

# IXVERIWAVE®—CHASSIS AND ACCESSORIES

DATA SHEET

## WORLD'S MOST COMPLETE WI-FI TEST SYSTEM

Ixia offers the world's most complete Wi-Fi test equipment including chassis, automation appliances, cables, and radio frequency (RF) connection equipment that allow the setup of isolated, stable, and repeatable test beds. Ixia Chassis are designed to house all IxVeriWave WaveBlades® and also provide line-rate backplane connection and ventilation and cooling for the blades. The Chassis come rack-mountable. Ixia's WaveChambers provide excellent RF characteristics with a high degree of isolation, in a compact form factor that is easily portable and yet extremely functional. With optional turntables, the solution can also be extended to test and improve device performance at different antenna orientations.

## IXVERIWAVE CHASSIS

For professional Wi-Fi testing, industrial-quality equipment is required. The IxVeriWave two-slot WT22 and nine-slot WT92 chassis power WaveBlades to produce extensive Wi-Fi benchmarking, extreme loading, and broad traffic mixes. Real-world testing requires reliable equipment that can scale to reflect today's Wi-Fi network use. IxVeriWave Chassis and WaveBlade solutions provide up to 500 concurrent Wi-Fi client simulations to test extensively Wi-Fi Networks.

## KEY FEATURES

- Automation –10x More Efficient
  - Hundreds of tests run unattended
  - Uninterrupted operation for extended periods of time
  - Complete control over large-scale deployment scenarios
- Cost of Ownership Minimized
  - Test time reduced from days to minutes
  - Test coverage increased
  - Bugs revealed early in the QA cycle

## HIGHLIGHTS

- Rack-mountable 2- and 9-slot chassis variants
- Automation – 10x more efficient
- Cost of ownership minimized
- Repeatability equals confidence
- Goes beyond conformance and interoperability
- Run long, scaled, control-plane soak and system stress tests
- Easily integrates into any automation framework
- Reduces test time
- Functional sanity test suites target specific controller/AP features

- Repeatability = Confidence
  - Get to the root cause and solve problems faster
  - Avoid pitfalls when testing with off-the-shelf clients
- Goes Beyond Conformance and Interoperability
  - Scales to thousands of stateful and independent clients
  - Quantifies real-world deployment scenarios
  - Stress tests complete wireless LAN (WLAN) networks



Ixia WT22 and WT92 Chassis

## SPECIFICATIONS

	WT92	WT22
<b>Size</b>	<ul style="list-style-type: none"> <li>• Height: 17.5 inches (44.5 cm)</li> <li>• Width: 19.0 inches (48.3 cm)</li> <li>• Depth: 21.5 inches (54.5 cm)</li> </ul>	<ul style="list-style-type: none"> <li>• Height: 13.5 inches (34.3 cm)</li> <li>• Width: 5.6 inches (14.2 cm)</li> <li>• Depth: 21.5 inches (54.0 cm)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• Empty: 50.0 lbs (22.7 kg)</li> <li>• Fully loaded: 100.0 lbs (45.4 kg)</li> </ul>	<ul style="list-style-type: none"> <li>• Empty: 20.0 lbs (9.1 kg)</li> <li>• Fully loaded: 27.5 lbs (12.5 kg)</li> </ul>
<b>Temperature</b>	<ul style="list-style-type: none"> <li>• Operating: +5° C to +25° C</li> <li>• Storage: -20° C to +70° C</li> </ul>	<ul style="list-style-type: none"> <li>• Operating: +5° C to +25° C</li> <li>• Storage: -20° C to +70° C</li> </ul>

