



The **ACLNB-Q family** of LNBS is designed for the most challenging Q-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-Q 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 .....	38.0 to 40.0 GHz
Input Q-Band VSWR (50 Ω) .....	< 1.5:1
Output frequency .....	950 to 1950 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 option LN2)
Noise figure @ 25 °C .....	≤ 2.8 dB
Noise temperature @ 25 °C .....	≤ 260 K
Image rejection .....	> 45 dB
Output P1dB .....	> +10 dBm
Output IP3 .....	> +20 dBm
In-band spurious .....	< -60 dBc @ P <sub>OUT</sub> = 0 dBm

### LOCAL OSCILLATOR

Output phase noise (IESS-308/309)	
100 Hz .....	-60 dBc/Hz
1 kHz .....	-70 dBc/Hz
10 kHz .....	-80 dBc/Hz
100 kHz .....	-90 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 <sub>DC</sub>
Consumption @ 12 V <sub>DC</sub> .....	350 mA typ

### MECHANICAL SPECIFICATIONS

Size (LxWxH) .....	150 x 60 x 40 mm (TBC) 5.9 x 2.3 x 1.4 in (TBC)
Weight .....	450 g (TBC) 1.0 lbs (TBC)
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
IP protection .....	IP67

### INTERFACES

RX input (Q-Band) .....	WR22 (UG-383/U)
RX output (L-Band+DC+Ext.Ref.) .....	Type N(F) 50 Ω

### OPTIONS

Q-band input	L-band output	LO freq.	Standard freq. option
38.0 to 39.0 GHz	950 to 1950 MHz	37.050 GHz @ 13 V <sub>DC</sub>	ACLNBD-Q-E16-V1
39.0 to 40.0 GHz	950 to 1950 MHz	38.050 GHz @ 18 V <sub>DC</sub>	

LN1 .....	RX output connector type SMA(F) 50 Ω
LN2 .....	Operating temperature -40 °C to +60 °C
LN3 .....	Internal reference ACLNBQI-Q-E16-V1