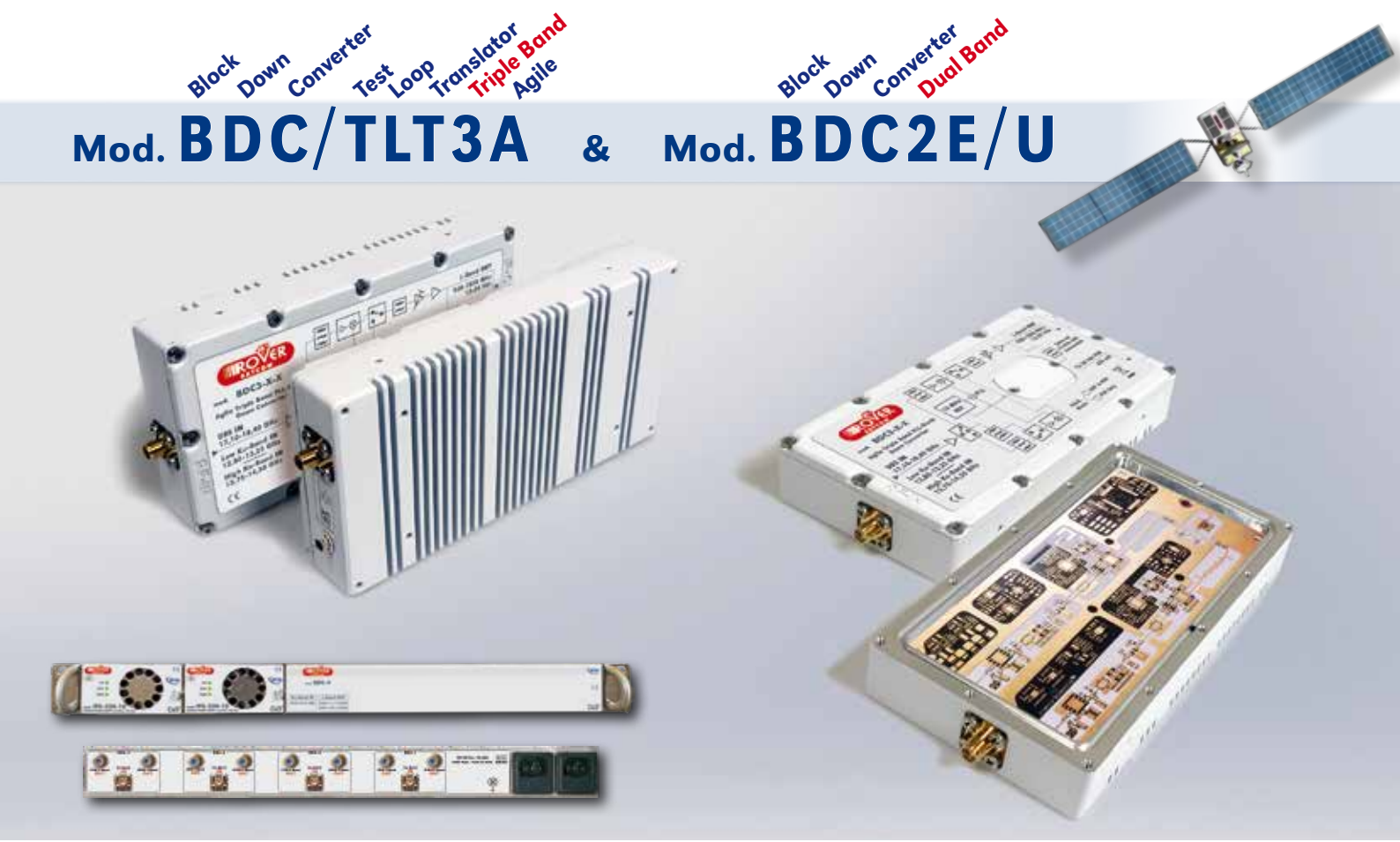
DUAL & TRIPLE PLL-BLOCK DOWN CONVERTER

Ku/Ka-Band Agile Block Down Converter

Block Down Converter Test Loop Translator Triple Band Agile

Mod. BDC/TLT3A & **Mod. BDC2E/U**

Block Down Converter Dual Band



- Dual & Triple Ku/Ka Block Down Converter :
  - Dual Simultaneously Low & High Down Link Ku-Band
  - Triple Selectable Low/High Up Link Ku & DBS Band
- Coax SMA In-Out connectors
- Internal or ext. 10 MHz REF
- Very Low phase Noise
- High P1 dB and IP3
- Large operating Temper. range
- For Outdoor and Indoor use

