

# 10

## *IXIA 1600T Chassis*

This chapter provides details about Ixia 1600T chassis—its specifications and features.

The Ixia 1600T Chassis has 16 slots for support of up to 16 single wide load modules, or eight double-wide load modules. The Ixia 1600T supports all high power load modules with enhanced power supplies and cooling. The Ixia 1600T was specifically designed to support OC-192c and 10 Gigabit Ethernet load modules. The Ixia 1600T is shown in the following figure.

Figure 10-1. Ixia 1600T Chassis





**Warning:** To prevent accidental injury to personnel, do not leave unused SFP (or SFP+) ports on load modules uncovered. When transceivers are not installed, end caps must be used. For details, see [Use End Caps on Open Ports](#) on page xxxvii.

## Specifications

### 1600T Chassis

Ixia 1600T computer and chassis specifications are contained in the following table.

Table 10-1. IXIA 1600T Specifications


CPU	Intel Celeron 1.2Ghz
	 <p><b>Caution-Battery replacement</b> There is danger of explosion if battery is incorrectly replaced. Do not attempt to replace the battery. Return to Ixia Customer Service for replacement with the same or equivalent type of battery. Ixia disposes of used batteries according to the battery manufacturer's instructions.</p>
Memory	1 GB
Disk	IDE disk: 20 GB
Operating System	Windows XP Professional
Physical	
Load Module Slots	16
Size	17.5" w x 15.7" h x 20.4" d (44.5cm x 39.9cm x 52cm)
Weight (empty)	47lbs (21kg)
Avg. Shipping Wt.	51lbs (23kg)
Shipping Vibration	FED-STD-101C, Method 5019.1/5020.1
Environmental	
Temperature	
Operating	41°F to 104°F, (5°C to 40°C) <b>Note:</b> Some high-density/high performance load modules may require a lower operating temperature; if this is the case, the operating temperature is specified in the load module datasheet.
Storage	41°F to 122°F, (5°C to 50°C)
Humidity	
Operating	0% to 85%, non-condensing
Storage	0% to 85%, non-condensing
Clearance	Rear: 4 in (10 cm); fan openings should be clear of all cables or other obstructions. Bottom: 1 in (2.5cm). Top and sides: none.
Power	100-240V 60/50Hz 16-10A

Table 10-1. IXIA 1600T Specifications

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Fuse	250V 20A Fast Acting
Front Panel Switches	On/Off momentary power push button
Back Panel Switches	On/Off rocker switch
Front Panel Indicators	Power, Standby, Master, External Clock See <a href="#">LEDs</a> on page 5.
Back Panel Connectors	
Power	Male receptacle (IEC 60320-C19).
Mouse	PS/2 6-pin DIN with or without Y-connector, for external mouse.
Keyboard	PS/2 6-pin DIN with or without Y-connector, for external keyboard.
Monitor	HD-DB15 Super VGA for external monitor.
Printer	Female DB25 parallel port for external printer.
Ethernet	RJ-45 10/100Mbps
Serial	2 male DB9 ports
USB	2 USB dual type A, 4-pin jack connectors.
Sync In	4-pin RJ11
Sync Out	4-pin RJ11
Audio Line In	3 3.5mm mini-TRS
Line Out	
Mic In	
Trigger In	BNC
XM2 Noise Spec(Fan db)	Condition:Ixia XM2 Front Back Right Left Plugged in not started 56 54 57 58 Only CPU Running On Low Speed 58 56 58 60 On Medium Speed- On Full Speed 70 67 70 73

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## LEDs

The IXIA 1600T has the following set of front panel LEDs:

Table 10-2. IXIA 1600T LEDs

Label	Color	Description
Power	Green	The power LED is illuminated when the chassis is using power.
Standby	Yellow	The standby LED indicates that the chassis is in standby mode. Standby mode is defined as: the chassis is plugged into an active power outlet, the chassis power block switch is active (or 'On'), and the system power is not on. Pressing the front panel Power On/Off button enables system power and start the system.
Master	Green	This LED is illuminated during chassis power up. After IxServer is loaded, the LED is only illuminated when the chassis is enabled in Master Mode. Master Mode indicates that the chassis operates based on its local system clock and it is not dependent upon any external synchronization. In a chassis chain this LED is illuminated on the first chassis in the chain. All other chassis downstream receive their clock from the Master chassis and therefore does not illuminate this LED.
External Sync	Green	This LED is illuminated during chassis power up. After the IxServer load the LED is only illuminated when the chassis detects an external synchronization clock. The external synchronization clock is used to synchronize to an adjacent chassis when defining a chassis chain. This LED does not indicate that a chassis is a device in a chain. It only indicates that a clock signal has been detected on the line.

