



Model Number: 2431

RF Engineering  
and Custom Build

# Ku/ L-band Block Down Converter Shelf (Low)

With 2:1 redundancy switching and Swedish Microwave BDC Module

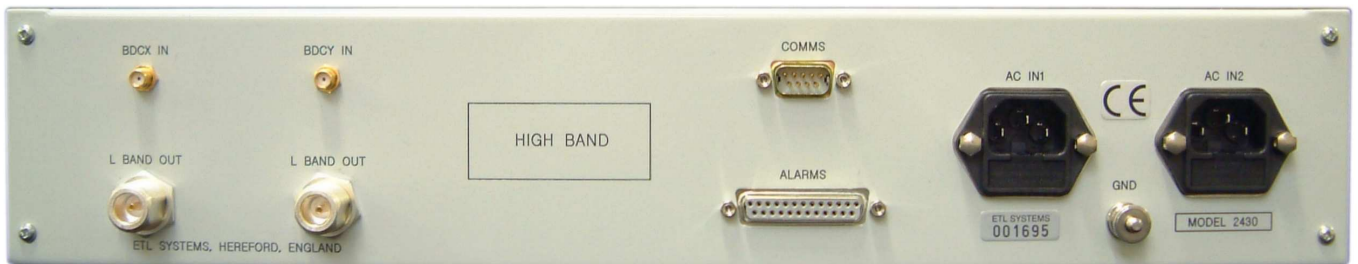


Front View of Model 2431

This Low Ku-band (10.70 to 11.80 GHz) to L-band block down converter with 2:1 redundancy switching comprises of 3 BDC Modules, Swedish Microwave model BDC-9.75N, with a 9.75 GHz LO and output range of 950 – 2050 MHz, housed in a 2U high shelf.

The three BDCs are supply current monitored so that once the monitoring levels are SET any deviation of current will cause the standby BDC to switch in to replace the failing unit. A -20dB BNC monitor port is also supplied on the front panel of the unit for each of the 3 L-band outputs.

The shelf operates in Manual or Auto or Remote modes and a key-switch on the front panel provides mode selection.



Rear View of similar Model 2430

The unit also benefits from dual redundant power supplies which can be monitored via front panel status LEDs or a dry contact alarm port on the rear panel.





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## Technical specifications and operating parameters

RF Parameters	
Input Frequency Range	10.70 to 11.80 GHz
Local Oscillator Frequency	9.75 GHz
IF output Frequency	950 to 2050 MHz
Input Signal Levels	-70 to -20 dBm typical
Gain	20 dB typical
Gain Variation	±0.4 dB within 30 MHz
Output Return Loss	>9 dB
Noise Figure	3 dB typical
1 dB Gain Compression Point (output)	+15 dBm
IP3	+25 dBm typical
LO Phase Noise (typical)	-75 dBc @ 1kHz
	-85 dBc @ 5 kHz
	-85 dBc @ 10 kHz
	-110 dBc @ 100 kHz
	-120 dBc @ >1 MHz
LO Stability (over temp)	±25 kHz (option ± 10 kHz or ext. 10 MHz ref.)
Image Rejection	40 dB

Power	
AC Power	85-264Vac 50/60Hz
LNB Power	None
PSU	Dual redundant
Hot-swap PSU	No

System Control	
Local Control	Via front panel push buttons
Remote Control	Via rear panel RS232/485 serial port
Display	BDC & PSU condition LED's
Monitor Port	-20 dB 50Ω BNC on front panel for all 3 BDC outputs

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	85% non-condensing

Physical	
RF Ports (Ku Band)	50Ω SMA (F)
RF Ports (L-band out)	50Ω N-type (F)
Dimensions	2U high x 450mm deep x 19" wide
Colour	White 00-E-55 semi-gloss

Key Features	
Low (10.70 to 11.80 GHz) Ku to L-band Swedish Microwave BDC	
2:1 BDC Redundancy based on BDC current monitoring	
Key switch on front panel	

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