

VORTEX™ Open Frame Module

VFR-500 Series

DTC's Vortex Open Frame series of video receivers was designed specifically for users who want to embed a video receiver into another device, such as a concealment or briefcase system. Applications include covert surveillance, Airborne Law Enforcement (ALE), Unmanned Aerial Vehicle (UAV) downlinks, Unmanned Ground Vehicle (UGV) and robot Operator Control Units (OCU's).

The Vortex Open Frame series is a board level receiver, without the weight and cost of a rugged aluminum enclosure. Connections to the unit have been simplified, with all connections except the RF connector utilizing a locking, miniature MTA connector strip. The RF connector remains a standard SMA connector.

The Vortex series offer superior video performance and complete user programmability. Up to ten user programmable video frequencies may be selected. Each video frequency has two user programmable audio subcarriers as well.

Two video outputs are provided, one composite and one video only. The composite video output is ideal for retransmission, as the audio subcarriers are embedded in the signal. The video only output is typically connected to either a local monitor and/or recording device. Two audio outputs are provided.

Features

- ▲ Open Frame board level design reduces size, weight and cost
- ▲ Current consumption of only 260 mA @ 12 VDC
- ▲ Locking MTA connectors
- ▲ Ten user programmable video channels and two audio subcarriers per channel
- ▲ Audio subcarriers may be used to receive data
- ▲ RSSI available as analog voltage or discrete value

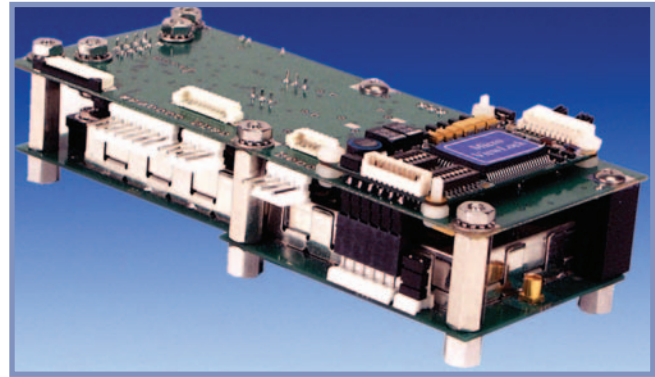
Models

- ▲ VFR-500-L 1700-1850 MHz
- ▲ VFR-500-S2 2200-2300 MHz
- ▲ VFR-500-S 2400-2500 MHz

Contact your DTC sales representative for other frequency bands which are not listed here

Add "ENC" to any of the above model numbers for Video Encryption

Add "ENC-AV" for Audio & Video Encryption



VORTEX mounted to board stack

Specifications

RF

Operating Frequency Range	1700 – 1850 MHz 2200 – 2300 MHz 2400 – 2500 MHz
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Number of Channels	10 max. (user-programmable)
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Input Impedance	50 ohms
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Video 1

Video Frequency Response	6 Hz – 4.5 MHz ±1 dB
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Output Impedance	75 ohms
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Video 2

Video Frequency Response	6 Hz – 7.5 MHz ±1 dB
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Output Impedance	75 ohms
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Audio

Number of Subcarriers	2 per video channel
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Subcarrier Frequencies	6 – 7.5 MHz (user-programmable)
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Tuning Step Size	10 KHz
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Power

Input Voltage	9 – 16 VDC
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Input Current	400 mA max. 450 mA max. (w/descramble enabled)
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Connectors

Video	4-pin MTA
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Audio	4-pin MTA
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Programming	4-pin MTA
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Indicators

RSSI	Five-section LED; Part of membrane assembly; Indicates RF received signal strength
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Video Descrambler Clear/Scramble LED	Part of membrane assembly; Indicates status of descrambler module
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Encryption

Descrambling of Encrypted Video	Ovation Systems Micro Viewlock II (optional)
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Environment

Operating Temperature Range	-20° to +60° C ambient
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Mechanical

Dimensions	5.0" W x 2.16" D x 1.22" H
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Weight	.4 lb max
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Mounting Provisions	4-40 UNC female standoffs (6X)
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