	WT92	WT22
<b>Humidity</b>	<ul style="list-style-type: none"> <li>Operating: 20% to 80% relative humidity</li> <li>Storage: +40° C at 95% relative humidity, non-condensing</li> </ul>	<ul style="list-style-type: none"> <li>Operating: 20% to 80% relative humidity</li> <li>Storage: +40° C at 95% relative humidity, non-condensing</li> </ul>
<b>Altitude</b>	<ul style="list-style-type: none"> <li>Operating: -1000 ft. to +6500 ft. (2000 meters)</li> <li>Non-operating: +40,000 ft.</li> </ul>	<ul style="list-style-type: none"> <li>Operating: -1000 ft. to +6500 ft. (2000 meters)</li> <li>Non-operating: +40,000 ft.</li> </ul>
<b>Vibration, random</b>	<ul style="list-style-type: none"> <li>Operating: 5 Hz to 500 Hz, 0.27 Grms</li> <li>Non-operating: 5 Hz to 500 Hz, 2.3G</li> </ul>	<ul style="list-style-type: none"> <li>Operating: 5 Hz to 500 Hz, 0.27 Grms</li> <li>Non-operating: 5 Hz to 500 Hz, 2.3G</li> </ul>
<b>Shock</b>	<ul style="list-style-type: none"> <li>20 G shock tolerance</li> </ul>	<ul style="list-style-type: none"> <li>20 G shock tolerance</li> </ul>
<b>WaveBlade Capacity</b>	<ul style="list-style-type: none"> <li>WaveBlade Management: One WaveBlade Management (WB1000) required in the management slot (left most slot in chassis)</li> <li>Traffic generator / RF WaveBlades: Up to 9 traffic generator WaveBlades</li> </ul>	<ul style="list-style-type: none"> <li>WaveBlade Management: One WaveBlade Management (WB1000) required in the management slot (left most slot in chassis)</li> <li>Traffic generator / RF WaveBlades: Up to 2 traffic generator WaveBlades</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>100/120/230 VAC, 18/14.9/7.7 A, 50/60 Hz</li> <li>Automatic line voltage selection</li> </ul>	<ul style="list-style-type: none"> <li>100/120/230 VAC, 7.5/6.3/3.1 A, 50/60 Hz</li> <li>Automatic line voltage selection</li> </ul>
<b>Airflow</b>	<ul style="list-style-type: none"> <li>Cool air enters at the bottom front and bottom sides</li> <li>Exhaust air exits the top rear</li> </ul>	<ul style="list-style-type: none"> <li>Cool air enters at the base</li> <li>Exhaust air exits at the top</li> </ul>
<b>Connectors</b>	<ul style="list-style-type: none"> <li>Network: Ethernet, RJ-45, 10/100/1000 Base-T LAN</li> <li>Sync In and Sync Out: RJ-45 connectors (Ixia Sync cable required)</li> <li>Off load ports (9) RJ45 Connectors, to back plane at each slot</li> <li>AC Power: IEC standard power cord connection</li> <li>External Connections: Other than mains power, all external connections are intended to be to non-hazardous circuits per the requirements of IEC 61010-1</li> </ul>	<ul style="list-style-type: none"> <li>Network: Ethernet, RJ-45, 10/100/1000 Base-T LAN</li> <li>Sync In and Sync Out: RJ-45 connectors (Ixia Sync cable required)</li> <li>Off load ports (2) RJ45 Connectors, to back plane at each slot</li> <li>AC Power: IEC standard power cord connection</li> <li>External Connections: Other than mains power, all external connections are intended to be to non-hazardous circuits per the requirements of IEC 61010-1</li> </ul>

	WT92	WT22
<b>Product Safety Compliance</b>	<ul style="list-style-type: none"> <li>Listed TUV-USA and TUV-Canada</li> <li>Low Voltage Direction EN6101-1:2010</li> </ul>	
<b>Electromagnetic</b>	EU EMC Directive 89/336/ECC, as amended <ul style="list-style-type: none"> <li>EN 61000-6-2:2001: Class B Radiated Emissions</li> <li>EN 55011(AMD. A1:199) Class B Conducted Emissions</li> <li>EN 61000-3-2:2000: Current Harmonics</li> <li>EN 61000-3-3:2001: Voltage Fluctuations</li> <li>EN61000 -6-2:2001: Immunity</li> <li>Class A part 15 FCC Standards for Radiated and Conducted Emissions</li> </ul>	

