

The Operator Highway

How an optimized radio physical layer maximizes your ROI in spectrum

Transferring data over mobile networks is like traffic on a busy highway, where –

- **Data (bits)** are the passengers
- **Throughput (bits/s)** is the number of passengers arriving per second
- **Latency (ms)** is the time it takes to reach the destination
- **Bandwidth (Hz)** is the number of lanes available
- **Spectral efficiency (bits/s/Hz)** can be seen as a measure of the average throughput per lane of the highway

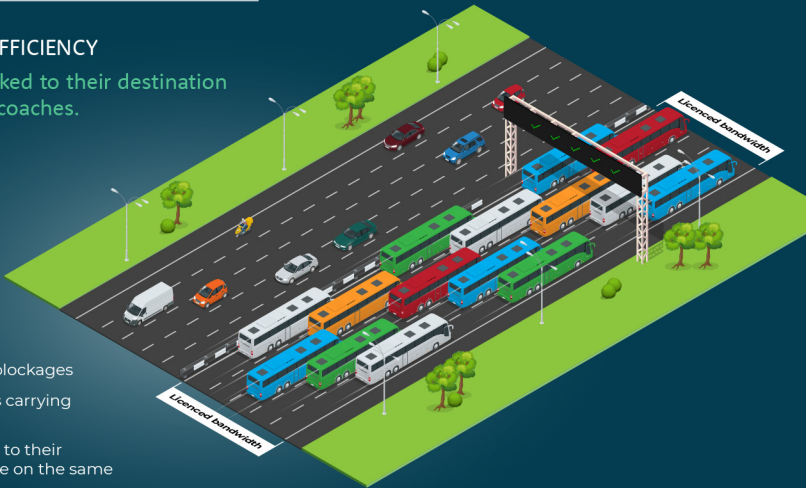
Maximizing spectral efficiency is critical to improving 5G network performance, and enables mobile operators to get maximum value from scarce spectrum assets. An optimized physical layer design can make a dramatic difference.

STANDARD 5G NETWORK



ACCELERCOMM-OPTIMIZED 5G NETWORK

MAXIMUM SPECTRAL EFFICIENCY
All passengers are whisked to their destination in high-speed, reliable coaches.



CONFIGURABLE IP THAT ENABLES YOU TO REALIZE THE VALUE OF YOUR OPERATOR HIGHWAY



Best spectral efficiency in all conditions

The integrated design of the AccelerComm decoder chain, including LDPC, channel estimation, and MIMO equalization functions realizes a full

3dB improvement in uplink receive sensitivity



Most reliable performance

A unique algorithm removes the BLER floor experienced by other decoders, even at high signal to noise ratios. Ultra low BLER drives

99.999% service availability



Fastest transport

AccelerComm IP supports scalable OFDM Numerologies, meaning the highest channel throughputs and lowest latencies are achieved

Supporting all 5G NR numerologies

OUR INNOVATIVE LDPC ARCHITECTURE...



Reduces power usage
56% energy/bit saving



Reduces chip area
40% silicon area saving

Maximizing spectral efficiency to meet 5G service and business requirements