

Chroma-Q™ Magic Box™ EtherSwitch 7™

User Manual



Version 1.1 April 2009

PN: 156-0500

Disclaimer

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Chroma-Q products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent. Chroma-Q sole warranty is that the product will meet the sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

Chroma-Q reserves the right to change or make alteration to devices and their functionality without notice due to our on going research and development.

The Chroma-Q Magic Box EtherSwitch 7 system has been designed specifically for the lighting industry. Regular maintenance should be performed to ensure that the products perform well in the entertainment environment.

If you experience any difficulties with any Chroma-Q products please contact your selling dealer. If your selling dealer is unable to help please contact support@chroma-q.com. If the selling dealer is unable to satisfy your servicing needs, please contact the following, for full factory service:

Outside North America:

Tel: +44 (0)1494 446000
Fax: +44 (0)1494 461024
support@chroma-q.com

North America:

Tel: 416-255-9494
Fax: 416-255-3514
support@chroma-q.com

For further information please visit the Chroma-Q website website at www.chroma-q.com.

Chroma-Q is a trademark, for more information on this visit www.chroma-q.com/trademarks.

The rights and ownership of all trademarks are recognised.

Table of Contents

1.	Product overview	3
2.	Operation	3
2.1	Unpacking the units	3
2.2	Power	3
2.3	RJ45 Ethercon Ports	3
2.4	LED Indicators	4
2.5	Installation	4
3.	Troubleshooting	4
4.	Specification	5
4.1	Technical specifications	5
4.2	Drawings	6
5.	Maintenance	7

1. Product overview

The EtherSwitch 7 is a heavy duty, high speed unmanaged network switch that supports simultaneous computer connections. Designed to satisfy the requirement of entertainment touring applications, the EtherSwitch 7 is equipped with seven shielded ethercon ports (RJ45) providing 10 / 100 / 1000 Mbps bandwidth in full-duplex mode. This stand-alone unit enables the concurrent use of various multimedia devices within a network without traffic restrictions.

The unique Magic Box interlocking enclosure facilitates easy rack mounting when used in single units or pairs, and easy truss mounting via a captive nut insert. Rack mounting brackets are available in single unit and dual unit versions, enabling you to customise your equipment rack or your installation by mixing and matching different Magic Box interface.



2. Operation

2.1 Unpacking the units

The EtherSwitch 7 package includes 1 unit EtherSwitch, a power cord and a Quick Start Guide. We recommend that you keep the original packaging in case items need to be returned.

2.2 Power

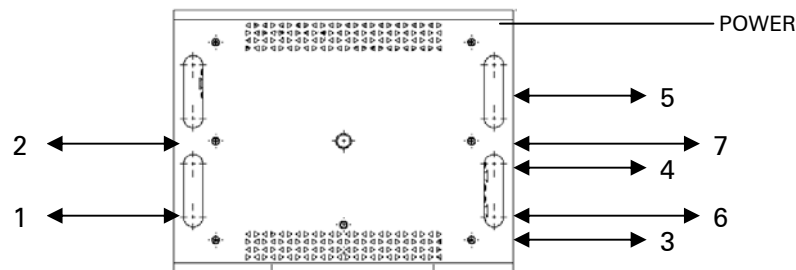
Power for the EtherSwitch 7 is connected through a male IEC chassis connector with input rating of 100-240V AC, 50-60Hz. There is no power button and plugging into the power outlet will immediately power the unit on.

2.3 RJ45 Ethercon Ports

The EtherSwitch 7 system utilises CAT5e cable to send and receive data (all IEEE 802.3 protocol) through 7 shielded RJ45 Gigabit Ethercon ports. There are 2 ports at the front panel and 5 ports at the rear panel. These ports support network speeds of 10Mbps, 100Mbps, and can operate in half- and full- duplex transfer modes. Automatic MDI/MDIX crossover detection is supported. The EtherSwitch 7 will automatically detect the settings of the external device immediately upon connection.