## AUTOMATION TEST APPLIANCE

The ATA100 Automation Test Appliance offer users the ability to access and control high-scale WaveTest systems via user-written scripts. An optional command line interface (CLI) mode is also available for script development and limited manual testing. The appliances enable large-scale and long-term testing scenarios requiring clients and flows that connect and reconnect automatically and persistently.

### KEY FEATURES

- Ability to run long, scaled, control-plane soak and system stress tests
- IxVeriWave test systems integrate into users' own test automation framework using a well-documented and common API
- Test time reduced greatly by avoiding the need to bind test ports, create/associate clients, start flows, then tear it all down prior to the next test case
- CLI used to create test cases before they are automated and to build test scripts around the IxVeriWave API
- Functional sanity test suites target specific controller/access point (AP) features
- Powerful appliance offers automation of large number of IxVeriWave test ports and devices under test (DUTs)
- Changes to IxVeriWave-created client behavior made on the fly while tests are running
- The ATA100 exposes the IxVeriWave-generated client behavior in a controlled and portable fashion by allowing the user to reserve ports, set channels, scan for APs, capture packets, create/destroy clients, set security modes and MAC/PHY options, send/receive arbitrary frames, set up traffic flows (stateful/stateless), roam clients, create and handle groups of clients and flows, and read back port/client/flow statistics
- The system creates persistent clients and adapts to changes advertised by the system under test (SUT), essential for large-scale tests and long-term soak tests

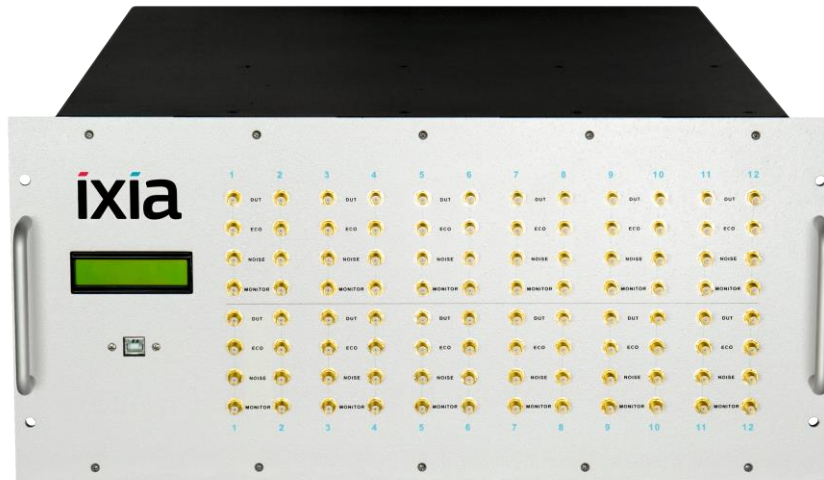
- ATA100 offer a highly interactive script or CLI that allows the user to connect via Telnet or standard sockets interface
- The ATA100 supports up to 8 simultaneous users
- Users can issue commands, disconnect at any time, reconnect, and resume a session later

