These Ku-band block upconverter and block downconverter employ Narda’s Ultimate SMT technology to reduce cost and size while delivering high performance. Other techniques including the ability to mix blind, buried, and standard through-hole vias for interconnections between layers, and Narda’s unique subcover design with form-in-place gasket, achieve extremely high isolation.

The block upconverter (BUC) drives a 13-W solid state power amplifier (SSPA) module while the block upconverter (BDC) is a standalone unit. Both use a single conversion from Ku-band to L-band. The BUC upconverts to 13.75 GHz to 14.5 GHz, and the frequency range of the BDC is 10.95 GHz to 12.75 GHz, divided into three sub-bands. Both feature high linearity, low current and power dissipation, nearly flat gain over frequency, and temperature, and high spurious rejection.

### Key features
- Modules use proprietary Narda techniques to reduce size, cost, and weight
- BUC uses single LO frequency for upconversion to 13.75 to 14.75 GHz
- BDC downconverts 10.95 to 12.75 GHz divided into three subbands
- Exceptional linearity, spectral regrowth, gain flatness, spurious and harmonic rejection, and phase noise performance
- High isolation between control, power, and RF components
- Low power consumption
- Very compact and lightweight

### Block Up Converter
- **Input frequency (MHz)**: 950 to 1700
- **Output frequency (MHz)**: 13750 to 14500
- **Conversion gain (dB)**: 55
- **Gain flatness over frequency (dB)**: +/-1.5
- **Group delay variation over any 50 MHz band (ns p-p)**: 2.5
- **IP3 (dB)**: 48.14
- **Spectral regrowth (dBc)**: -33 dBc typical, QPSK signal measured one symbol rate from carrier
- **Spurious rejection (dBc)**: -70 maximum
- **Harmonic suppression (dBc)**: -60
- **Noise figure (dB)**: 20 or less
- **Phase noise at 10 Hz and 100 kHz offsets (dBc/Hz)**: -60 dB at 120 Hz offset, -100 at 100 kHz offset

### Block Down Converter
- **Input frequency (MHz)**
  - Receive band 1: 10950 to 11700
  - Receive band 2: 11700 to 12250
  - Receive band 3: 12250 to 12750
- **Output frequency (MHz)**
  - Receive band 1: 950 to 1700
  - Receive band 2: 950 to 1500
  - Receive band 3: 950 to 1450
- **Conversion gain (dB)**: 30
- **Gain flatness (dB)**: +/- 2 over frequency and temperature
- **RF output IP3 (dBm)**: 24 typical
- **Spectral regrowth (dBc)**: 40 typical, QPSK signal, measured one symbol rate from carrier
- **Spurious emissions, 950 to 1700 MHz ( dBc)**: -50
- **LO leakage (dBm)**: -75
- **Harmonic suppression (dBc)**: -50
- **RF P1dB output (dBm)**: 10
- **Noise figure (dB)**: 20 maximum
- **Phase noise at 10 Hz and 100 kHz offsets, typical (dBc/Hz)**: -45 at 10 Hz offset, -95 at 100 kHz offset

Please consult the factory for detailed product specifications.