DCTGSB

Downconverter Tri-Gain Selectable Broadcast

Overview:

DTC's Downconverter Tri-Gain Selectable product has been designed for use with DTC Broadcast receivers and is also suitable for third-party systems.

Designed to handle diverse operational scenarios, the downconverter has three switchable gain modes: low, middle and high; at the press of a button. A panel-mounted tri-colour LED switch simplifies gain and local oscillator (LO) mode control and identification.

Wider bandwidth variants now cover an extended spectrum of frequencies, thanks to the inclusion of LO selectivity, while maintaining exceptional rejection of image frequencies.

Downconverters are connected directly to the receive antenna or filter, if being used, and are designed for permanent outdoor deployment offering versatile attachment options such as cable ties and screw-hole fixings for maximum flexibility. Power is drawn from the connected receiver and operates within a voltage range of 9-24VDC.

Features and Benefits:

- Gain selectable options: low, mid and high
- Longer cable runs can now be achieved with increased high gain mode
- Small, lightweight design and fully protected to IP67
- Tri-colour LED switch offering easy control of gain and LO modes
- Switchable LO frequencies on wideband variants offering superior image frequency rejection
- Bracket included to facilitate straightforward rail and pole mounting

Product Information:

Product Codes

DCTGSB-100150	1.00-1.50GHz, LO: 1800MHz (300-800MHz IF)
DCTGSB-200290	2.00-2.45GHz, LO1: 1750MHz (250-700MHz IF) 2.45-2.90GHz, LO2: 2050MHz (400-850MHz IF)
*DCTGSB-550600	5.50-6.00GHz, LO: 5200MHz (300-800MHz IF)
*DCTGSB-680750	6.80-7.15GHz, LO1: 6300MHz (500-850MHz IF) 7.15-7.50GHz, LO2: 6650MHz (500-850MHz IF)

* Future development

Product Includes

MW4513	Downconverter bracket

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Technical Specification:

IO

RF input 50Ω	N-type (f)
IF output 75Ω	BNC (f)

RF

RF input power before damage (max)	35mW (+15dBm)
P1db input for normal operation (max)	-10dBm low gain -15dBm mid gain -25dBm high gain
IF output	150-850MHz (dependent on frequency band)
Gain, typical	10dB low gain 25dB mid gain 40dB high gain
Noise figure	3dB approx.
Phase noise @ 1750MHz LO	-91dBc/Hz @ 1kHz -96dBc/Hz @ 10kHz -109dBc/Hz @ 100kHz
LO frequency stability	±1.0ppm
LO frequency stability (aging)	±1.0ppm/year
Image rejection	> 60dBc

Power

Power input	9VDC from the receiver - 24VDC max
Power consumption	< 3W

Physical

Dimensions (incl. connectors)	140mm x 50mm x 27mm
Weight	260g approx.
Enclosure colour	Black anodised

Environment

Sealing	IP67

Controls/Indicators

Panel mount LED indicator	Low gain green Mid gain white High gain red LO1 solid, LO2 flash (if applicable) Disable LED option
Panel mount LED switch	Gain and LO select

Cable

RG59	48-82m (max typical)
RG6	82-133m (max typical)
LMR400-75	127-233m (max typical)
LDF4-75	227-387m (max typical)

Note: The maximum length of cable depends on the RX frequency, as this dictates the down converted UHF frequency which the cable has to carry. The theoretical cable lengths show best and worst case, dependent on the frequency used.

Export of encrypted products is subject to regulatory export controls.

For further information contact your Sales Account Manager, one of our Regional Sales Offices, or email solent.info@domotactical.com

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