## SPECIFICATIONS

	ATA100
<b>Maximum Supported Test Ports per ATA</b>	20
<b>Maximum Supported WLAN Test Ports per ATA</b>	16
<b>Maximum Sustainable Active Clients per WLAN Test Port</b>	400
<b>Maximum Active WLAN Clients per ATA</b>	6,400
<b>Maximum Active Flows per ATA</b>	10,000
<b>Maximum Concurrently Roaming Clients per ATA</b>	1,600
<b>Maximum Active Ethernet Servers per ATA</b>	8,000
<b>Maximum IPv4 Multicast Groups per ATA</b>	16
<b>Maximum IPv6 Multicast Groups per ATA</b>	16
<b>Flow Types Supported</b>	IPv4/IPv6, ICMPv4/ICMPv6, UDP, TCP (stateful & stateless), RTP, HTTP, FTP, SMTP, G.711, G.729a, G.723, IPv4/IPv6 multicast
<b>Client Types Supported</b>	IEEE 802.11b, IEEE 802.11b/g, IEEE 802.11a, IEEE 802.11a/b/g, IEEE 802.11 a/b/g/n
<b>Security and AAA Modes Supported</b>	Open, WEP-40 (open and shared-key), WEP-128 (open and shared-key), WPA/WPA2-PSK, WPA/WPA2-PEAP-MSCHAPv2, WPA/WPA2-EAP-TLS, WPA/WPA2-EAP-TTLS-GTC, WPA/WPA2-EAP-FAST, LEAP, WPA-LEAP, DWEAP (with different EAP types)

## WIRELESS TAP AND PROGRAMMABLE ATTENUATOR

Ixia's tap and attenuator platform provides 12 ports of inline broadband programmable attenuation, wireless tap monitoring, and insertion points for ecosystem traffic injection and RF noise injection for testing real-world Wi-Fi devices. Ixia uses the latest RF technologies to provide a 0 to 80dB step attenuator that supports a broad frequency range from 2.4 to 2.5GHz and 4.9 to 6GHz. It features glitch-less attenuation state transitions with .5dB steps, ideal for broadband wireless test applications.



### Wireless Tap & Attenuator

Ixia's Wireless Tap and Programmable Attenuator are the first in a line of symmetric and asymmetric programmable digital attenuators. Within IoT testing, the ability to directionally attenuate one path asymmetrically allows for isolation testing of the device under test (DUT) without compromising the RF channel of the paired device.

Each DUT has a dedicated monitor port and dual insertion ports to remove the need for external splitters, attenuators, and couplers.

### KEY FEATURES

- Fully configurable wireless tap that supports SISO and MIMO Wi-Fi use-cases
- 0-80dB of programmable attenuation, with 0.5dB steps
- Supports both symmetric and asymmetric directional attenuation
- Two monitor points to tap into wireless traffic at each end of the Tx path
- Independent injection points for targeted ecosystem client traffic and RF noise injection

SPECIFICATIONS

PARAMETER	NOTES	MIN	MAX	UNITS
<b>Supply Voltage</b>		9	12.2	V
<b>RF Input Power, 50Ω</b>	1kHz to 2.4 GHz		0	dBm
	2.4GHz to 6GHz		31	
<b>ESD Voltage HBM, all SMA Ports<sup>(1)</sup></b>			3000	V
<b>ESD Voltage CDM, all SMA Ports<sup>(2)</sup></b>			1000	V
Notes: 1) Human body model (MIL-STD 884 Method 3015) 2) Charged device model (JEDEC JESD22-C101)				

RECOMMENDED OPERATING CONDITIONS

The below table lists the recommended operating conditions for the device. The device should not be operated outside the recommended operating conditions listed below.

PARAMETER	NOTES	MIN	TYPICAL	MAX	UNITS
<b>Input Supply Voltage</b>		11.8	12	12.2	V
<b>Input Supply Current</b>		5	6	6.2	A
<b>Input Operating Frequency</b>	Low Band	2.4		2.5	GHz
	High Band	4.9		6	
<b>RF Input Power, CW<sup>(1)</sup></b>				+23	dBm
<b>RF Input Power, Pulsed<sup>(2)</sup></b>				+30	dBm
Notes: 1) 100% duty cycle, all supported bands, 50Ω 2) Pulsed, 5% duty cycle of 6ms period, 50Ω					

