

## the i-Volution™ 4200 HARDENED EOC

### Ethernet to Optical Converter

The i-Volution 4200 (i4200) Series of Ethernet-to-Optical Converters (EOC) are designed to transport 10/100 Base-T Ethernet LAN traffic over single-mode optical fiber links. The i4200's hardened design and optical link budget extend Ethernet LAN connectivity to virtually any location, irrespective of the environment and/or the distance.

The i4200 is available as a standalone EOC with dual 10/100 Base-T Ethernet interfaces and single or dual fiber 100 Base-FX optical ports.



i4221 EOC with Single Optics



i4222 EOC with Dual Optics



Rear View

### applications

- Security Surveillance
  - Airports
  - Military
  - Industrial Complexes
  - Hospitals
  - Campuses
  - Detention Centers
- Transportation Monitoring
  - Road (ITS)
  - Rail/Light Rail
  - Subway/Metro
- Industrial Process Control

### Network Scalability and Flexibility

The i4200 EOC is ideal for a multitude of network applications requiring extended Ethernet connectivity. The integral Layer-2 network switch allows for easy deployment and permits multiple Ethernet devices to be inter-connected remotely.

The Ethernet ports on the i4200 EOC are standards compliant and will auto-negotiate with any Ethernet networking device. To further facilitate interoperability and ease of installation, the i4200 dual 10/100 Base-T Ethernet interfaces are user-configurable to eliminate the need to for special interconnect cabling.

The i4200 with dual optical ports provide the ability to cascade multiple Ethernet sites together over a common fiber path, thus maximizing the overall network utilization while eliminating the need for additional cabling. When deployed in this manner, the i4200 can inter-connect networks up to 1000 km apart with minimal signal degradation and/or delay.

### Extended Range

The i4200 EOC optical link budget (35 dB) provides remote LAN connectivity up to 70 km. To further eliminate distance barriers, the i4200 can also be used as an optical repeater to extend the network topology to 140 km.

### Temperature Hardened

The i4200 EOC is designed to meet "high availability" network requirements. The unit is environmentally hardened to operate over extended temperature ranges and is conformal coated to ensure maintenance free operation.

### Standards Compliant

The i4200 EOC is industry standards compliant to simplify installations in a multi-vendor network environment. The units are interoperable with all members of the i-Volution product family.

### Plug-and-Play operation

The i4200 EOC is truly plug-and-play, making it easy to install and maintain. No user configuration and/or adjustments are required.

### Product Variant

**i4221 Ethernet-to-Optical Converter** - The i4221 provides two 10/100 Base-T Ethernet interfaces and one 100-FX optical port.

**i4222 Ethernet-to-Optical Converter** - The i4222 provides two 10/100 Base-T Ethernet interfaces and two 100-FX optical ports.



