

# OCTA 4300

8-channel digital video, audio, data, CC and Fast Ethernet

## DESCRIPTION

8-Channel digital video over fiber. One complete bi-directional multimedia over a single fiber.

## FEATURES

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8-channel uncompressed 10-bit digital video

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Two CD-quality, full-duplex audio channels

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Four full-duplex data channels

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Two full-duplex contact closure channels

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One 10/100Base-TX Fast Ethernet (IEEE 802.3) interface

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No signal degradation over long distances

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Adjustment-free operation

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Compact stand-alone and rack-mount versions

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## Description

Offering a compact and versatile combination of video, audio, data, contact closures, and Ethernet, the Octa 4300 can be effectively deployed in almost any CCTV application.

The multiplexer simultaneously transmits eight camera signals and two audio, four data, and two CC signals, and one 10/100Base-TX Fast Ethernet interface over one single-mode or multimode optical fiber. Uncompressed 10-bit digitizing, oversampling, and digital filtering ensure a very high transmission performance, exceeding the requirements of the EIA RS-250C short haul specification.

The bidirectional RS-485/422 data interface supports PTZ data from all types of camera interfaces including RS-485, TTY, Manchester, Bi-phase, and SensorNet. In addition, the module offers isolated alarm contact closure channels for door contacts and anti-tamper contacts, for example. In addition to audio and data, the Octa 4300 offers a 10/100Mb/s Fast Ethernet interface with auto-negotiation, autosensing, and auto MDI/MDI-X for fast, reliable connection.

The wide operating temperature range of these units makes the Octa 4300 series well-suited for environmentally harsh applications such as traffic monitoring, video surveillance in city centers, and airport security.

Video	
Number of channels	8
Video format	NTSC, PAL
Input/output level	1 V <sub>pp</sub> (3 dB)
DC restore (clamping)	On or off (selectable)
Bandwidth (-3 dB)	6 Mhz
Sampling resolution	10-bit
Video sampling rate	27 MSamples/s, 2x oversampled
Differential gain	<2%
Differential phase	<1°
Group delay	40 ns
Signal-to-noise ratio	63 dBw
Connector type	75 BNC (gold-plated center pin)

Audio	
Number of channels	2 (full duplex)
Bandwidth	20 Hz to 20 kHz
Sampling rate	16-bit
Input/output level	0 dBV (+6 dBV maximum)
Total harmonic distortion	75 dBA
Input impedance	47 k or 600 balanced
Output impedance	47 balanced
Connector type	RJ-45

Data	
Number of channels	4 (full duplex)
Data interfaces	2x RS-232, 2x RS-422/485 (2- or 4-wire)
Interface support	Current loop, TTY, TTL, Manchester, Bi-phase
Data format	Asynchronous, serial
Data rate	
D1 (RS-422/RS-485)	DC to 256 kbit/s
D3 (RS-422/RS-485)	DC to 128 kbit/s
D2/D4 (RS-232)	DC to 115.2 kbit/s
Sampling rate	
D1	3 MSample/s
D2/D3/D4	1.5 MSample/s
Connector type	RJ-45

Contact closures	
Number of channels	2 (full duplex)
Input	+5 V pull-up 10 k
Input activation	0.75 V (250,000 hours)
Safety and EMC	IEC/EN 60950-1, IEC/EN 60825, IEC/EN 61000, EN 50130-4, EN 50081-1, EN 55022, FCC part 15

### Fast Ethernet

# Specs



## Fast Ethernet

Number of channels	1 (full duplex)
Data interface	0/100 Base-TX Fast Ethernet
Connector type	RJ-45

## Management

LED status indicators	
- DC	Power-on indicator (green)
- NV	No video on input or output (red)
- Sync	Full-duplex link (green), local (red) or remote (yellow) synchronization error
- D1/D3	RS-4xx data activity on input (red/green = 1/0)
- D2/D4	RS-232 data activity on input (green/off = 1/0)

## Environmental

Operating temperature	-40 °C to +74 °C (-40 °F to +165 °F)
Storage temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Relative humidity	250,000 hours
Safety and EMC	IEC/EN 60950-1, IEC/EN 60825, IEC/EN 61000, EN 50130-4, EN 50081-1, EN 55022, FCC part 15

## Powering

Power consumption	<12 W (2 A inrush)
Rack-mount units	MC 10 and MC 11 power supply cabinets
Stand-alone units (/SA)	11 to 15 Vdc (PSA-UN12-FC or PSR-12DC)

## Mechanical

Dimensions (h x w x d)	128 x 71 x 190 mm (5.0 x 2.8 x 7.5 in)
Weight	900 g (30.4 oz)
Housing	Rack-mount or stand-alone

## Optical

Device type	Octa 4310 TX/RX	Octa 4350 TX/RX
Fiber type	1x MM (62.5 μm)	1x SM (9 μm)
Output wavelength	1310 nm / 1550 nm	1310 nm / 1550 nm
System link budget	16 dB at 1310 nm	19 dB at 1310 nm
Link length	2 km*	20 km**
Minimum link loss	0 dB	0 dB
Output power	-4 dBm/ -8 dBm	-4 dBm/ -8 dBm
Input sensitivity	-20 dBm / -20 dBm	-23 dBm / -23 dBm
Connector type	SC	

\*Range may be limited by fiber bandwidth \*\*Range limited by return path @ 1550 nm

## Ordering information

Octa 4310 TX	8-channel digital video multiplexer, two-way audio, data, CC, and FE, 1x MM
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# Specs



Ordering information	
Octa 4310 RX	8-channel digital video demultiplexer, two-way audio, data, CC, and FE, 1x MM
Octa 4350 TX	8-channel digital video multiplexer, two-way audio, data, CC, and FE, 1x SM
Octa 4350 RX	8-channel digital video demultiplexer,two-way audio ,data, CC, and FE, 1x SM
Octa 43XX /SA	Stand-alone version of rack-mount models