- Down Link Band (10,70/12,75) GHz
- UP LINK Band (12,85/13,25) or (17,10/18,40) GHz
- PLL L.O. (9,75/10,60) or (10,00/10,75) GHz
- Agile PLL L.O. (11,80) or (12,65) or (16,15) GHz
- Adjust. GAIN, 5 to 35 dB
- Remote Control & Monitor Alarms
- Low profile for 1U Rack mount
- Stand alone or Rack configuration
- Dual Redundant configuration Available
- 5 years Warranty, reliable support and training

INNOVATIVE PERFORMANCE

for: SYSTEM INTEGRATOR, TELEPORT BROADCASTER, CABLE NETWORK, GOVERNMENT & MILITARY COMMUNICATIONS

CE DVB WTA MEMBER

MAIN SPECIFICATIONS

The BDC2-X is a HIGH STABILITY LOW PHASE NOISE DUAL BAND "PLL" BLOCK DOWN CONVERTER.

It allow to cover simultaneously the full Ku-Band, Frequency range thanks to the two Outputs, LOW and HIGH Band.

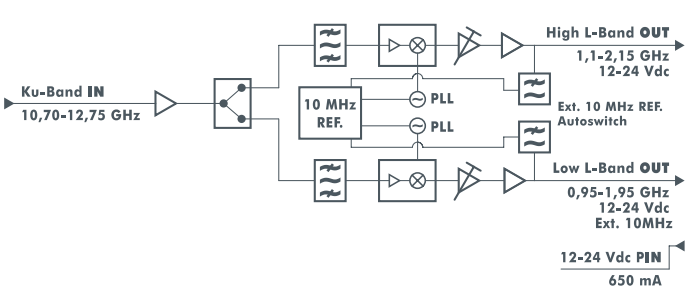
The BDC3-X is a HIGH STABILITY & LOW PHASE NOISE AGILE TRIPLE BAND "PLL" BLOCK DOWN CONVERTER.

It allow to select all the Ku & DBS Up-Link Band Frequency range, thanks to the switchable L.O. and B.P. filters.

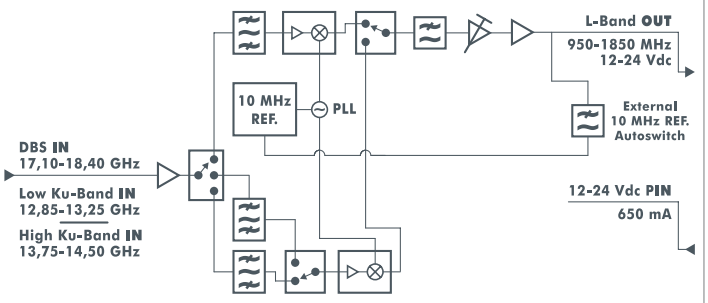
All designed for indoor and outdoor applications, they can work in a vaste temperature range and are designed to be easily customized in 1U Rack.

Ideal for Professional use, like Redundancy, Distribution & Monitoring, they are corrently the best value for money.