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## Installing Filler Panels

When using the IXIA 1600T for fewer than eight OC192 modules, it is best to redirect the airflow to the installed load modules to optimize operating conditions. Consequently, 1-slot and 4-slot 1600T cover plates have been designed to redirect the airflow to the installed load modules from empty slots.

The following components are included with each IXIA 1600T:

- Three 4-slot wide 1600T Filler Panel units (p/n 652-0118)
- Two 1-slot wide 1600T Filler Panel units (p/n 652-0117)
- Screws for attaching the panel faceplates to the chassis

Prerequisites for  
Filler Panel  
Installation:

**Warning:** Power to the chassis must be OFF.

- The technician should use industry-standard grounding techniques, such as wrist and ankle grounding straps, to prevent damage to electronic components on any Ixia Load Modules.
- The chassis should be placed in a horizontal position, in a well-lighted work area.
- The Load Module(s) must have been previously installed, per the instructions before application of power.

Insert one or more OC192 or 10GE modules into the chassis. Other load modules may be installed at any location

Table 10-3. Slot Preferences for Installing Multiple OC192 Load Modules

Module	Slots	Filler Panels Required
1 <sup>st</sup>	11 & 12	(3) 4-slot and (2) 1-slot
2 <sup>nd</sup>	5 & 6	(3) 4-slot
3 <sup>rd</sup>	8 & 9	(2) 4-slot and (2) 1-slot
4 <sup>th</sup>	14 & 15	(1) 4-slot and (4) 1-slot
5 <sup>th</sup>	2 & 3	(6) 1-slot
6 <sup>th</sup>	1 & 2	(4) 1-slot (shift the 5th module to slots 3 & 4)
7 <sup>th</sup>	7 & 8	(2) 1-slot (shift the 3rd module to slots 9 & 10)
8 <sup>th</sup>	13 & 14	None (shift the 4th module to slots 15 & 16)

The filler panels are required when there are empty slots in the chassis. However, any other Ixia load modules, such as 10/100, Gigabit, OC12/3c, and OC48c, can be installed in the chassis, alongside the OC192c load modules. First, insert the OC192c load modules into the respective slots, as described in the second column of the table above. Second, install any other load modules in any empty slots. Last, fill the remaining slots with the filler panels.

Filler Panel  
Installation  
Procedure:

**ESD Caution:** Use industry-standard grounding techniques to prevent Electrostatic Damage to the delicate electronic components on the Ixia Load Modules.

To install a filler panel, do the following:

1. Verify that the chassis is powered **OFF** and the power cable is unplugged.
2. To install a 4-slot filler panel, slide the 4-slot filler panel, with the Ixia logo at the top, into Slots 1 through 4, or as indicated in the Slot Preference table above.

The panel slides in on the slot rails in the chassis.

3. Secure the faceplate of the filler panel to the chassis with 4 of the supplied screws.
4. To install a 1-slot filler panel, slide the 1-slot filler panel, with the Ixia logo at the top, into the correct slot, per the Slot Preference table above.

The panel slides in on the slot rails in the chassis.

5. Secure the faceplate of the filler panel to the chassis with 2 of the supplied screws.



**Caution:** Use extreme care to prevent damage to delicate electronic components on an adjacent load module.

Not using filler panels could cause random failures in port operations or damage installed modules..

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## Rack Mount Cautions



**Caution:** If this unit is installed in a Rack Mount, observe the following precautions:

- a:** Elevated Operating Ambient Temperature: If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, consider installing the equipment in an environment that is compatible with the maximum allowable ambient temperature specified for the chassis (40° C).
- b:** Reduced Air Flow: Install the equipment in a rack so that the amount of air flow required for safe operation of the equipment is not reduced. Do not block the back or sides of the chassis, and leave approximately two inches of space around the unit for proper ventilation.
- c:** Mechanical Loading: Mount the equipment in the rack so that a hazardous condition is not caused due to uneven mechanical loading.
- d:** Circuit Overloading: Consider the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Pay attention to equipment nameplate ratings when addressing this concern.
- e:** Reliable Earthing: Maintain reliable earthing (grounding) of rack-mounted equipment. Pay special attention to supply connections other than direct connections to the branch circuit (such as use of power strips).

