



## iDC-3743

### 37-40/40-43 GHz Block Downconverter

#### FEATURES

- **Switch Selectable RF Input**
- **2 channel (Horizontal/Vertical)**
- **IF Output 1GHz-4GHz**
- **Low Noise Figure (<3dB typ.)**
- **Modular, Low SWAP**

#### APPLICATIONS

- **SATCOM**
- **SIGINT**
- **Cross Polarization Reception**

#### DESCRIPTION

The banded block downconverter covers 37-40GHz and 40-43GHz vertical and horizontal polarizations. The low SWAP allows for mounting directly to the antenna feed. These downconverters provide extremely low noise figure and phase noise to receive and ultimately process high order digital modulation waveforms. Two or more downconverters are capable of being synchronized via an external 10MHz reference.

Intelligent RF Solutions is committed to supporting the SATCOM and SIGINT mission. The iDC-3743 is just one in a family of banded cross pole downconverters.

## SPECIFICATIONS AT 25° C

### RF Input

#### Frequency Range (switch selectable)

37GHz-40GHz  
40GHz-43GHz

#### VSWR

2.5:1 into 50 ohms

#### IIP3

-14dBm

#### Noise Figure

<3.5dB typ.

#### LO Radiation

<-50dBm

### IF Output

#### Frequency Range

1GHz-4GHz

#### VSWR

2.5:1 into 50 ohms

#### Gain

20dB  $\pm$  3dB

### 10MHz Reference

#### External Power Level

0dBm  $\pm$ 3dB

#### Internal Accuracy

$\pm$ 10 PPM

### Integrated Phase Noise

#### (300Hz to 30MHz)

0.20° rms to 0.45° (Frequency Dependent)

### Size

#### Diameter

6.5" (16.5 cm)

#### Height

4" (10.16 cm)

### Power

#### Voltage

15V

#### Wattage

<15W

### Operating Temperature

-10°C to +70°C

## BLOCK DIAGRAM