ELECTRICAL SPECIFICATIONS

PARAMETER	NOTES	MIN	TYPICAL	MAX	UNITS
<b>Attenuation Range</b>	<i>Main Path</i>	0		80	dB
	Monitor Path	0		20	dB
<b>Asymmetric Attenuation</b>		0		30	dB
<b>Attenuation Accuracy</b>	Main Path <sup>1</sup>		.5	1 + (.0125 * programmed value)	dB
	Monitor		.5	2	dB
<b>Attenuation Step Size</b>	Main Path		.5		dB
	Monitor		5		dB
<b>Insertion Loss (Main Path) (DUT to DUT)</b>	Low Band Main Path	11	12	13	dB
	High Band Main Path	19	20	21	dB
<b>Insertion Loss (Monitor Path) (DUT to Monitor)</b>	Low Band DUT to Associated Monitor port	15	16	17	dB
	High Band DUT to Associated Monitor port	18	19	20	dB
<b>Insertion Loss (Ecosystem / Noise Path)</b>	Low Band DUT to Associated ECO port	27	29	31	dB
	High Band DUT to Associated ECO port	33	33	35	dB
<b>IP3</b>		50		56	dBm
<b>VSWR</b>	S11, S22	1.4			
<b>Attenuation Settling Time</b>			1		us
Notes: 1) Main path is measured from DUT to DUT. Monitor path is measured from DUT to Monitor associated with the DUT.					



ENVIRONMENTAL SPECIFICATIONS

PARAMETER	SPECIFICATION
<b>Operating Temperature</b>	0° to +40° C
<b>Guaranteed Temperature Specification</b>	20° to +30° C
<b>Storage Temperature</b>	-20° to +70° C
<b>Humidity</b>	Operating: 20% to 80% relative humidity Storage: +40° C at 95% relative humidity, non-condensing
<b>Altitude</b>	Operating: -1000 ft. to +6560 ft. (2000 meters)
<b>Vibration, random</b>	Operating: 5 Hz to 500 Hz, 0.27 Gms Non-operating: 5 Hz to 500 Hz, 2.3G
<b>Shock</b>	20 G shock tolerance

CERTIFICATIONS

VISIT IXIACOM.COM FOR MORE INFORMATION ON THIS AND OTHER IXIA PLATFORM OPTIONS	
<b>Product Safety Compliance</b>	<ul style="list-style-type: none"> <li>Listed TUV-USA and TUV-Canada</li> <li>Low Voltage Direction EN6101-1:2010</li> </ul>
<b>Electromagnetic Compliance</b>	<p>EU EMC Directive 89/336/ECC, as amended</p> <p>EN 61000-6-2:2001: Class B Radiated Emissions</p> <p>EN 55011(AMD. A1:199) Class B Conducted Emissions</p> <p>EN 61000-3-2:2000: Current Harmonics</p> <p>EN 61000-3-3:2001: Voltage Fluctuations</p> <p>EN 61000 -6-2:2001: Immunity</p> <p>Class A part 15 FCC Standards for Radiated and Conducted Emissions</p>

## PHYSICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
<b>Weight</b>	60 lbs (27.2 kg)
<b>Size</b>	Height: 8.72 inches (22.14 cm) Width: 19 inches (48.26 cm) Depth: 22 inches (55.88 cm)
<b>SMA Cable Torque</b>	8 inch-lbs
<b>Chassis Connections</b>	USB-Type B, Ethernet 10/100 RJ-45 Jack, 96 RF SMA Jacks

## CALIBRATION

This product is calibrated at the factory and will maintain advertised specifications for 2 years. Customers can elect to recalibrate this product depending on their specific requirements, however Ixia recommends 2-year calibration cycle.

## WAVECHAMBER XT

WaveChamber XT is Ixia's high-end, semi-anechoic chamber that comes with optional turntables to facilitate antenna orientation testing.



WaveChamber XT is perfectly suited for testing performance of small to medium devices that often change positions during use. It comes built-in with 2D or 3D turntables that can position the device at specific azimuths from the measuring antenna before calibrating results. With 5 different types of filtered connectors built-in, it can accommodate a wide-variety of devices for testing, while providing high-degree isolation from external sources.