Send and receive data (all IEEE 802.3 protocol) to and from an external source through any of the seven shielded RJ45 Ethercon ports. There are 2 ports at the front panel and 5 ports at the rear panel.

RJ45 Ethercon Ports:



Front Panel: 2 Ethercon Ports



Rear Panel: 5 Ethercon Ports



2.4 LED Indicators



Speed LED Indicators

Activity LED Indicators

1. The LED indicator for power at the front panel will light up (Green) when the EtherSwitch 7 is receiving power, otherwise, it is off.
2. Cable Diagnostic will start upon power up, which will determine if the Ethernet cables connected are in good working condition. This process is indicated by the **Speed** LED corresponding to each of the 7 ports blinking (Green) sequentially.

The initial port scan takes about 10 seconds. A detected cable fault will be indicated by the corresponding port's **Speed** LED glowing (Amber) for 5 seconds after the initial port scan.

A good cable connection will be indicated by the corresponding port's **Speed** LED glowing (Green) for 5 seconds. The EtherSwitch 7 will then reset for normal operation.

3. The **Speed** LED indicators (Top) at the front panel that corresponds to each port number will light up (Green) when a secure connection is present.

The **Activity** LED (Bottom) will blink when reception or transmission of data is occurring at the port.

4. The **Speed** LED indicator will light up green when the port is connected to a 1000Mbps Ethernet station, and amber when connected to a 100Mbps Ethernet device. The indicator will remain off when the port is connected to a 10Mbps Ethernet device.

2.5 Installation

Unique Magic Box interlocking enclosure facilitates easy rack mounting when used in pairs and easy truss mounting via captive nut insert. Rack mounting brackets are available in single unit and dual unit versions.

Note: for truss mounting, we recommend the use of a 1/2"-13UNC x 3/4" long bolt to avoid damage.

3. Troubleshooting

Troubleshooting is a process of elimination. First, rule out the other field factors (i.e. bad connections, faulty cables and power supplies). For technical advice and/or parts, please contact your selling dealer or the offices listed in this manual.

Symptom	Possible Cause	Solution
LED indicator for power is off.	Power cord is not connected properly. There is no power at the source.	Check power source, power cord and connector.

Speed LED lights amber upon cable diagnostic.	Loose connection. Damaged cable. Damaged connector. No connection.	Replace damaged cable. Check connector.
Speed LED lights is off. No connection detected.	Poor connection. Possible transmission fault at the source. Electronics fault in unit if it is connected to a 100/1000Mbps Ethernet device.	Check connection/ connectors. Check Ethernet device. Call selling dealer.

