



1Gb Copper/Fibre Smart 12 & 24-Port Ethernet Switch Datasheet

Features



High-speed, full duplex networking on a single fibre redundant ring or over copper with self-managed control

The CNSIQ1200 & 2400 Smart Switch™'s are designed for fibre and copper-based applications that demand ultra-reliable network performance with sub-second recovery for mission critical and high reliability applications including surveillance, security access and sensor applications.

CNSIQ Switches are more powerful than typical Ethernet Switches:

- ◆ Easy Installation
- ◆ Total lowest cost solution 12 and 24 –Port versions
- ◆ High Network Reliability with Millisecond Recovery Times
- ◆ 2 Gbps Throughput IQ Ring Monitoring
- ◆ True Plug and Go Operation Optional Secure
- ◆ Encrypted Web Server
- ◆ Optional Power over Ethernet (PoE)
- ◆ Compatible with both single-mode and multi-mode cable without changing hardware
- ◆ Link monitoring of fibre network status for enhanced control or Ring Break Alarm relay

- ◆ Quasar’s ring topology provides interconnectivity for hundreds of devices, scalable to any network size
- ◆ Field upgradeable to protect equipment investment and add future functionality
- ◆ Available in both Commercial and Industrial grade

Description

CNSIQ Smart Switches are more powerful than other Ethernet Switches

- ◆ Ultra-reliable due to unique failure resolution capabilities
- ◆ Self-healing Ring Redundancy Technology recovers network quickly
- ◆ “Plug and Go” interfacing of Ethernet devices including Controllers, I/O, IP-based Video cameras and sensors

The CNSIQ1200 & 2400 Smart Switch with GigE IQ Ring, 12 or 24 Ethernet Ports and a Gigabit Ethernet Uplink has several unique features that make this platform ideal for many security networks.

Quick and Easy Plug ‘N Go Installation

CNSIQ1200 & 2400 Smart Switches are extremely easy to set up:

- 1 Connect the fibres, Ethernet and any control interface cables
- 2 Power on the CNSIQ1200 or 2400
- 3 The CNSIQ1200 & 2400 auto provisions all networking configurations
- 4 The entire ring and all devices are up and running.

Lowest Total Cost Gigabit Solution

The innovative CNSIQ1200 & 2400 Smart Switch provides savings in many areas – faster installation, no administration, self-healing resilient ring architecture means low maintenance, easy network expansion, and flexible scalability.

For more information on implementing Self-managed IP- based Ethernet networks please refer to the associated discussion document on our web site, details at the end of this data sheet.

Multi-Vendor Compatibility

The CNSIQ1200 & 2400 is compatible with all IP-based Ethernet Switches and Routers. When connected to other vendors' equipment in a typical Star/Tree topology, these products look like any other standard switch and are interoperable with Spanning Tree Protocol. The Intelligent Quasar technology does not effect the operation of the non-IQ elements as the other network elements do not utilise the IQ Ring functionality. It is possible that customers will have an IQ Ring network of IQ Switches that attaches to a non-self-healing, non-self-managing IP based network. The Intelligent Quasar technology enhances the network reliability for mission critical applications.

Scalability – Adding many IP devices and Smart Ethernet Switches to an IQ Ring

The CNSIQ1200 & 2400 Smart Switch provides unlimited scalability in a redundant ring network as opposed to traditional Ethernet network switches. The IQ1200 & 2400 utilises unique firmware and self-management techniques to overcome the limitations placed on Managed Ethernet networks. As many nodes as needed may be added to an IQ Ring without the difficulties of reconfiguring the network experienced with Managed Ethernet switches. The data from IP-based devices including high data rate ones such as Video Cameras is routed around the IQ Ring with extremely low latency to the Gigabit Ethernet port attached to the Video Control and Monitoring server.

IP Video Camera Initialisation and Video Streaming Transmission

When high data rate IP-based devices such as IP Video cameras are attached to the CNSIQ1200 or 2400, they auto negotiate the port speed to match the device. At the Video Control centre, the IP address to be used by the camera is input by an Administrator. Once this information is assigned, the camera will initiate transmission of the IP Video stream over the IQ Ring back to the Video Control centre.

Auto-Email Notification of Network Performance

All switch and Ring related events are configurable via WEB server for automatic email notification. Event notification to include:

- 1) Change in Ring connectivity
- 2) Change in any port status
- 3) Unauthorized access to the switch
- 4) Monitoring of Ring performance in terms of spurious link or packet loss
- 5) Excessive temperature or fan failure.

Specification

Environmental Specifications	
Operating Temperature -Commercial -Industrial (available as option)	0 to 70° C -40 to 85° C, utilises Thermostat controlled fans
Input Voltage	90 to 240 VAC Universal
Humidity	95% non-condensing
Certifications	UL, CE, FCC Part 15
Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3x. IEE802.3af
Electrical Specifications (all values at ambient temperature)	
IQ Ring Single Mode 1310/1550 nm 9/125u single fibre	2 single fibre SC-connector TX/RX ports full duplex
IQ Ring Single Mode 1310/1550 nm Single Fibre Options - Distance Between Nodes	15km standard, Optional 25km, 40km, 60km
IQ Ring Multi-mode 850nm 62.5/125 single	SC/SC connectors simplex, 300 meters max
Distance Between Nodes	
IQ Ring Copper SFP	Gigabit Copper SFP, 100 meters distance
Ethernet Connections	12 or 24 ports RJ-45 10/100/1000Mbps Autosensing
Optional Uplink Port using SFP modules	Accepts Single Mode, Multimode and Copper SFPs
Ring Break and Power Loss Signals	Ring Break Alarm Relay: relay closed when configured as ring, Power Loss Relay: relay closed when power On
Optional Power over Ethernet on 24 Service Ports	48 V, 15.4Watts max per port. Dual zone power – separate power supply for each group of 12 Ethernet ports
Mechanical Specifications	
Dimensions	17.0 x 15.0 x 1.5 inches (439 x 376 x 38 mm)
Weight	9.0 pounds (4.1Kgs)
Power Consumption	100 Watts nominal, 200 watts (IQ1200) & 500 Watts (IQ2400) max with POE enabled
Mounting Options	Standalone, 19" rack

Note: All specifications are subject to change v2.1

Ordering Details

CNSIQ1200 (X) or 2400(X) - abcde

X= blank, Fibre Quasar.

X= C, Copper Quasar.

X= P, SFP Quasar ports.

a= 0, Standard, no PoE.

a= E, PoE option.

b= 0, Standard IQ2400 switch, Commercial Grade.

b= G, Industrail Grade option.

c= 0, Standard, 19" rack mountable.

d= 0, Standard, 15km range.

d= 1, Extended 25km SC range oprion.

d= 2, Extended 40km SC range option.

d= 3, Extended 60km SC range option.

e= 0, Commercial Temp.

e= I, Industrial Temp.

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