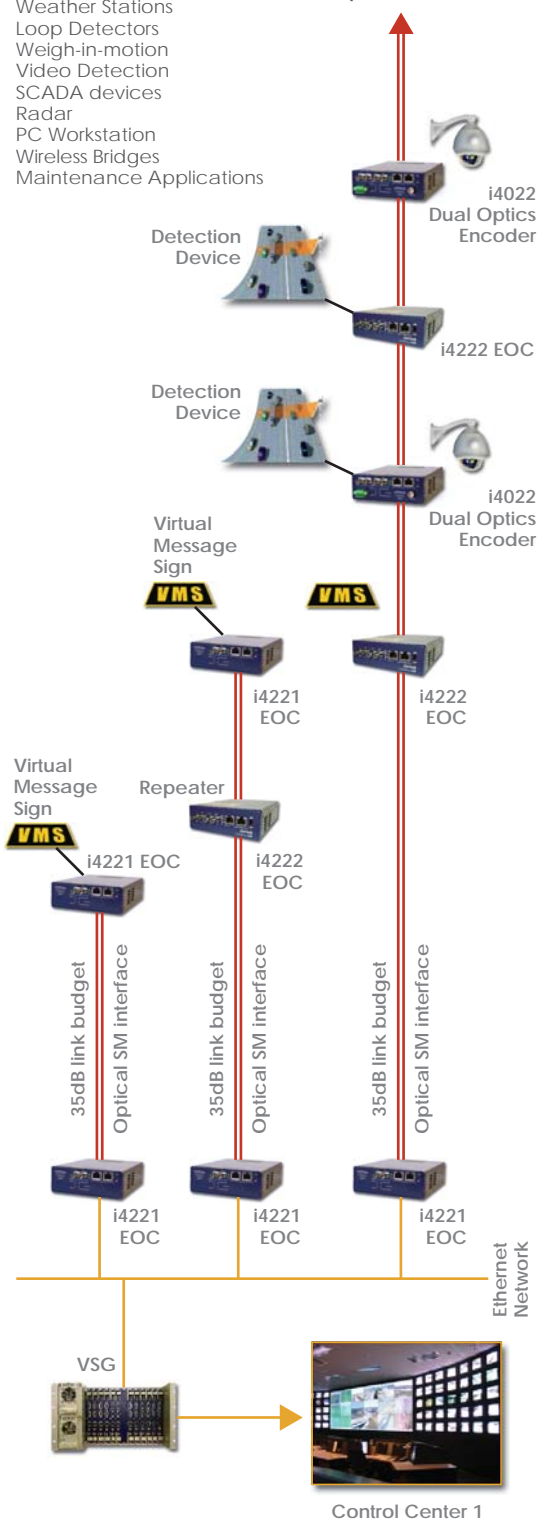
# the i-Volution™ 4200

## HARDENED EOC

### ethernet interface applications

- Pan Tilt Zoom
- Traffic Controllers
- Card Readers
- Virtual Message Signs
- Weather Stations
- Loop Detectors
- Weigh-in-motion
- Video Detection
- SCADA devices
- Radar
- PC Workstation
- Wireless Bridges
- Maintenance Applications

Up to 15 units



### LAN

LAN Format	IEEE 802.3 Ethernet
Interface	2 RJ 45 10/100 Base-T Ethernet, Half/Full Duplex, Auto-Sensing Integral Layer-2 Switching with Extended Channel Support <i>When Multicast video mode is used, any device connected on the Ethernet port of the i4200, must negotiate it's speed to 100 Mbps Full Duplex. Maximum cascade of 15 units provided aggregate bandwidth &lt;70% of LAN link.</i>
Data Rate	10/100 Mbps
Protocol	Protocol Transparent
	User selectable switch for straight-through/cross-over on 2nd Ethernet interface

### Optical Link

Optical Format	IEEE 802.3 Ethernet
Connector/Fiber	ST/Single Mode/35dB link Budget
Interface	100 Base-FX Ethernet, Full Duplex Integral Layer-2 Switching with Extended Channel Support <i>Maximum cascade of 15 units provided aggregate bandwidth &lt;70% of Optical Link.</i>
Data Rate	100 Mbps

### Management

None required - Plug-and-play operation

### Power

Input Voltage	11.4 - 15 V DC (.100" center pin diameter lock type connector.) <i>AC Power Adaptor included</i>
Consumption	7 W (typical)

### Physical

Size/Weight	W 5.0" (12.7cm) x H 1.72" (4.37 cm) x L 7.5" (19 cm) / 1.34 lbs (0.6 kg)
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### Environmental

Operating Temperature	-34°C to +74°C
Relative Humidity	5% to 95%, Non-Condensing
Environmental Protection	PCB Conformal Coating
RoHS Compliance	EU 2005/95/EC ( <i>Available on request</i> )

### Regulatory Approvals

Emissions	
Europe	EN55022: 1998 For Class A, EN61000-3-2: 1995 & EN6100-3-3: 1995
North America	FCC47 CFR Part 15, Subpart B: 1999 Class A
Australia/New Zealand	AS/NZS 3548: 1995 for Class A
Immunity	EN55024
Laser Products	
Europe	IEC60825-1,2
North America	CFR1040 Class 1

Variant	Video ports	Data ports	Ethernet ports	Optical ports
i4221 Single EOC	0	0	2	1
i4222 Dual EOC	0	0	2	2
<b>Other i4000 Variants - Refer to individual datasheets</b>				
i4110 Encoder	1	2	1	0
i4020 Dual Ethernet	1	2	2	0
i4021 Single Optics	1	2	2	1
i4022 Dual Optics	1	2	2	2

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