



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 (See options) |
| Input Ka-Band VSWR (50 Ω) | < 1.5:1 |
| Output frequency | 1000 to 2000 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 | 13-18 V _{DC} |
| Consumption @ 13 V _{DC} | 320 mA typ |

MECHANICAL SPECIFICATIONS

| | |
|--------------------|--|
| Size (LxWxH) | 120 x 60 x 40 mm 4.7 x 2.4 x 1.6 in |
| Weight | 450 g 1.0 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 (L-Band+DC+Ext.Ref.) | Type N(F) 50 Ω (+22 kHz option LN4) |
| M&C (RS485) | 62IN12E8-4S-4-622 |

All mating connectors provided

OPTIONS

| Ka-band input | L-band output | LO freq. | Option LN4 | Standard freq. option |
|------------------|------------------|----------|-----------------------------|-----------------------|
| 17.7 to 18.2 GHz | 1000 to 1500 MHz | 16.7 GHz | 13 V _{DC} | ACLNBW-Ka-E33-V2 |
| 18.2 to 19.2 GHz | 1000 to 2000 MHz | 17.2 GHz | 13 V _{DC} + 22 kHz | |
| 19.2 to 20.2 GHz | 1000 to 2000 MHz | 18.2 GHz | 18 V _{DC} | |
| 20.2 to 21.2 GHz | 1000 to 2000 MHz | 19.2 GHz | 18 V _{DC} + 22 kHz | |
| 17.7 to 18.7 GHz | 1000 to 2000 MHz | 16.7 GHz | N.A. | ACLNBW-Ka-E45-V2 |
| 18.7 to 19.7 GHz | 1000 to 2000 MHz | 17.7 GHz | | |
| 19.7 to 20.7 GHz | 1000 to 2000 MHz | 18.7 GHz | | |
| 20.7 to 21.7 GHz | 1000 to 2000 MHz | 19.7 GHz | | |
| 21.7 to 22.2 GHz | 1500 to 2000 MHz | 20.2 GHz | | |

| | |
|-----------|---|
| LN1 | RX output connector type SMA(F) 50 Ω |
| LN2 | Operating temperature -40 °C to +60 °C |
| LN3 | Internal reference ACLNBWI-Ka-Ex-V2 |
| LN4 | Band switching 13/18 V _{DC} + 22 kHz |