



The **ACLNB-Ka family** of LNBs is designed for the most challenging Ka-band **professional & military** satellite communication systems (ground, SOTP, SOTM, maritime, etc.). Latest technology is applied to obtain the best noise figure, phase noise, gain stability and return losses according to **MIL-STD-188-164C**. The ACLNB-Ka family is a **high reliability** solution designed for **harsh environmental conditions**, with every single production unit **fully tested** in an environmental chamber and delivered with a complete factory acceptance test report.

RECEIVER SPECIFICATIONS

Input frequency	17.7 to 22.2 GHz
Input Ka-Band VSWR (50 Ω)	< 1.5:1
Output frequency	1000 to 2150 MHz
Output L-band VSWR (50 Ω)	< 2.0:1
Spectrum inversion	None
Max. input level without damage	0 dBm
Gain	60 dB min
Gain flatness	±2.0 dB over whole BW ±0.5 dB over 40 MHz
Gain stability (24 hours)	±0.25 dB @ const. temp.
Gain variation over temperature	±1.5 dB (±2.0 dB option LN2)
Noise figure @ 25 °C	≤ 1.8 dB
Noise temperature @ 25 °C	≤ 150 K
Image rejection	> 40 dB
Output P1dB	> +10 dBm
In-band spurious	< -60 dBc @ P _{OUT} = 0 dBm

LOCAL OSCILLATOR

Output phase noise (IESS-308/309 – 5 dB)	
100 Hz	-65 dBc/Hz
1 kHz	-75 dBc/Hz
10 kHz	-85 dBc/Hz
100 kHz	-95 dBc/Hz
External reference	10 MHz
External reference level	0 dBm ± 5 dB
Internal reference stability	±1 ppm (option LN3)

POWER SUPPLY

DC input voltage	12-24 V _{DC}
Consumption @ 24 V _{DC}	550 mA typ (140 mA typ per output port)

MECHANICAL SPECIFICATIONS

Size (LxWxH)	140 x 155 x 40 mm 5.6 x 6.1 x 1.6 in
Weight	950 g 2.1 lbs
Finish	RAL 9003 (White)

ENVIRONMENTAL SPECIFICATIONS

Storage temperature	-40 °C to +85 °C
Operating temperature	-20 °C to +60 °C
Relative humidity	up to 100%
Operating altitude	up to 4500 m

INTERFACES

RX input (Ka-Band)	WR42 grooved (PBR 220)
RX output 1 (L-Band+DC+Ext.Ref.)	Type N(F) 50 Ω
RX output 2 (L-Band+DC+Ext.Ref.)	Type N(F) 50 Ω
RX output 3 (L-Band+DC+Ext.Ref.)	Type N(F) 50 Ω
RX output 4 (L-Band+DC+Ext.Ref.)	Type N(F) 50 Ω

OPTIONS

Ka-band input	L-band output	LO freq.	Output port	Standard freq. option
17.70 to 18.85 GHz	1000 to 2150 MHz	16.70 GHz	1	ACLNBW-Ka-E45-V3
18.85 to 20.00 GHz	1000 to 2150 MHz	17.85 GHz	2	
20.00 to 21.15 GHz	1000 to 2150 MHz	19.00 GHz	3	
21.15 to 22.20 GHz	1000 to 2050 MHz	20.15 GHz	4	

LN1	RX output connector type SMA(F) 50 Ω
LN2	Operating temperature -40 °C to +60 °C
LN3	Internal reference ACLNBWI-Ka-E45-V3
LN4	Supply and ext. ref. over single port