

b-com *Wireless Library* [LDPC FEC]

A multi-standard LDPC channel processing solution ready for 5G



b-com *Wireless Library* [LDPC FEC] enables broadband wireless transmissions. It implements Forward Error Correction (FEC) across a wide range of Physical Layers and standard specifications including 5G-NR. This is an IP that can be easily integrated into your product design.

{key features} :

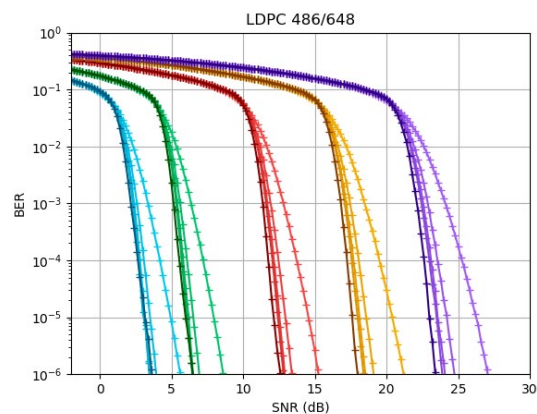
- ◆ **Decoding**
 - Early stopping criterion
 - Configurable amount of LDPC decoding iteration
 - 5G-NR de-rate matching & chase Combining
 - CRC decoding
- ◆ **Encoding**
 - Filler bits insertion/removal
 - Support 5G-NR rate matching and modulation schemes
 - CRC Encoding

{benefits} :

- ◆ **Throughput of up to 1.6 Gbps @250MHz in both directions**
- ◆ **Available for FPGAs**
- ◆ **Compact size: <40kLUT for full 5G-NR compatibility**
- ◆ **Avalon & AXI4-stream interfaces**

{applications} :

- ◆ 5G-NR: 3GPP TS 38.212 Release 15
- ◆ WiMAX 802.16m
- ◆ Wi-Gig 802.11ad
- ◆ WPAN 802.15.3c
- ◆ WLAN 802.11n, 802.11ac



- Wi-Fi BER performances for BPSK to 256QAM constellations and variable iterations
- Measurements on target
- 5G-NR FEC performance data available upon request

{about b-com} :

A technology pioneer and provider for companies that want to digitally boost their competitive edge, b-com addresses several industries: culture & creation, digital infrastructures, health, defence and industry 4.0. Its laboratories bring together talented people from a variety of disciplines and cultures in areas like artificial intelligence, immersive video and audio, content protection, 5G networks, the Internet of Things, and cognitive technologies. b-com's researchers and engineers, drawn from the ranks of industry and academia, work at its Rennes campus and at its sites in Paris, Brest, and Lannion. Thanks to its world-class engineering team, its technology platforms and its unique mix of scientific and industrial knowhow, b-com offers its clients technology solutions that give them invaluable competitive edge.