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# Ka

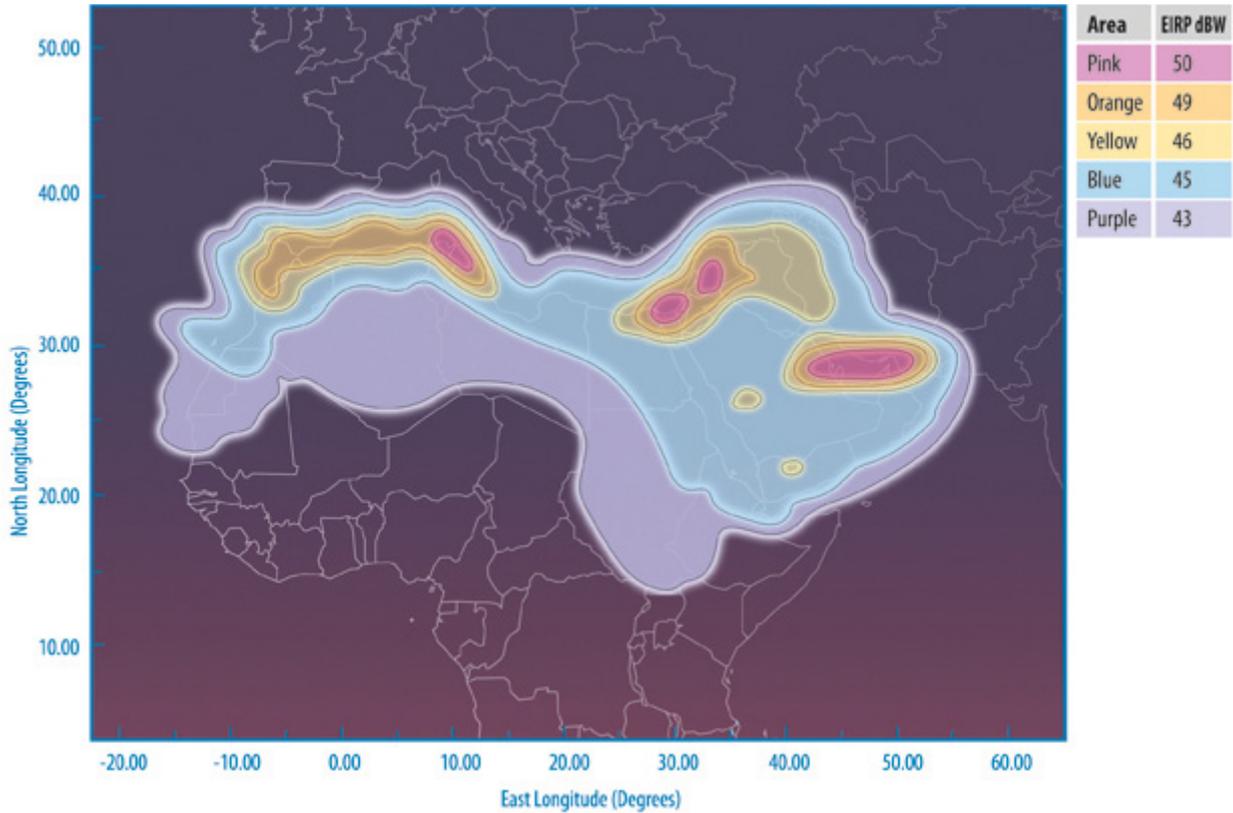
**KaKu Co-locate Linear 23mm LNB with one KaKu switchable output and one Ka output**  
**IDLK-SINL20-KAKUO-OPP**  
Item: 5104



This industry-first and unique dual band Ka/Ku LNB is designed to receive Ku (10.7 to 12.75 GHz) and Ka (21.4 to 22.0 GHz) TV, radio and data channels with linear polarity (Horizontal/Vertical) from the same orbital position at 25.5° East. It can be used with standard offset dish antennas of 60 to 90cm diameter and F/D of 0.6.

The LNB has two ports – one supporting either Ku or Ka and the second port fixed to deliver Ka-only. The selection between Ku and Ka band is based Tone Burst or DiSEqC 1.0 commands. The product is supplied with a 40mm ring adapter to ensure compatibility with the majority of already installed legacy dish antennas.

