

## Advanced DAB/DAB+/DMB Radio Receiver

LN2 has developed the most advanced DAB/DAB+/DMB compliant baseband receiver that provides superior performance compared to the receivers presently used in the field.

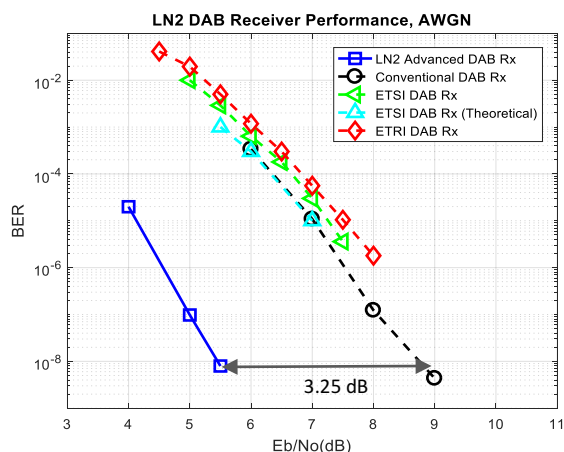


Figure 1: Comparison of LN2's advanced DAB receiver with several conventional DAB receivers in AWGN.

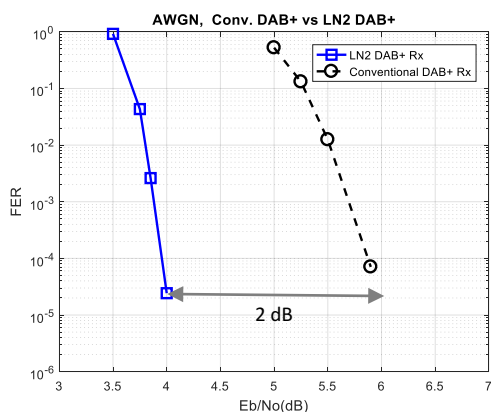


Figure 2: Comparison of LN2's advanced and conventional DAB+ receivers in AWGN.

### Key Features and Benefits

LN2's receiver exists in multiple configurations, for different performance-complexity trade-offs, with reconfigurable architecture and interfaces. This provides flexibility to deploy LN2's superior performance receiver on a wide spectrum of platforms with different constraints related to silicon area and power consumption.

LN2's Advanced Receiver provides the following performance gains in additive white Gaussian noise (AWGN):

- 3.25 dB relative to its reference conventional DAB receiver.
- 2 dB relative to the conventional DAB+ receiver;
- Other receiver variants provide slightly larger respectively lower gains with larger respectively lower complexity.

Larger gains, up to as much as several dBs, are generally achievable in multipath fading channels as shown in Figures 3-5 for some exemplary frequency band, environment and vehicle speed scenarios.

Even larger gains are observed in co-channel interference scenarios.

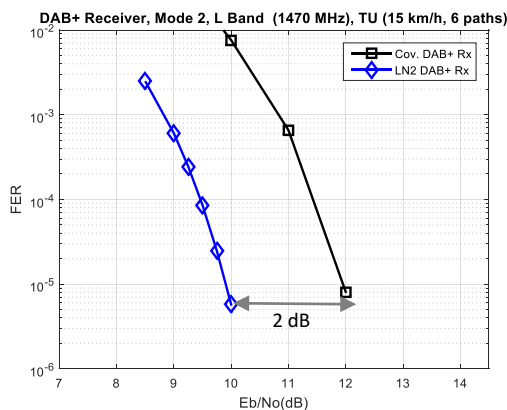


Figure 3: Comparison of LN2's advanced and conventional DAB+ receivers in a typical urban (TU) channel, L band, vehicle speed 15 km/h.

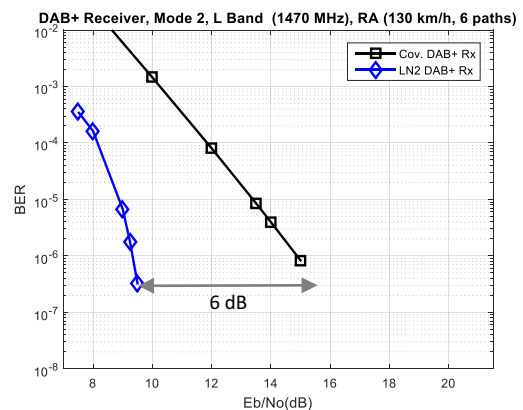


Figure 5: Comparison of LN2's advanced and conventional DAB+ receivers in a rural area (RA) channel, L band, vehicle speed 130 km/h.

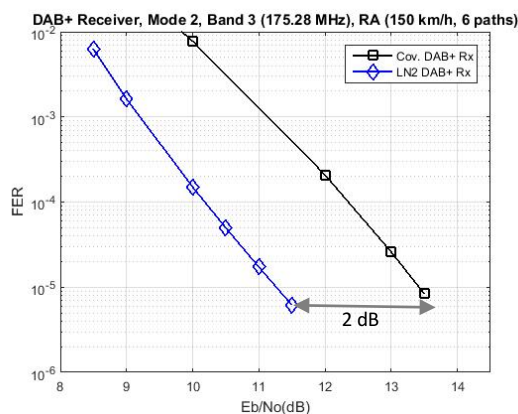


Figure 4: Comparison of LN2's advanced and conventional DAB+ receivers in a rural area (RA) channel, Band 3, vehicle speed 150 km/h.

## Deliverables

- Whole baseband receiver or individual receiver modules;
- Executable code for DSP and software defined radio (SDR) platforms;
- IP cores:
  - FPGA platforms;
  - ASIC integrations;
- Customer specific configurable parameters and interfaces.

## About LN2

LN2 is a privately held company with offices in the Washington, DC area in the US. Its wholly-owned subsidiary, LN2 Hellas, has offices in Athens, Greece. LN2 employs experts worldwide for targeted research and development initiatives, to provide state-of-the art solutions and designs for communications, broadcast, signal processing and magneto-optical recording/storage systems. Its proprietary solutions could be delivered to customers as DSP/FPGA/ASIC IP in various formats. For more information please visit us at: <http://www.ln2db.com/> .