BDC2-x-x BLOCK DIAGRAM

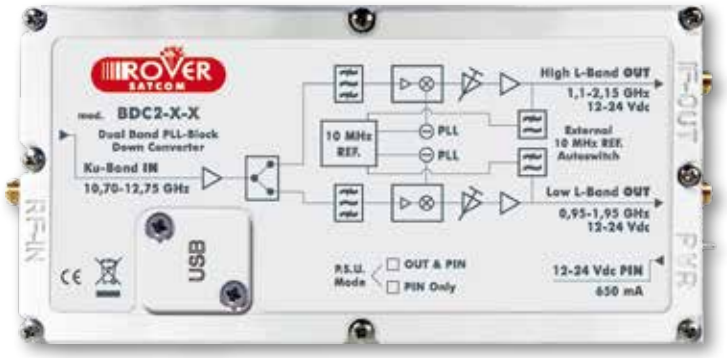


BDC3-x-x BLOCK DIAGRAM

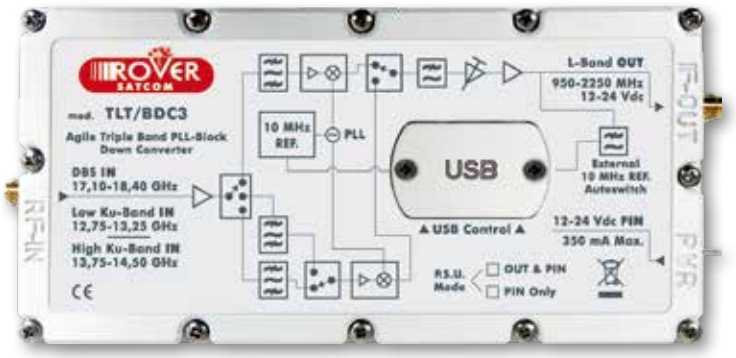


FRONT VIEW

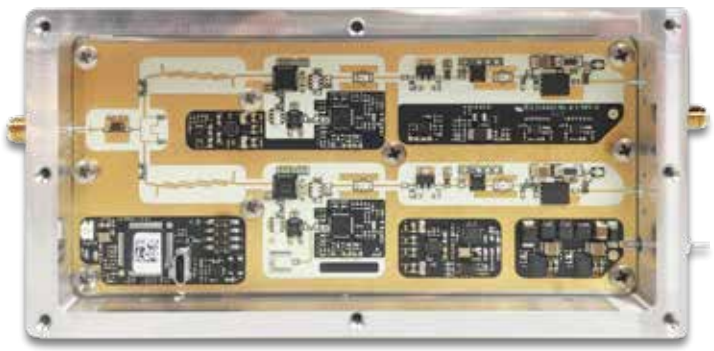
BDC2-x



BDC/TLT3-A-x



INTERNAL VIEW



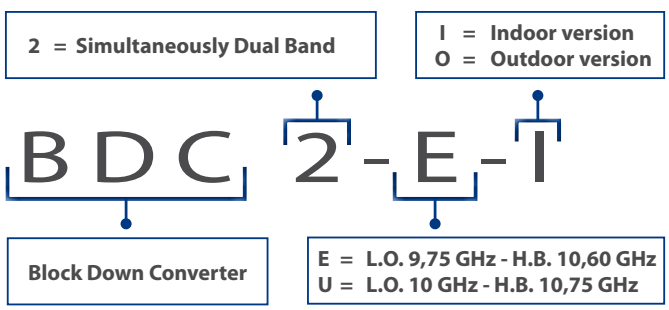
REAR VIEW

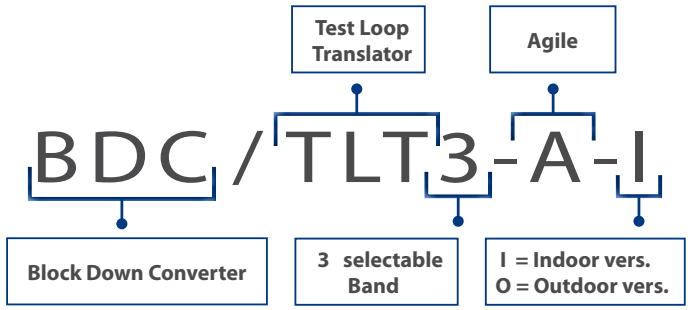
Ku-Band BDC TECHNICAL SPECIFICATIONS

MODEL	**BDC2-E** 10/12 GHz	**BDC2-U** 10/12 GHz	**BDC/TLT3-A-x** 13/18 GHz
Functions:	Dual Ku-Band Block Down Converter	Dual Ku-Band Block Down Converter	Agile Triple Band Ku & DBS Block Down Converter & Test Loop Translator for UP LINK Test
Features:	High Stability & Low Phase Noise PLL	High Stability & Low Phase Noise PLL	High Stability & Low Phase Noise PLL
Benefit:	N. 2 Simultaneously Low & High Band Out	N. 2 Simultaneously Low & High Band Out	N. 3 Selectable Low/High & DBS Band
Applications:	Redundancy, Distribution & Monitoring	Redundancy, Distribution & Monitoring	Full Band Up-Link Monitoring
N. of RF Inputs:	N. 1 = Low & High (Ku-Band)	N. 1 = Low & High (Ku-Band)	N. 1 = Low/High-Ku & DBS (full up Link Band)
Input Frequency:	10,70 -12,75 GHz (Low+High Ku-Band)	10,95 -12,75 GHz (Low+High Ku-Band)	12,85 -13,25 GHz Low Ku-Band (Up-Link) 13,75 -14,50 GHz High Ku-Band (Up-Link) 17,10 -18,40 GHz DBS-Band (Up-Link)
N. of RF Outputs:	N. 2 = Low & High Band	N. 2 = Low & High Band	N. 1 = Low/High-Ku & DBS selectable
Output Frequency:	Low Band 950 -1950 MHz High Band 1.100 -2150 MHz	Low Band 950 -1700 MHz High Band 950 -2000 MHz	from 950 to 1850 MHz
L.O. Frequency:	9,75 GHz for Low Band 10,60 GHz for High Band	10,00 GHz for Low Band 10,75 GHz for High Band	11,80 GHz for Low Ku-Band (Up-Link) 12,65 GHz for High Ku-Band (Up-Link) 16,15 GHz for DBS-Band (Up-Link)
L.O. Stability (with Internal REF)	± 2 ppm	± 2 ppm	± 2 ppm
Phase Noise (SSB)	at 1 KHz = 82 dBc / Hz at 10 KHz = 89 dBc / Hz at 100 KHz = 97 dBc / Hz	at 1 KHz = 82 dBc / Hz at 10 KHz = 89 dBc / Hz at 100 KHz = 97 dBc / Hz	at 1 kHz = 80 dBc / Hz at 10 kHz = 85 dBc / Hz at 100 kHz = 96 dBc / Hz
Noise Figure:	10 dB at max gain	10 dB at max gain	5 dB at max gain
Gain:	10 to 30 dB in 1 dB step adj.	10 to 30 dB in 1 dB step adj.	5 to 35 dB in 0,5 dB step adj.
