



## Catalyst-40 40 GHz Downconverter

Elevate Your Legacy Instruments to mmWave



Catalyst-40 is setting new standards when handling mmWave signals either for measurement purposes or communications/reception applications.

The instrument employs state-of-the-art mmWave electronics to deliver exceptional RF performance. And the built-in local oscillator brings maximum simplicity to the user setup without extra external devices; just connect the measured signal to the device RF input while connecting the IF output to your low-GHz spectrum analyzer, scanner or receiver.

The compact downconverter is ideal for field applications as well as several laboratory use-cases since the unit can be controlled via its windows application or optionally through a built-in Keypad and LCD. Additionally, for some scenarios that require using the device with one of Consultix receivers, the Catalyst-40 can be controlled from Consultix Walkview software as a single point of control/collection.

### Performance

- 8 dB Noise figure
- -10 dBm P1dB (typ.)
- 100 MHz Real-time Bandwidth
- 4-6 dB Conversion Gain

### Convenience

- Built-in LO for minimal user setup
- Ergonomic Form Factor
- 2.6 Kg weight (5.8 lbs.)
- High-grade test accessories





<b>Specifications</b>	
<b>Frequency Parameters</b>	
Input Frequency Range	24 to 40 GHz
IF Output Frequency	2.4 GHz
Real-time Bandwidth	100 MHz
Tuning step	1 MHz (for RF center frequency)
<b>Internal LO</b>	
Frequency Accuracy	0.3 ppm
Frequency reference aging	1 ppm
<b>Amplitude Parameters</b>	
Conversion gain	4-6 dB (conversion table included)
Maximum Safe RF input	0 dBm
Noise Figure	6 dB (typ. 8 dB)
IP3	0 dBm
P1dB	-14 dBm (typ. -10 dBm)
Residual Spurious (LO leakage to RF)	< -65 dBm (typ.)
Residual Spurious (LO leakage to IF)	< -55 dBm (typ.)
RF input VSWR	2:1
<b>Power</b>	
Power Supply	Input: 100-240 VAC, 50-60 Hz / Output: 12 VDC, 2A
Power consumption	10 W
DC input	Power Jack 2.1 mm ID 5.5 mm OD
<b>General</b>	
Control	Catalyst app for Windows (standard). Optional through Consultix Walkview SW or device Keypad/LCD
Control interface	USB
RF in port	K-type female (2.92 mm)
IF out port	N-type female
10 MHz Ref. in	BNC female
10 MHz Ref. out	BNC Female
Operating Temperature	0 to 40 °C (32 to 104 °F)
Size	(H) 110 mm, (W) 260 mm, (D) 280 mm
Weight	2.6 Kg (5.8 lbs)
Standard Package	Catalyst-40 downconverter, USB cable, AC/DC adapter, User Guide and Calibration Certificate

<b>Ordering Information</b>	
Compact mmWave downconverter; 24-40 GHz conversion to 2.4 GHz	Catalyst-40
Omni-directional antenna; 24 to 40 GHz, Max. gain 3 dBi. Connector 2.92mm K(F). Incl. mounting plate.	C5G-Acc-OA34
Precision RF cable; 3ft (91 cm), 40 GHz, 2.9mm male to 2.9mm male. Attenuation; 2.5 dB @ 30 GHz and 2.96 dB @ 40 GHz.	C5G-Acc-C29

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