



M I C R O T U N E®

RF SILICON AND SUBSYSTEMS SOLUTIONS
FOR BROADBAND COMMUNICATIONS AND AUTOMOTIVE ELECTRONICS

MT5001 VIDEOCASTER™

PRODUCT BRIEF

The MT5001 VideoCaster is a four-channel Video on Demand upconverter designed to reduce space, power and cost.



MT5001 VideoCaster Module

The MT5001 VideoCaster™ subsystem is a high quality frequency agile upconverter designed specifically for video on demand systems. The RF subsystem converts a QAM modulated signal centered at an intermediate frequency of 36.125 MHz or 44.00 MHz to any frequency between 50 MHz and 860 MHz at a user selectable output level between 50 dBmV and 61 dBmV. Based on a proprietary Microtune chipset, the module provides the highest upconverter density in the market packing four independent upconverters into a 98.1mm x 88.4mm x 14.1mm module. The MT5001 VideoCaster also features the lowest available power dissipation at 6.5W per channel.

APPLICATIONS

- Video on demand (VOD)

FEATURES

- Smallest upconverter available
- Lowest power per channel upconverter available
- Lowest cost per channel upconverter available
- Operates with 36.125 MHz or 44.00 MHz IF inputs
- Meets requirements for interactive video on demand applications
- Fully programmable via 2-wire serial interface
- When integrated into headend equipment eliminates the need for separate racks of upconverters
- 50 MHz to 860 MHz output programmable in 12.5 kHz steps
- Output power adjustable from 50 dBmV to 61 dBmV in 0.1 dB steps
- Built-in power detectors allow independent monitoring of each output level
- Built-in fault detection ensures robust system operation

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OPERATING CHARACTERISTICS

PARAMETER	MIN	TYP	MAX	UNIT
Power supply voltage	5.8	6	6.2	V
Power from supply		26		W
Ambient operating temperature	0		50	°C
Airflow over module	150	200		LFPM
ESD protection, human body model	2000			V
2-wire serial bus input voltage			3.3	V

ABSOLUTE MAXIMUM RATINGS

PARAMETER	MIN	TYP	MAX	UNIT
Supply voltage			7	V
Storage temperature range	-40		+70	°C

SPECIFICATIONS

PARAMETER	MIN	TYP	MAX	UNIT
Input frequency		44.00		MHz
Alternate input frequency		36.125		MHz
Input impedance		75		Ω
Output frequency	50		860	MHz
Output impedance		75		Ω
Output level	50		61	dBmV
Frequency step size	12.5			kHz

MECHANICAL CHARACTERISTICS

CHARACTERISTIC	DESCRIPTION
Dimensions	114.5 x 105.9 x 14.1 mm
Weight	200g
Connector 20-pin pinheader	Samtec ASP31714-04
Suggested receptacle for 20-pin pinheader	Samtec SMM-110-01-S-D-P-TR (20-pin)
Connector 4-pin pinheader	Samtec ASP31714-03
Suggested receptacle for 4-pin pinheader	Samtec SMM-102-01-S-D-P-TR (4-pin)
F-connector mechanical specification	The F-connector is according IPS-SP-406 and IEC 169-24



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