## Eutelsat 25.5E Ka/Ku coverage over the MENA region



## Technical data

### Mechanical

F/D	~0.6
External feed holder diameter	23mm (40 mm ring adapter supplied accessory)
Number of F connectors	2 (one for Ka band only, one for Ka/Ku bands)
Adjustment of polarisation	by rotating the LNB feedhorn (+/-45°)
Nominal antenna size	60cm to 90cm
Polarisation	Dual linear for Ka band and Ku band
Output connector	F type female (EN60169)

### RF and Electrical

#### Ku band:

Frequency range	Low Band: 10.70 ~ 11.70 GHz High Band: 11.70 ~ 12.75 GHz
LOs:	9.75 GHz (Low band) & 10.6 GHz (High band)
LOs stability	(25°C) +/- 1 MHz (-30°C ~ 60°C) +/- 3 MHz

Phase Noise	(1 KHz offset)	-50 dBc/Hz
	(10 KHz offset)	-75 dBc/Hz
	(100 KHz offset)	-95 dBc/Hz
	(1 MHz offset)	-105 dBc/Hz
Noise figure	1.2 dB typ.	
Gain	50 - 60 dB	
Gain Ripple (over full band)	+/- 5 dB	
Output power at 1dB gain compression	0 dBm min	
Band selection	0/22 KHz +/- 4 kHz	
Polarisation selection	13 V vertical /18 V horizontal	
Cross polarisation isolation	18dB min.	

#### Ka band:

Frequency range	21.4 to 22.0GHz	
IF frequency range	950 to 2150MHz	
LO	20.25 GHz	
LO stability	(25°C)	+/- 1 MHz
	(-30°C ~60°C)	+/- 3 MHz
LO phase noise	(1 KHz offset)	-50 dBc/Hz
	(10 KHz offset)	-75 dBc/Hz
	(100 KHz offset)	-95 dBc/Hz
	(1 MHz offset)	-105 dBc/Hz
Noise figure	1.5 dB typ, 1.7dB max.	
Gain	50 - 60 dB	
Output power at 1dB gain compression	0 dBm min	
LO selection	none (fixed to 20.25 GHz)	
Polarisation selection	13V (vertical) / 18V (horizontal)	
Cross polarisation isolation	20 dB min.	

#### Polarisation and band selections:

##### Receiver Commands

Tone Burst A or DiSEqC A
Tone Burst B or DiSEqC B
DiSEqC C
DiSEqC D

##### LNB Band selection

Ku band (Low & High)
Ka
Ku band (Low & High)
Ka

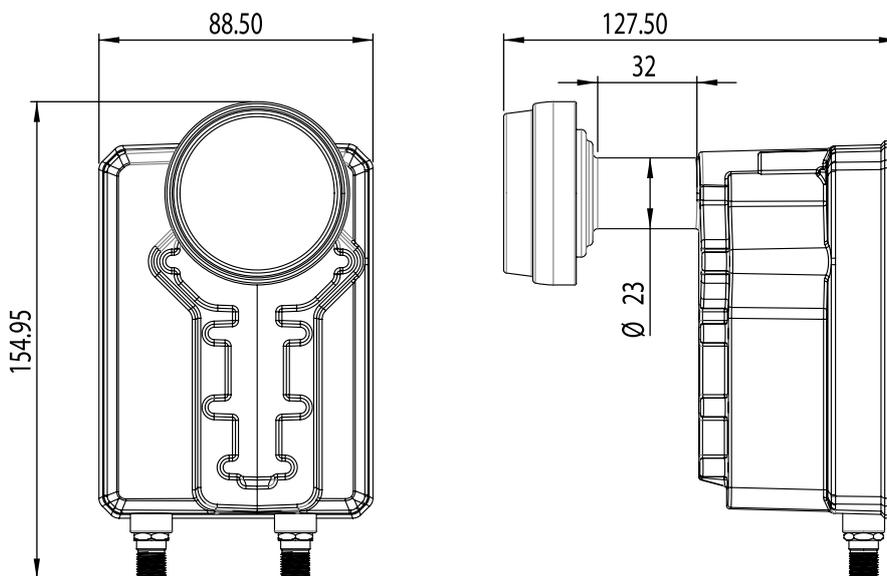
- 18/13V command is used to select between:
- Vertical and Horizontal polarization for Ku and Ka band

- 22KHz is used to select between:
  - 10.7 to 11.7 GHz in Ku band (ie 9.75GHz LO) – Low band
  - 11.7 to 12.75 GHz in Ku band (ie 10.6GHz LO) – High band
  - In Ka band, the LO is fixed whatever is the 0/22 KHz signal (ie 20.25 GHz LO)

• Current 180 mA max

**Environment**

Temparture range -30 to +60 °C operating  
 -50 to 75 °C storage



For purpose of brevity, some product descriptions in this sheet remain at platform level and may not be referred to as detailed datasheets of the products. Inverto Digital Labs reserves the right to amend, omit or add products, product-lines, and / or features without notice.

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