

## VAD 5200

### Features

- Video with two-way audio and data over one fiber
- Uncompressed 10-bit video (SNR >67 dBw)
- High-speed, full-duplex data
- CD-quality audio
- Adjustment-free installation and operation
- Rack-mount and stand-alone
- SNM™ compatible

### Description

The remarkably versatile VAD 5200 series transceivers digitize and transmit one video signal while simultaneously handling one full-duplex data/audio channel over one single-mode optical fibre.

Due to the advanced 10-bit A/D conversion techniques used, a high-quality and superbly stable video signal can be sent over very long distances without degradation. Audio is fully duplex and of CD quality. The high-speed data channel is fully


**10-bit**

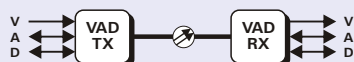
transparent and suitable for RS-232/422/485, TTY, Manchester and biphase signals. The data interfacing is adaptable for compatibility with all CCTV equipment.

VAD transceivers are designed to be slotted into MC 11 power-supply cabinets, but can also be supplied as stand-alone units (/SA versions). For longer links, a high-power version (/HP) of the VAD 5250 TX is available. All VAD 5200 equipment is SNM™ compatible.

### Ordering information

Model	Description	Fiber type	Wavelength(s)	Budget	Housing	Managed
VAD 5250 TX VAD 5250 RX	Digital video transmitter, 2-way audio/data Digital video receiver, audio/data transceiver	SM	1310/1550 nm	21 dB	rack-mount	SNM
VAD 5250 TX /HP VAD 52xx /SA	High-power video transmitter, 2-way audio/data Stand-alone versions of rack-mount models	SM	1310/1550 nm	27 dB	rack-mount stand-alone	SNM SNM

### Applications



1x Video  
1x Audio  
1x RS-422/485

or RS-232

Video 1x  
Audio 1x  
RS-422/485 1x

or RS-232

## Technical Specifications

### Video

Number of channels	1
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 W (gold-plated centerpin)

### Audio

Number of channels	1 (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 kW or 600 W bal.
Output impedance	< 50 W bal.
Connector type	RJ45

### Data

Number of channels	1 (full-duplex)
Data interface	1x RS-232 or 1x RS-422/485 (4- or 2-wire)
Interface support	Current loop / TTL / TTY / Manchester / Bi-phase
Data format	Asynchronous, serial
Data rate	DC to 128 kbit/s
Sampling rate	1.5 Msamples/sec
Connector type	RJ45

### Powering

Power consumption	< 5 W (1 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	RS-4xx data activity on input (red/green = 1/0)
D2	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

### Mechanical

Dimensions (hwxwd)	128 x 35 x 190 mm
Weight (approximately)	450 g
Housing	Rack-mount or stand-alone

Optical	VAD 5250		VAD 5250		
	TX	RX	TX/HP	RX	
Fibre type	SM		SM		
System budget	21 dB @ 1310 nm		27 dB @ 1310 nm		
Min. link loss	0 dB		6 dB @ 1310 nm		
Output power	> -4 dBm	> -11 dBm	> 2 dBm	> -11 dBm	
Output wavelength	1310 nm	1550 nm	1310 nm	1550 nm	
Input sensitivity	< -35 dBm	< -25 dBm	< -35 dBm	< -25 dBm	
Connector type	FC (others optional)		FC (others optional)		

