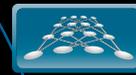
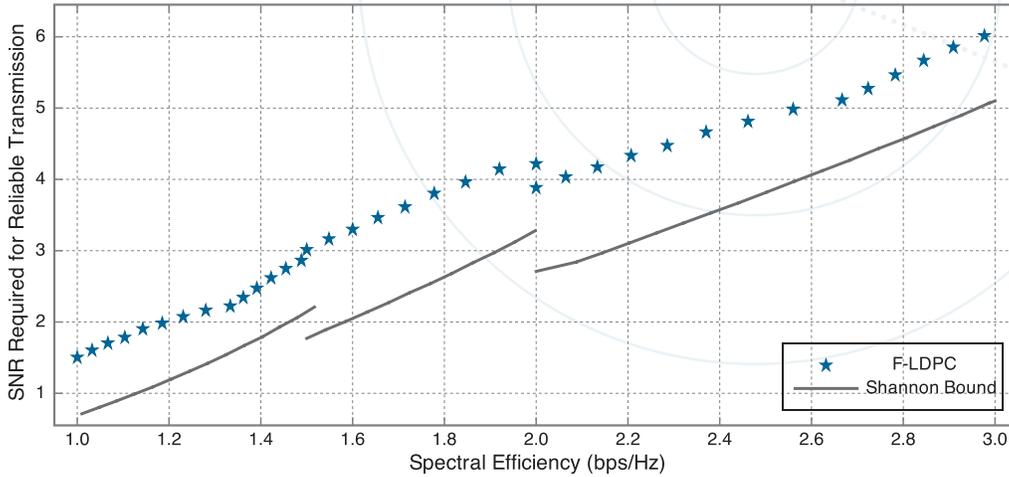


FLEXIBLE-LOW DENSITY PARITY CHECK (F-LDPC)



TrellisWare
TECHNOLOGIES



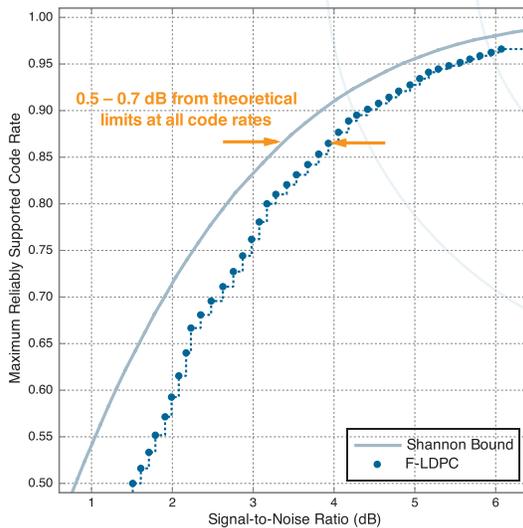
The F-LDPC provides performance within 1 dB of information-theoretic bounds across all code rates and modulations. This is achieved with a low-complexity, high-throughput decoding architecture.

F-LDPC

TrellisWare designed the F-LDPC code family to meet the demand for high-performance Forward Error Correction (FEC) solutions across a wide range of commercial and military applications. F-LDPC codes offer capacity-approaching performance for all offered code rates and modulations without sacrificing decoder latency or throughput.

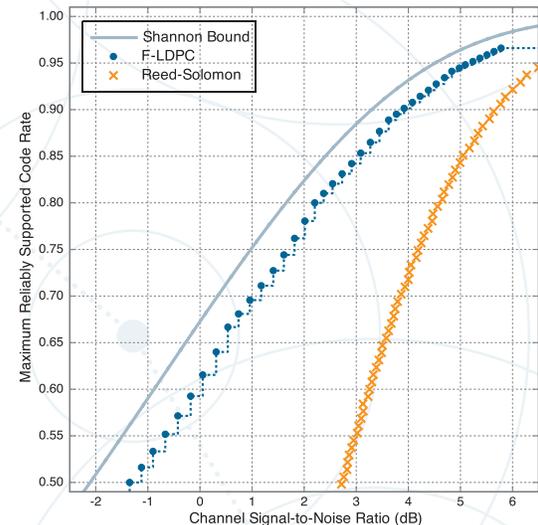
F-LDPC is available as encoder and decoder cores for FPGA and ASIC devices. Standard cores support 8 block sizes, 40 code rates, 4 modulation types and can be instantaneously reconfigured on-the-fly: there is zero latency penalty when transitioning from decoding a 128-bit, rate-1/2, QPSK-modulated data block to a 16,384-bit, rate-32/33, 16QAM-modulated data block. TrellisWare can also add custom block sizes and code rates before or after delivery via a simple, programmable ROM update.

F-LDPC is deployed in very small aperture terminals (VSAT), free space optics (FSO), holographic storage systems, military waveforms, and TrellisWare's own tactical mobile ad-hoc networking (MANET) radio products. Some customers choose the F-LDPC for its throughput – Gpbs+ in FPGAs – while others value its low implementation complexity. Others leverage the flexibility of the F-LDPC while designing new waveforms, or for backwards compatibility with legacy links.



The flexible, capacity-approaching threshold performance, and excellent floor performance of F-LDPC make it appealing to customers across diverse markets, with diverse applications:

- Replace Viterbi/Reed Solomon FEC with a modern code without changing other elements of waveform design
- Apply it to low-cost VSAT and M2M communications links
- E Band and optical link designers use it to benefit from modern codes at multi-Gbps throughputs



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