### KEY FEATURES

- 2D or 3D turntables for antenna orientation testing
- High isolation; 100-110dB overall, and >80dB at interface points
- Webcam for remotely monitoring devices inside the chamber
- Support for five different types of filtered connectors

### SPECIFICATIONS

WAVECHAMBER XT	2D	3D
<b>Product Part Number</b>	980-2088	980-2089
<b>Outside Dimensions (H x W x D)</b>	34.6 x 41.7 x 30.3 in. 88 x 106 x 77 cm	
<b>Nominal Inside Dimensions (H x W x D)</b>	19.4 x 35.0 x 17.7 in. 49.5 x 89 x 45 cm	
<b>Weight</b>	200 lbs. (91 kg)	218 lbs. (99 kg)
<b>Cooling Input Vent</b>	3.7 in. input vent at upper left door, Tin plate honeycomb.	
<b>Cooling Exhaust Fan</b>	50mm square axial fan. Filters over inlet and outlet for isolation	
<b>RF Isolation</b>	100-110 dB overall, >80dB at interface points	
<b>Turntable Diameter</b>	11.8" (30 cm)	15.7" (40 cm)
<b>Load Capacity</b>	22 lbs (10 Kgs)	6.6 lbs (3 Kgs)
<b>Turntable Material</b>	Polyurethane hard board	

WAVECHAMBER XT	2D	3D
Turning Speed	1° - 6° (rpm 0~6)	
Positioning Accuracy	±1°	
Turning Range	-360° - +360°	
Power Consumption	0.75A	0.75A
Power Source	110-230 VAC, 50/60Hz, single phase	
Temperature Range	50°F - 95°F (10°C - 35°C)	

WAVECHAMBER XT CONNECTIONS	2D	3D
SMA	16	16
USB	4	4
HDMI (DB15)	2	2
DB9 1000pF	2	2
Ethernet PoE Mbps 10/100/1000/2500/5000	4	4
Power Connections	6 outlet AC strip	6 outlet AC strip

WAVECHAMBER XT INCLUDED KIT	2D	3D
STP Cat5e Cable, 1m	4	4
RF Cable, SMA (Male to Male), 1m	8	8
HDMI to/from DB15 Cable Connector Set	2	2
USB Cable Type A to B	4	4

## WAVECHAMBERS

Designed to provide a simple and space-efficient solution for large-scale testing environments that involve multiple wireless 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 in a small, medium and large footprint.



**Ixia WaveChambers: Small, Medium, and Large**

Bulkhead-mounted connections for RF cabling, filtered 10/100/1000/2500/5000Mbps Ethernet, USB, HDMI, 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 WLAN system from all kinds of devices, APs, and managed WLAN switches
- Greater than 80dB of isolation at up to 6GHz provides excellent isolation for a wide range of wireless products including antennas, RF cabling, and Ethernet cable
- PoE Ethernet supported
- Best testing provided through use of the Wi-Fi Snuggie accessory, wrapping the device inside the chamber
- Small WaveChamber is a small chamber that minimizes space requirements, ideal for AP testing
- Medium WaveChamber is ideal for device testing and can house multiple larger multi-radio and outdoor AP units
  - Supports double the connections of the Small WaveChamber
  - Top-opening
- Large WaveChamber easily accommodates multiple Wi-Fi devices of all sizes
  - Largest Chamber offering

