RGB-4500
Single Fiber Hi-Res Video, Duplex Audio & RS-232 Duplex Data

One Channel, 160MHz Monochrome and Full Duplex Audio & RS-232 Data System for Ultra Hi-Resolution Remote Displays over One Fiber

The RGB-4500 is an Amplitude Modulated (AM), Laser-based monochrome-compatible Video transmission system with Sync accepted on green, with one channel Full Duplex Audio and RS-232 Full Duplex Async Data. All signals are CWDM over one singlemode fiber.

It is ideal for the extension of a high resolution radar Video signal with intercomm Audio and Async Data operation graphics workstation. Units come with a built-in Automatic Gain Control (AGC) to maintain constant Video, Audio and Data output, and a status indicator for Power On.

System Design

All units come in a 19" rack mount 1RU housing, which consists of a Video card and Audio & Data cards, all assembled in a 1RU unit, allowing for greater flexibility and future expansion. The unit can be rack mounted (RM) with the ear flanges provided (option: unit can sit on a flat surface as a standalone (SA) unit with no ears). Each unit operates with an appropriate internal power supply. The regulated switching power supply has short circuit protection, and an input operating voltage of 85-265 V_{AC}.

Features

- Ultra high-resolution (1792 x 1536)
- Single-mode CWDM operation over one fiber
- 160 MHz video bandwidth
- Ideal for radar applications
- True DC restoration
- Flat frequency Response
- Complies with RS-170, RS-170A & 343 EIA standards
- No EMI or RFI and no ground loops
- 19" 1RU rack-mountable (Optional 17" Standalone)
- Ideal for graphics workstation extensions

1510 CWDM	1530 CWDM	1550 CWDM	Type	Mode	Wavelength Suffix	Fiber Type	Output Power	Receiver Sensitivity	Optical Loss Budget	Range*	Conn Type
•	•	•	Laser	SM	L4	09/125µ	-8 dBm	-20 dBm	12 dB	5 km	FC

* Chromatic dispersion and additional losses should be taken into account

Video

Video in/out impedance	75 Ω
Video in/out level	1 volt peak to peak, 0.7 volts without sync
Video bandwidth	10 Hz to 160 MHz @ -3dB
Grayscale linearity distortion	< 2.0 % typical
Pixel intensity distortion	< 2.0° typical
Linearity	± 1.1 % typical
Tilt	≤ 0.5 % typical
Maximum horizontal frequency	128 KHz
Maximum refresh rate	120 KHz
Signal to noise ratio	>52 dB using RS-250C standards @ 1 km
Connector type	BNC

Audio

Channels	1 Duplex Audio @ 24 bits
Audio in/out impedance	600Ω or 47kΩ - balanced or unbalanced
Audio in/out level	-6 to +6 dBm
Frequency response	10 Hz to 20 KHz @ -3dB
Signal to noise ratio	> 90 dB @ 1 kHz (weighted)
Total harmonic distortion	< 1.0 %, 1 KHz at maximum modulation
Connector type	MIcro DB25

Data

RS-232	DC-1 Mbps Pin Male
Connector type	MIcro DB25

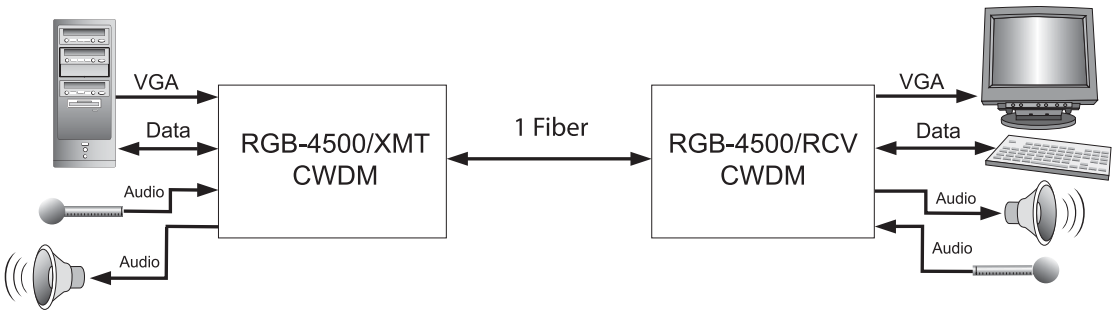
General

Dimensions	1RU Rack Mount (RM): 19" L X 7.25" W X 1.75" H (Optional: Standalone (SA): 17" L X 7.25" W X 1.75" H)
Material	Aluminum casing
Operating temperature	-20° C to +70° C
Storage temperature	-30° C to +85° C
Humidity	0 to 95% non-condensing
Operating voltage	85-265 VAC50/60 Hz @ 100 mA

Diagnostics

Status monitoring	LED indication

Sample Configuration



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CE

FCC PART 15 COMPLIANT

Emissions: FCC Part 15, ICES-003, AS/NZS, 3548, EN55022
Immunity: ENVS0204, EN61000-4-2,3,4,5,6,11
Safety: UL1950, CAN/CSA 22.2, NO.950-95

MADE IN THE USA