

## WaveChamber™ RF Isolation Enclosure



Designed to provide a simple and space-efficient solution for large-scale testing environments that involve multiple wireless access points (APs), Ixia's WaveChamber provides the isolation, cooling, and filtered signal connectivity needed to achieve accurate and repeatable results. WaveChamber provides an RF-isolated environment small enough to support rack-mounting and desktop use, yet large enough to house most access points.

### Highlights

- Designed to provide the highest density configurations for testing a complete wireless LAN (WLAN) system from access points to managed WLAN switches
- Greater than 80dB of isolation at up to 6 GHz provides excellent isolation for wide range of wireless products, Antennas, RF cabling, and Ethernet cable
- PoE Ethernet supported



**WaveChambers**

Bulkhead mounted connections for RF cabling, filtered 10/100/1000 Mbps Ethernet, and console ports make interfacing to any AP quick and easy. WaveChamber includes a fan and front-to-back airflow providing adequate cooling, whether used on the bench-top or stacked in high-density racks.

## Key Features

- Designed to provide the highest density configurations for testing a complete wireless LAN (WLAN) system from access points to managed WLAN switches
- Greater than 80 dB of isolation at up to 6 GHz provides excellent isolation for wide range of wireless products Antennas, RF cabling, and Ethernet cable included
- PoE Ethernet supported
- WaveChamber 1000 features small rack-mountable configuration in order to minimize space requirements, for example:
  - Two units can be placed side by side using a single standard 19" rack (optional shelf for secure mounting available)
  - Up to 8 units can be accommodated along with the WT90 using a standard 19" rack setup
- WaveChamber 1100 designed to house large multi-radio and outdoor AP
  - Supports multiple RF, console, RJ45 connections
  - Up to 3 units can be accommodated on sliding shelves along with WT90 using a standard 19" rack setup
  - Top-opening for easy access
- WaveChamber 2000 easily accommodates multiple types of 802.11n APs
  - Two units can be placed side by side using a single standard 19" rack (optional shelf for secure mounting available)
  - Up to 8 SMA connectors to support APs with two 4x4 MIMO interfaces
  - Filtered Gigabit ports supporting 10/100/1000 Mbps Ethernet
  - Top opening for easy access to multiple antenna connections of MIMO-based APs
  - Also available as a rack mountable two-unit kit for use on a standard 19" rack

## WaveChamber Kit Components

Component Name	Quantity		
	WaveChamber 1000	WaveChamber 1100	WaveChamber 2000
Antenna 802.11 a/b/g	2	2	NA
STP Cat5e cable, 1m	1	1	1
RF cable, SMA, 12"	2	2	2
RF cable, SMA, 24"	NA	NA	8
DC banana plugs	NA	NA	2

## Specifications

Component Name	WaveChamber 1000	WaveChamber 1100	WaveChamber 2000
Product part number	WCH1000	WCH1100	WCH2000
Outside dimensions (H x W x D)	<ul style="list-style-type: none"> <li>11 x 8 x 14 in.</li> <li>27.94 x 20.32 x 35.56 cm</li> </ul>	<ul style="list-style-type: none"> <li>12 x 17 x 24 in.</li> <li>30.48 x 43.18 x 60.96 cm</li> </ul>	<ul style="list-style-type: none"> <li>11.7 x 8.375 x 18 in.</li> <li>30.1 x 21.27 x 45.72 cm</li> </ul>
Nominal inside dimensions (H x W x D)	<ul style="list-style-type: none"> <li>10 x 7 x 13 in.</li> <li>25.4 x 17.78 x 33.02 cm</li> </ul>	<ul style="list-style-type: none"> <li>11 x 16 x 23 in.</li> <li>29.21 x 41.91 x 59.69 cm</li> </ul>	<ul style="list-style-type: none"> <li>10.5 x 7.125 x 16.8 in.</li> <li>28.89 x 20.00 x 44.5 cm</li> </ul>
Weight	11.2 lbs. (5.1kg)	40 lbs. (18.4kg)	14 lbs. (6.4 kg)
Construction	.090 aluminum, .125 aluminum cover, gray powder coat, 3/8" thick RF absorbent foam lined throughout		
Cooling input vent	2.2 in. (5.6cm) RF isolated, lower front door	2.2 in. input vent at lower front right, RF isolation mesh	2.2 in. input vent at lower front right RF isolation mesh
Cooling exhaust fan	<ul style="list-style-type: none"> <li>2.36 in. (6 cm) 9.1 CFM exhaust fan at upper left rear panel</li> <li>115VAC ball bearing, RF isolation mesh</li> <li>2.36 in. (6 cm) exhaust fan on rear panel, 12VDC ball bearing with RF isolation mesh (on WCH2000)</li> </ul>		
RF isolation	<ul style="list-style-type: none"> <li>Greater than 100 dB below 1 GHz</li> <li>Greater than 90 dB from 2 GHz to 4 GHz</li> <li>Greater than 80 dB at 6 GHz</li> <li>Greater than 75 dB at 8 GHz</li> <li>Isolated decreases linearly between 1 and 2 GHz between 4 and 6 GHz between 6 and 8 GHz</li> </ul>		

Available I/O Configurations and Options<sup>i</sup>

	WaveChamber 1000	WaveChamber 1100	WaveChamber 2000
RF feed-through	2 SMA bulkhead connectors	5 SMA female bulkhead connectors	8 SMA female bulkhead connectors
RF filtered data	1 DB-9 (100pf filtering), with RJ-45 Ethernet adapters for 10/100 Ethernet, supports POE	5 DB-9 filtered connectors, with 4 sets of RJ-45 adapters for 10/100 Ethernet, supports POE	1RJ-45 connector, filtered, capable of 10/100/1000 Mbps Ethernet, supports PoE, and 1 DB-9 filtered connector for console or custom connections
Power connections	4-pole filtered power strip, DC or AC compatible	6-pole filtered power strip, DC or AC compatible	2 DC banana plugs capable of up to 60 VDC with binding posts

<sup>i</sup> Alternative configurations available upon request

## Ordering Information

### 980-2016

IxVeriWave WCH2000 WaveChamber Kit; 802.11 MIMO Access Point RF Isolation Chamber kit; dimensions: 11.7"H x 8.325"W x 18"D; includes 8 SMA ports and 4 filtered Gigabit ports; top access

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