SPECIFICATIONS

WAVECHAMBER	SMALL	MEDIUM	LARGE
<b>Product Part Number</b>	980-2083	980-2084	980-2110
<b>Outside Dimensions (H x W x D)</b>	11.0 x 8.0 x 14.0 in. 27.94 x 20.32 x 35.56 cm	12.0 x 17.0 x 24.0 in. 30.48 x 43.18 x 60.96 cm	19.0 x 25.0 x 25.0 in. 48.26 x 63.5 x 63.5 cm
<b>Nominal Inside Dimensions (H x W x D)</b>	10.0 x 7.0 x 13.0 in. 25.4 x 17.78 x 33.02 cm	11.0 x 16.0 x 23.0 in. 29.21 x 41.91 x 59.69 cm	17.5 x 23.5 x 23.5 in. 44.45 x 59.69 x 59.69 cm
<b>Weight</b>	12 lbs. (5.44kg)	40 lbs. (18.4kg)	125 lbs. (56.7 kg)
<b>Construction</b>	.090 aluminum, .125 aluminum cover, gray powder coat, 3/8" thick RF absorbent foam lined throughout		
<b>Cooling Input Vent</b>	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 side right RF isolation mesh
<b>Cooling Exhaust Fan</b>	2.36 in. (6 cm) 9.1 CFM exhaust fan at upper left rear panel 115VAC ball bearing, RF isolation mesh 2.36 in. (6 cm) exhaust fan on rear panel, 12VDC ball bearing with RF isolation mesh (on Small WCH)		
<b>RF Isolation</b>	Greater than 80dB isolation from 400MHz to 6GHz		

WAVECHAMBER CONNECTIONS	SMALL	MEDIUM	LARGE
<b>SMAs</b>	8	16	16
<b>USB 2.0</b>	1	2	2
<b>HDMI/DB15</b>	1	2	2
<b>DB9 1000pF</b>	1	2	2
<b>BNC 75Ohm</b>	0	0	1
<b>Ethernet PoE 10 /100 Mbps 1/2/5/5/10 Gbps</b>	1	0	4

WAVECHAMBER CONNECTIONS	SMALL	MEDIUM	LARGE
<b>Ethernet PoE Mbps 10/100/1000/2500/5000</b>	0	4	0
<b>Power Connections</b>	3 outlet AC strip	6 outlet AC strip	6 outlet AC strip
<b>Antenna Array</b>	0	0	1

WAVECHAMBER INCLUDED KIT	SMALL	MEDIUM	LARGE
<b>STP Cat5e Cable, 1m</b>	2	4	4
<b>RF RG-142 Cable, SMA, 24"</b>	8	16	16
<b>HDMI cables</b>	1	0	2
<b>HDMI to/from DB15 Cable Connector Set</b>	0	2	0
<b>USB Cable Type A to B</b>	1	2	2
<b>WaveWrap</b>	1	2	2

The Ixia Chamber Antenna Array provided with the Large WaveChamber is a custom-developed RF solution using 64 directional antennas (4 for each SMA) over a ground plane solution allowing aggregated delays. This is better than using individual dipole antennas and provides excellent OTA RF distribution within the chamber for up to 16 SMA connections.

The WaveWrap is a custom folding enclosure for optimal over-the-air RF testing of a device. It supports 2x2 using 2 SMA connectors with 4 enclosed antennas.



Ixia Antenna Array



Ixia WaveWrap

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## ORDERING INFORMATION

### 980-1004

IxVeriWave WaveTest 92 Chassis, 9 slots, 19" rack-mountable; includes: 25meter Sync Cable, 5meter Cat5e cable, RJ45 connectors, Power Cord, Installation Guide

### 980-1005

IxVeriWave WaveTest 22 Multi-client Traffic Generator / Performance Analyzer, 2-slot rack-mountable chassis; includes: 25meter Sync Cable, 5meter Cat5e cable, RJ45 connectors, Power Cord, Installation Guide

### 980-1003

IxVeriWave VW10-0011-00 WB1000, WaveBlade Management required for both WT92 980-1004 & WT22 980-1005 chassis

### 980-2033

IxVeriWave ATA100, Test automation appliance. Offers users the ability to access and control WaveTest client and flow resources at scale, through a CLI API or user-scripted interface. Enables large-scale, and long-term testing scenarios requiring clients and flows that connect and reconnect automatically and persistently. Supports a single user and up to 4 wireless test ports. Note: Product shipped with 1-yr limited hardware warranty -- Extended Warranty can be purchased for up to 2 additional years (maximum). Note to U.S./Canada Customers: Hardware 3-day Advanced Replacement Technical Support Service not available on this product.

