

TETRA 5300

Features

- 4-channel digital video multiplexer with two-way audio and data
- Uncompressed 10-bit video (SNR >67 dBw)
- 5x high-speed full-duplex data
- 2x CD-quality audio
- No signal degradation over long distances
- Adjustment-free operation
- Compact rack-mount or stand-alone
- SNM™ compatible



10-bit

Description

Compactness and functionality are combined in TETRA 5300 transceivers, capable of simultaneous transmission of four camera signals in one direction, while also handling five full-duplex streams of high-speed data along with two audio and contact closure signals, all over one optical fiber. Due to the 10-bit digitizing and a very high sample rate, high-quality and superbly stable video signals can be sent over very long distances without degradation.

CD-quality audio and contact closure transmission are both fully duplex. The highly configurable data interfaces are suitable for RS-232/422/485, TTY, Manchester and biphase, and provide compatibility with all CCTV equipment.

Occupying a minimum of space, TETRA 5300 transceivers are ideal for video transmission from sites with multiple cameras under remote control. They will operate within a broad temperature range and are therefore suitable for outdoor applications.

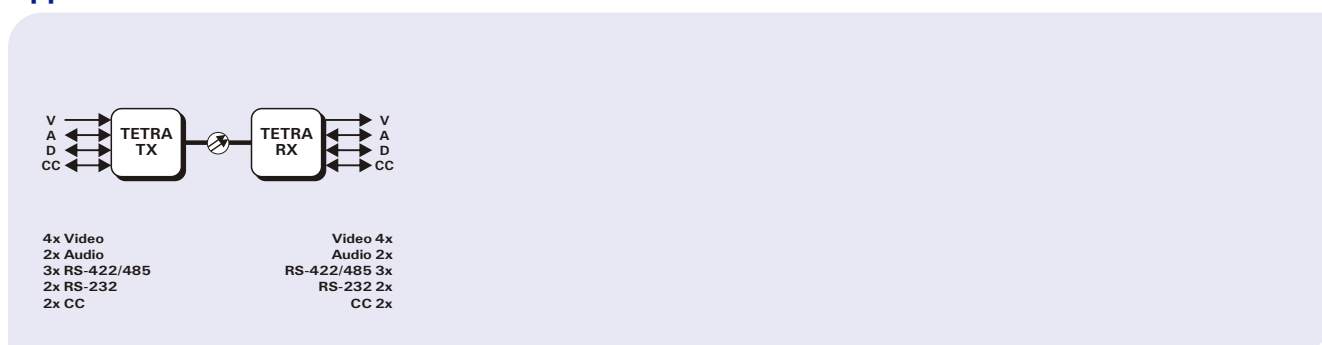
Each TETRA 5300 unit comes as a twin Eurocard module to be slotted into an Optelecom-NKF MC 11 power supply cabinet, or as a stand-alone unit (/SA version). All TETRA 5300 equipment is SNM™ compatible.

Ordering information

Model	Description	Fiber type	Wavelength(s)	Budget	Housing	Managed
TETRA 5310 TX TETRA 5310 RX	4-ch. digital video multiplexer, 2-way audio and data 4-ch. digital video demux, 2-way audio and data	MM	1300/850 nm	13 dB ¹	rack-mount	SNM
TETRA 5350 TX TETRA 5350 RX	4-ch. digital video multiplexer, 2-way audio and data 4-ch. digital video demux, 2-way audio and data	SM	1310/1550 nm	22 dB	rack-mount	SNM
TETRA 5350 TX /HP TETRA 53xx /SA	High-power 4-ch. video mux, 2-way audio and data Stand-alone versions of rack-mount models	SM	1310/1550 nm	26 dB	rack-mount stand-alone	SNM SNM

¹): Due to fiber bandwidth, the maximum transmission distance may be limited to 4 km. For 50/125 μ fiber subtract 4 dB.

Applications



Technical Specifications

Video

Number of channels	4
Video format	PAL/SECAM/NTSC
In-/output level	1 Vpp (± 3 dB)
DC restore (clamping)	On or off (selectable)
Bandwidth (-3 dB)	7.5 MHz
Sampling resolution	10-bit
Sampling rate	18 Msamples/s
Differential gain	< 1%
Differential phase	< 1°
Group delay	< 50 ns
SNR	> 67 dB (weighted)
Connector type	BNC 75 Ω (gold-plated centerpin)

Audio

Number of channels	2 (full-duplex)
Bandwidth	20 Hz to 20 kHz
Sampling resolution	16-bit
In-/output level	0 dBV (+6 dBV max)
Total harmonic distortion	< 0.25% at nominal level
SNR	> 75 dBA
Input impedance	> 50 k Ω or 600 Ω bal.
Output impedance	< 50 Ω bal.
Connector type	RJ45

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 16 Vdc (PSA 12 DC/25 or PSR 12 DC)

Management

LED status indicators	
DC	Power-on indicator (green)
NV	No video on in- or output (red)
SYNC	Full duplex link (green), local (red) or remote synchronization error (yellow)
D1, D3	RS-4xx data activity on input (red/green = 1/0)
D2, D4	RS-232 data activity on input (green/off = 1/0)
Network Management	SNM™ compatible
SNM™ variables	PS Voltages, module temperature, module status, optical levels, configuration, etc.

Environmental

Operating temperature	-40 to +74 °C
Relative humidity	< 95% (no condensation)
MTBF	> 100,000 h
Safety & EMC	IEC/EN 60950-1, IEC/EN 60825, IEC/EN 61000, EN 50130-4, EN 50081-1, EN 55022, FCC part 15

Data

Number of channels	5 (full-duplex)
Data interface	2x RS-232 3x RS-422/485 (2- or 4-wire)
Interface support	Current loop / TTY / TTL / Manchester/Bi-phase
Data format	Asynchronous, serial
Data rate	D1 to D4 DC to 64 kb/s D5 DC to 128 kbit/s
Sampling rate	D1 to D4 512 Ksamples/s D5 1.5 Msamples/s
Connector type	D1 to D4 RJ45 D5 5-p screw terminal

Contact Closure

Number of channels	2 (full-duplex)
Input	+5 V pull-up, 10 k Ω
Threshold	0.75 V
Output	Fail-safe, potential-free
Switch rating	2 A at 30 Vdc
Connector type	RJ45

Mechanical

Dimensions (h \times w \times d)	128 x 71 x 190 mm
Weight (approx.)	900 g
Housing	Rack-mount or stand-alone

Optical	TETRA 5310		TETRA 5350		TETRA 5350	
	TX	RX	TX	RX	TX/HP	RX
Fibre type	1x MM		1x SM		1x SM	
System budget	13 dB ¹ @ 850 nm		22 dB @ 1310 nm		26 dB @ 1310 nm	
Min. link loss	0 dB		0 dB		4 dB @ 1310 nm	
Output power	> -8 dBm	> -20 dBm ¹	> -3 dBm	> -7 dBm	> 2 dBm	> -7 dBm
Output wavelength	1300 nm	850 nm	1310 nm	1550 nm	1310 nm	1550 nm
Input sensitivity	< -33 dBm	< -15 dBm	< -27 dBm	< -24 dBm	< -27 dBm	< -24 dBm
Connector type	ST		FC (others optional)		FC (others optional)	

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