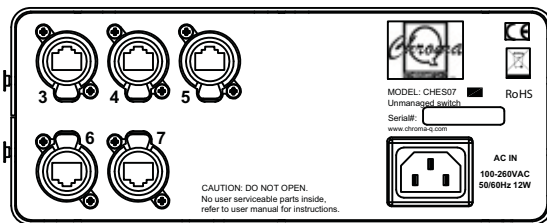
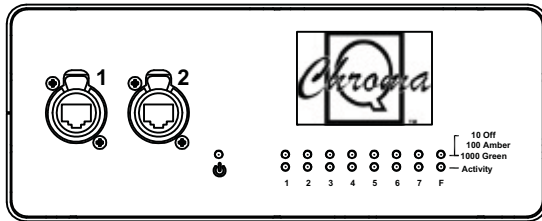
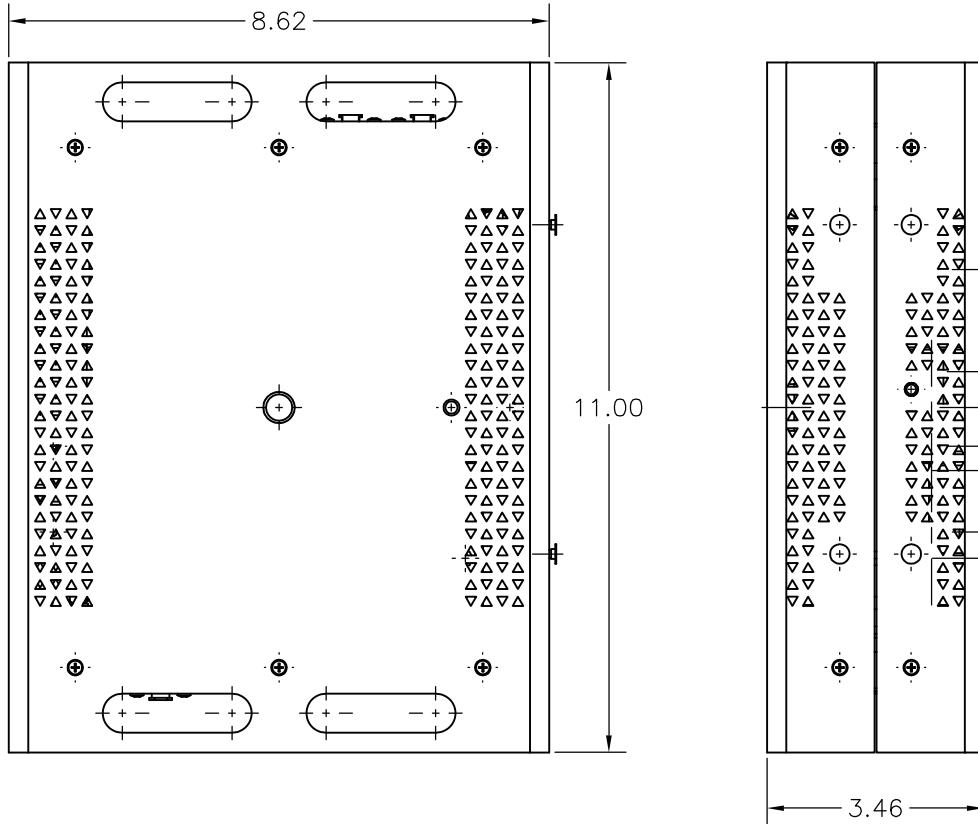
4. Specification

4.1 Technical specifications

Product Code:	CHES07
Dimensions:	280mm x 220mm x 88mm 11" x 8.6" x 3.5"
Weight:	3.5kg / 7.8lbs
Power:	100-240V AC, 50-60Hz, 0.4A
Power connector:	IEC
Ethernet Switch Type:	Intelligent store & forward
Ethernet Protocols:	All IEEE 802.3
RJ45/EtherCon Port:	Shielded 10BaseT/ 100BaseTX/ 1000BaseT
RJ45/EtherCon:	Auto-negotiation
RJ45/EtherCon MDI/MDIX:	Auto-crossover
RJ45/EtherCon TD and RD polarity:	Auto-polarity
MAC Addresses Supported:	8192
VLAN Supported:	4096
Jumbo Frame Support:	up to 9.6K
Buffer Memory:	144 Kbytes
Memory Bandwidth:	16 Gbps for full wire speed on all ports
Forwarding Rate:	10 Mbps : 14,880pps 100 Mbps : 148,81pps 1000 Mbps : 1488,1pps
Port Connection:	Speed and Activity LED indicators
Power:	Power LED
Max Cat5e cable run:	90m / 295ft
Colour:	Black
Approvals :	Pending



4.2 Drawings



5. Maintenance

With care, the Chroma-Q Magic Box EtherSwitch 7 will require little maintenance. However, as the unit is likely to be used in a stage environment we recommend periodical internal inspection and cleaning of any resulting dust and cracked oil residue.

Do not spray liquids on the front or rear panel. If the front enclosure requires cleaning, wipe with a mild detergent on a damp cloth.