### 980-2034

IxVeriWave ATA1000, Test automation appliance. Offers users the ability to access and control WaveTest client and flow resources at scale, through a CLI API or user-scripted interface. Enables large-scale, and long-term testing scenarios requiring clients and flows that connect and reconnect automatically and persistently. Supports multiple simultaneous users and controls multiple WT22/92 chassis' and up to 48 wireless test ports. Note: Product shipped with 1-yr limited hardware warranty -- Extended Warranty can be purchased for up to 2 additional years (maximum). Note to U.S./Canada Customers: Hardware 3-day Advanced Replacement Technical Support Service not available on this product

### 980-2088

IxVeriWave WaveChamberXT-2D, Chamber with built-in 2D turntable (980-2088)

IxVeriWave WCH-XT-2D, High isolation RF Chamber with 2D turntable. Comes with SMA, USB, HDMI, RJ45, DB15, DB9 ports. External dimensions: 34.4"H x 39.3"W x 27.5"D

### 980-2089

IxVeriWave WaveChamberXT-3D, Chamber with built-in 3D turntable (980-2089)

IxVeriWave WCH-XT-3D, High isolation RF Chamber with 3D turntable. Comes with SMA, USB, HDMI, RJ45, DB15, DB9 ports. External dimensions: 34.4"H x 39.3"W x 27.5"D



## 980-2083

IxVeriWave WCH2900, Small WaveChamber includes SMA, RJ45, HDMI, USB and power connections.

IxVeriWave WCH2900, Small WaveChamber Kit; external dimensions: 11.0"H x 8.0"W x 14.0"D; includes 8x SMA ports, 1x USB 2.0, 1x HDMI, 1x DB9 1000pF, 1x 10/5/2.5/1 Gigabit (PoE) port, 4 outlet 250VAC power strip, with front access. Note to U.S./Canada Customers: Hardware 3-day Advanced Replacement Technical Support Service not available on this product.

## 980-2084

IxVeriWave WCH3600, Medium WaveChamber includes SMA, RJ45, HDMI, USB and power connections.

IxVeriWave WCH3600, Medium WaveChamber Kit; external dimensions: 12.0"H x 17.0"W x 24.0"D; includes 16x SMA ports, 2x USB, 2x DB15 High Density Filtered Connector that support 2x HDMI, 2x DB9 1000pF, 4x filtered Gigabit (PoE) ports, 6 outlet 120VAC power strip, with top access. Note to U.S./Canada Customers: Hardware 3-day Advanced Replacement Technical Support Service not available on this product.

## 980-2110

IxVeriWave WCH5000, Large WaveChamber includes SMA, RJ45, HDMI, USB and power connections.

IxVeriWave WCH5000, Large WaveChamber Kit; external dimensions: 19.0"H x 25.0"W x 25.0"D; includes 16x SMA ports, 2x USB 2.0, 2x HDMI, 2x DB9 1000pF, 4x 10/5/2.5/1 Gigabit (PoE) ports, 6 outlet 250VAC power strip, with front access and an optimized Antenna Array. Note to U.S./Canada Customers: Hardware 3-day Advanced Replacement Technical Support Service not available on this product.

## 980-2087

Wireless Tap and Programmable Attenuator.

Wireless Tap and Programmable Attenuator, 12-Port unit, 0-80dB Attenuation Range. Accessories include 4x each of 10,20 and 30 dB attenuators, 8x 36" and 8 x 80" SMA Cables and 24x SMA Terminator plugs. Requires: Ixia IoT Interoperability testbed and software.

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