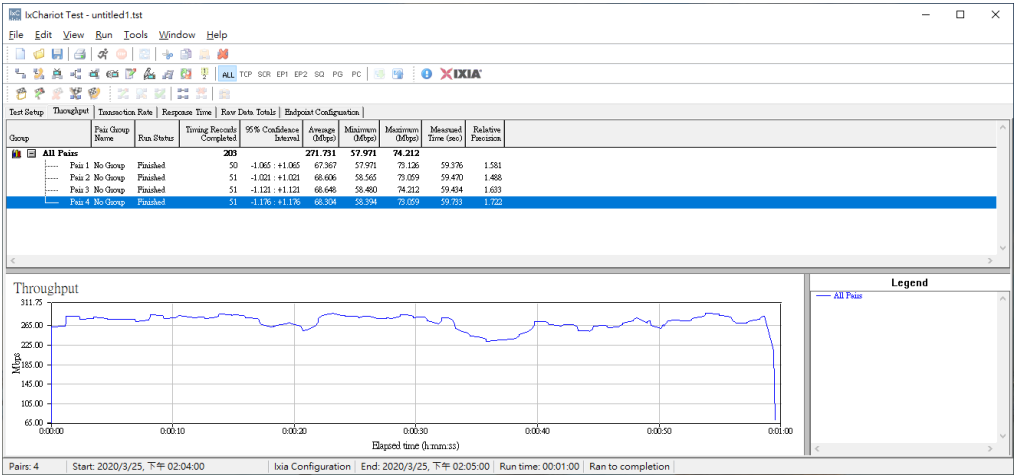
From IP 192.168.2.30 to IP 192.168.2.20 Throughput



From IP 192.168.2.30 to IP 192.168.2.40 Throughput



From IP 192.168.2.30 to IP 192.168.2.50 Throughput



8. On-site status:

IP: 192.168.2.10





IP: 192.168.2.20



IP: 192.168.2.30



IP: 192.168.2.40





IP: 192.168.2.50





Conclusion

In order to verify the performance of Cerio MAN-Mesh outdoor wireless products and strengthen customer confidence, we conducted long-distance throughput and coverage of WiFi Mesh network backbone testing by using CERIO MAN-Mesh outdoor wireless access points with attached 7dBi 5GHz Omni antennas.

Based on the results of the OW-500 A3-MESH long-distance test (650m), we have concluded that our transmission performance is very stable and has a significant throughput level in long-distance connections. For users who plan to deploy WiFi Mesh network in a variety of outdoor environments, CERIO's outdoor wireless MAN-Mesh equipment test result has proven to be a valuable reference tool. (Eg remote mountainous areas, remote network extension, remote backhaul, remote monitoring center)

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