Gain Flatness:	± 1 dB typ. 2 max (0,2 dB over 65 MHz)	± 1 dB typ. 2 max (0,2 dB over 65 MHz)	± 1 dB typ. 2 max (0,2 dB over 65 MHz)
Gain stability at constant temperature:	± 0,25 dB in 24 h	± 0,25 dB in 24 h	± 0,25 dB in 24 h
Input Power Range:	-75 to -30 dBm (RMS pwr of 64 transponders)	-75 to -30 dBm (RMS pwr of 64 transponders)	-75 to -30 dBm (RMS pwr of 64 transponders)
Maximum allowed Input PWR:	0 dBm (no damage)	0 dBm (no damage)	0 dBm (no damage)
OP1dB Output Power:	15 dBm, typ. 17 dBm (at Max Gain)	15 dBm, typ. 17 dBm (at Max Gain)	15 dBm, typ. 17 dBm (at Max Gain)
OIP3 Output:	+ 25 dBm, typ. 27 dBm (at Max Gain)	+ 25 dBm, typ. 27 dBm (at Max Gain)	+ 25 dBm, typ. 27 dBm (at Max Gain)
Group delay:	1nS	1nS	1ns
Input RETURN LOSS:	10 dB, 15 dB typ.	10 dB, 15 dB typ.	10 dB max, 14 dB typ.
Output RETURN LOSS:	16 dB, 18 dB typ.	16 dB, 18 dB typ.	10 dB max, 15 dB typ.
Spurious signals:	Low Band -60 dBm, typ. -70 dBm High Band -70 dBm, typ. -75 dBm	Low Band -60 dBm, typ. -70 dBm High Band -70 dBm, typ. -75 dBm	Low/High Ku & DBS typ - 60 dBm
Image rejection:	> 40 dB typ. 50 dB	> 40 dB typ. 50 dB	> 40 dB typ. 50 dB
Spectrum inversion:	non inverting	non inverting	non inverting
L.O. leakage at Input:	- 60 dBm	- 60 dBm	- 60 dBm
Input Connector:	SMA (50 OHM)	SMA (50 OHM)	SMA (50 OHM)
Output Connector:	2 x SMA (50 OHM)	2 x SMA (50 OHM)	SMA (50 OHM)
EXT REF:	10 MHz (autodetection switch, through both out) -5 to +5 dBm	10 MHz (autodetection switch, through both out) -5 to +5 dBm	10 MHz (autodetection switch, through output) -5 to +5 dBm
PSU Voltage:	+12 V to +24 V DC (via RF Out connector, or via feed through PIN)	+12 V to +24 V DC (via RF Out connector, or via feed through PIN)	+12 V to +24 V DC (via RF Out connector, or via feed through PIN)
Current Consumption:	650 mA at 12 Vdc	650 mA at 12 Vdc	400 mA at 12 Vdc
Size (L x W x H):	150 mm x 75 mm x 25 mm	150 mm x 75 mm x 25 mm	150 mm x 75 mm x 25 mm
Weight:	590 gr	590 gr	590 gr
Operating temperature:	- 40 to + 80 C°	- 40 to + 80 C°	- 40 to + 80 °C
IP grade:	IP65 for outdoor type (opz.)	IP65 for outdoor type (opz.)	IP65 for outdoor type (opz.)

