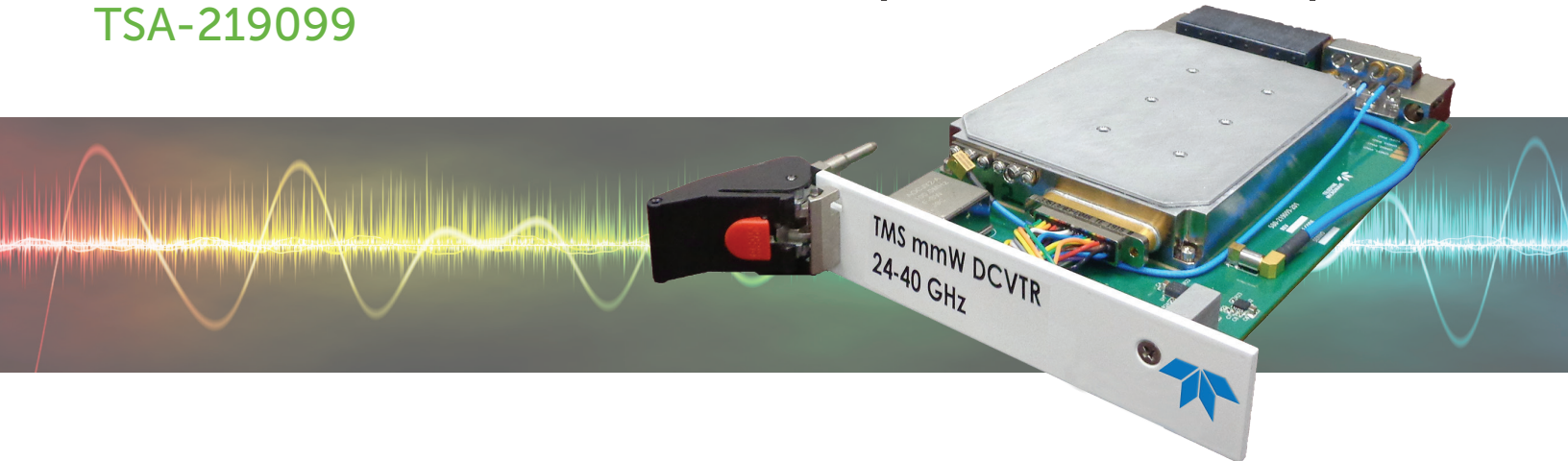


# 3U VPX Downconverter (24 to 40 GHz)

## TSA-219099



## Expand your system spectrum coverage with a single slot 3U converter from Teledyne Microwave Solutions

Covering a broad frequency range of 24-40 GHz, Teledyne Microwave Solutions 3U VPX Downconverter is ideally suited for airborne, shipboard and radar applications. This ruggedized unit offers excellent phase noise in a compact form factor. It offers long operational life and enhanced interoperability using a flexible open systems compliant architecture.

- Rugged & Compact
- Open Systems Compliant
- Excellent Phase Noise
- High Dynamic Range
- Built-in LO Generation

### High Dynamic Range

RF Coverage: 24-40 GHz, 16 GHz IBW  
Noise Figure: 9 dB typical  
Phase Noise: 1 MHz @ -120 dBc/Hz  
Linear Dynamic Range: 90 dB (with 1 MHz BW)

### Built-in LO Generation

Single-tone, internally generated spurious:  
-80 dBc (@ -15 dBm input and max gain)  
Reference Frequency Input: 100 MHz

### Weight

<500 g rugged air-cooled



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### SPECIFICATIONS

| Parameter                                | Value  |
|--|--|
| Format/Size                              | 3U OpenVPX, single slot                      |
| Power                                    | 24 W Maximum                                 |
| Control interface                        | RS-422<br>(consult factory for more options) |
| Weight                                   | <500 g (rugged air-cooled)                   |
| Commercial and rugged air-cooled options |  |

#### Down Converter Specifications

|  |                          |
|--|--------------------------|
| RF input coverage                          | 24 GHz to 40 GHz         |
| Noise figure                               | 9 dB typical             |
| Gain                                       | (typical RF to IF) 20 dB |
| Max RF input (without damage)              | 20 dBm                   |
| OP1dB (with max gain)                      | 8 dBm                    |
| OIP3 (with max gain)                       | 21 dBm                   |
| Attenuation                                | 30 dB in 0.5 dB steps    |
| Linear dynamic range                       | 90 dB (with 1 MHz BW)    |
| Single-tone, signal related spurious       | -45 dBc (@-15 dBm Input) |
| Single-tone, internally generated spurious | -80 dBc (@-15 dBm Input) |
| IF output frequency                        | 2 to 18 GHz              |
| IF bandwidth                               | 16 GHz                   |
| IF band flatness                           | +/- 3.0 dB typical       |
| VSWR (In/out)                              | 2:1                      |
| RF Rejection                               | -40 dBc                  |
| Image Rejection                            | -40 dBc                  |
| LO Leakage                                 | -70 dBm typ.             |

| Parameter  | Value       |
|--|-------------|
| <b>LO Generation Specifications</b>                      |             |
| Frequency  | 42 GHz      |
| Reference Frequency Input                                | 100 MHz     |
| Converter Composite Phase Noise (with 100 MHz Reference) |             |
| 100 Hz   | -60 dBc/Hz  |
| 1 kHz  | -75 dBc/Hz  |
| 10 kHz   | -85 dBc/Hz  |
| 100 kHz  | -100 dBc/Hz |
| 1 MHz  | -120 dBc/Hz |
| 10 MHz   | -135 dBc/Hz |

Specifications subject to change without notice. © 2020 Teledyne Microwave Solutions