Features

- Four-channel digital video multiplexer with two-way audio, data, contact closures, and Fast Ethernet
- Uncompressed 10-bit digital video
- Two CD-quality full-duplex audio channels
- Four full-duplex data channels
- Two full-duplex contact closure channels
- 1x 10/100 Base-TX Fast Ethernet (IEEE 802.3)
- No signal degradation over long distances
- Adjustment-free operation
- Compact stand-alone and rack-mount versions

Tetra 4300

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

Description

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

The multiplexer simultaneously transmits four 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 digitising, oversampling, and digital filtering ensure a very high video channel transmission performance, exceeding the requirements of the EIA RS–250C medium–haul specifications.

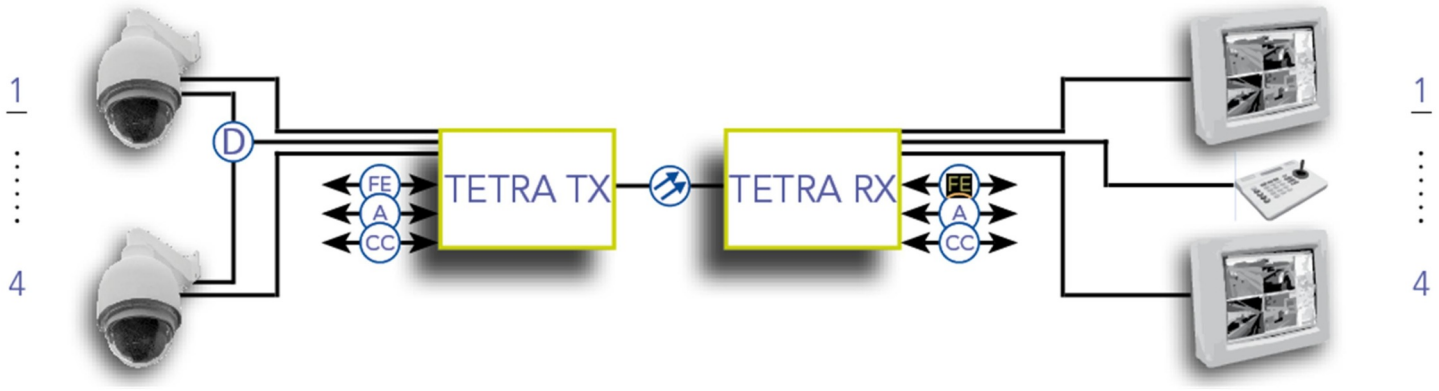
The bidirectional RS-485/422 data interfaces support PTZ data from all types of camera interfaces including RS-485, TTY, Manchester, Bi-phase, and SensorNet. In addition, the module offers isolated alarm contact closure channels for door contacts and anti-tamper contacts, for example.

In addition to audio and data, the Tetra 4300 offers a 10/100Mb/s Fast Ethernet interface with autonegotiation, autosensing, and auto MDI/MDI-X for fast, reliable connection.

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

The Tetra 4300 comes as a twin Eurocard cassette, suitable for an MC 10 or MC 11 power supply cabinet or as a stand-alone unit (/SA). LED indicators provide an instant overview of the system status, including power, datachannel activity, and system faults.

Technical Specifications
Tetra 4300



Video	
Number of channels	4
Video format	NTSC, PAL
Input/output level	1 Vpp (±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 Ω 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	<0.25% at nominal level
Signal-to-noise ratio	>75 dBA
Input impedance	47 kΩ or 600 Ω balanced
Output impedance	47 Ω balanced
Connector type	RJ-45

Technical Specifications
Tetra 4300

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 kΩ
Input activation	0.75 V (<1.5 kΩ to ground)
Output	Fail-safe, potential-free
Switch rating	1 A at 30 Vdc
Connector type	RJ-45

Fast Ethernet	
Number of channels	1 (full duplex)
Data interface	10/100 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) synchronisation 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	<95% with no condensation
MTBF (mean time between failures)	>100,000 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

Technical Specifications
Tetra 4300

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-UN12DC 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

	Tetra 4310 TX/RX	**Tetra 4350** TX/RX	**Tetra 4350** TX/RX ED
Fiber type	1x MM (62.5 µm)	1x SM (9 µm)	1x SM (9 µm)
Output wavelength	1310 nm / 1550 nm	1310 nm / 1550 nm	1310 nm / 1550 nm
System link budget	18 dB at 1310 nm	19 dB at 1310 nm	19 dB at 1310 nm
Link length	2 km*	20km**	40 km***
Minimum link loss	0 dB	0 dB	0 dB
Output power	>-4 dBm / >-8 dBm	>-4 dBm / >-8 dBm	>-4 dBm / >-8 dBm
Input sensitivity	-20 dBm / -22 dBm	-23 dBm / -23 dBm	-23 dBm / -23 dBm
Connector type	SC	SC (others optional)	SC (others optional)

*Range may be limited by fiber bandwidth
**Range limited by return path @ 1550 nm
***RX ED 1550 nm dfb laser

Ordering information

Models	**Description**	**Fiber type**
Tetra 4310 TX	4-channel digital video multiplexer, two-way audio, data, CC, and FE	1x MM
Tetra 4310 RX	4-channel digital video demultiplexer, two-way audio, data, CC, and FE	1x MM
Tetra 4350 TX	4-channel digital video multiplexer, two-way audio, data, CC, and FE	1x SM
Tetra 4350 RX	4-channel digital video demultiplexer, two-way audio, data, CC, and FE	1x SM
Tetra 4350 RX/ED	4-channel digital video demultiplexer, two-way audio, data, CC, and FE, extended distance	1x SM
Tetra 43XX /SA	Stand-alone version of rack-mount models	

The quality management system used in the development, production, sales, and support of this product is ISO 9001:2008 certified by LRQA.

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