SERVICE INTERFACE PORT for: L.O. lock detector, Freq. Selection, temperature, current alarm, gain, ext. 10 MHz lock			
Internal connector:	micro USB type B & RS232 UART via PIN	micro USB type B & RS232 UART via PIN	micro USB type B & RS232 UART via PIN

ORDERING MODEL/CODE EXPLANATIONS





ORDERING MODEL / CODE EXAMPLE

MODEL	*DESCRIPTION*	*APPLICATION*
BDC2-E-I	Simultaneous Dual Band PLL-Block down Converter, Ku-Band In 10,70 - 12,75 GHz, Dual L-Band Out L.B. 950-1950, H.B. 1100-2150 MHz, Local Oscillator Low Band 9,75 GHz, High Band 10,60 GHz.	Redudancy, Monitoring, Distribution.
BDC2-U-I	Simultaneous Dual Band PLL-Block down Converter, Ku-Band In 10,95 - 12,75 GHz, Dual L-Band Out L.B. 950-1700, H.B. 950-2000 MHz, Local Oscillator Low Band 10 GHz, High Band 10,75 GHz.	Redudancy, Monitoring, Distribution.
BDC3-x	Agile Triple Band PLL-Block Down Converter for all Up-Link Monitoring, Low Ku-Band In 12,85 - 13,25 GHz, High Ku-Band In 13,75 - 14,50 GHz, DBS Band 17,1 - 18,40 GHz, L.B. L.O. 11,80 GHz, H.B. L.O. 12,65 GHz, DBS L.O. 16,15 GHz.	Up-Link Monitoring

Also available: 1U Rack with up to 4 BDC & Redundant PSU

Mod. RA-BDC-x-x

Front View

Rear View

Outdoor Box with up to 2 BDC

Mod. OB-BDC-x-x

with Ethernet POE

COMPLETE CHASSIS ORDERING MODEL / CODE EXAMPLE

RA-BDC2-E-4	1 U Rack Quadruple Dual Band PLL-Block down Converter, Ku-Band In 10,70 - 12,75 GHz, Dual L-Band Out 0,95 - 1,95 GHz / 1,1 - 2,1 GHz, Local Oscillator Low Band 9,75 GHz, High Band 10,60 GHz. Dual Redundant P.S.U. included.

Complete REDUNDANT DOWN CONVERTER SYSTEM with n. 2 Dual Redundant 1+1, HOT-SWAP module

Mod. Ku-RDC System

Front View

Rear View

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