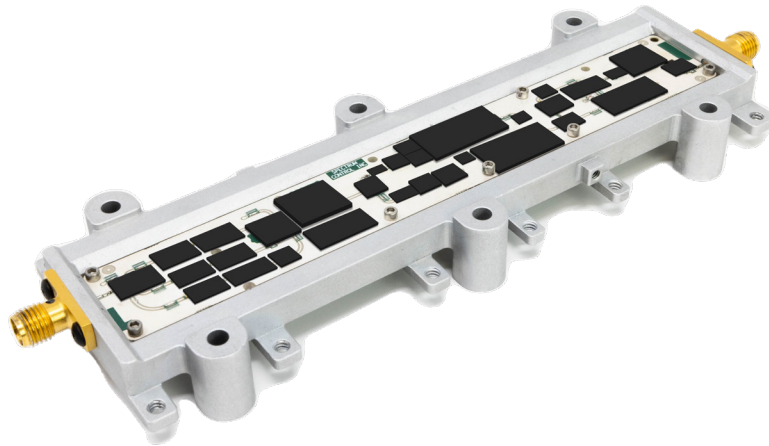


RF Up & Down Converter

We've solved the SWaP-C challenge with no compromises.



Description:

This high-performance 2-18GHz RF up/down converter has been designed for easy integration into systems that need high signal fidelity with full spectrum coverage, small size, and low power. Targeted applications include Electronic Warfare, SIGINT & Intelligence Surveillance and Reconnaissance.

Integral digital control and flexible tuning features with minimal interconnect make this module an excellent fit for your mission while saving valuable engineering time. The on-board digital gateway has a simple 4-wire interface for command and control.

We achieved breakthrough miniaturization using a novel design and state-of-the-art SMT packaging. The board measures only 130 by 20 mm and draws only 10 watts!

It can be supplied in a metal enclosure with coaxial connections, providing high isolation, or as a circuit board with edge connectors, depending on the application. It is also an integral part of the SCi Blocks 3U OpenVPX 8-channel Tuner Transceiver module.

Features:

- SMT manufacturing techniques
- Integrated digital gateway for command/ control with health/temperature monitoring
- High isolation metal enclosure available
- Integrated LO generation for independent tuning capability
- Can be tuned coherently for DF (direction finding) applications
- IF calibration for optimum spectral performance

Up Converter Specifications

Description	Specs	Units
RF Range	0.02 - 18	GHz
Gain	20	dB
Noise Figure	17 - 22	dB
OP1dB	13 - 16	dBm
OIP3	23.5 - 28	dBm
Input Attenuation (.5dB steps)	31	dB
Output Attenuation (.5dB steps)	31	dB
Single Tone Spurious (SFDR)	-55	dBc
IF Input Center Frequency (IFc)	3.75, 4 or 4.25	GHz
IF input bandwidth (IBW)	3.25 – 5.25 (2)	GHz
IF Band Flatness	+/- 2	dB
Tuning Speed	25	µsecs
Tuning Resolution	10	MHz
Internal Reference	100	MHz
External Reference	10, 20, 25, 33.3333, 50, 100	MHz
Voltage to Standing Wave Ratio (VSWR)	2:1 typical	RMS
Voltage	12 and 3.3	VDC
Power Consumption	8	W
Temperature range	-40 to 85C	C
Size	0.735 x 5 x 0.375	inches

Do you like this solution?
Please contact Heynen for distribution in BENELUX.



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Down Converter Specifications

Description	Specs	Units
RF Range	0.02 - 18	GHz
RF Tune (Converted Range)	2 - 17	GHz
Instantaneous Bandwidth (IBW)	2	GHz
IF output Frequency	3.75, 4 or 4.25	GHz
Conversion Bypass	0.2-2.5	GHz
Gain	25	dB
Gain Flatness	+/-1	dB
Noise Figure	14-17	dB
OP1dB	13	dBm
OIP3	25	dBm
Image Rejection	70	dB
IF Rejection	70	dB
BW Flatness (1.5dB)	80	%
BW Flatness (3.0dB)	100	%
Internally Generated Spurious	80	dB
Single Tone Spurious	60	dBc
Input Gain Control	31.5	dB
Input Gain Control Step Size	0.5	dB
Output Gain Control	31.5	dB
Output Gain Control Step Size	0.5	dB
Integrated Phase Noise	0.5	RMS
Tuning Step Size	10	MHz
Internal Reference	100	MHz
External Reference Input	10,20,25,33.3333,50,100	MHz
Tuning Speed	25	microSec
Voltage	12 and 3.3	VDC
Power Consumption	8	W
Temperature range	-40 to 85C	C
Size	0.735 x 5 x 0.375	inches
Phase Noise - 1kHz Offset	-90	dBc/Hz
Phase Noise - 10kHz Offset	-95	dBc/Hz
Phase Noise - 100kHz Offset	-100	dBc/Hz
Phase Noise - 1MHz Offset	-115	dBc/Hz
Phase Noise - 10MHz Offset	-130	dBc/Hz
RF Power Input	20	dBm
LO Leakage	-90	dBm
Gain control (attenuation range)	50dB (.5dB steps)	

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Spectrum Control reserves the right to make changes to datasheets at any time without notice.