



10-Gbps duobinary-4-PAM for High-Performance Access Network

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10-Gbps duobinary-4-PAM for High-Performance Access Networks

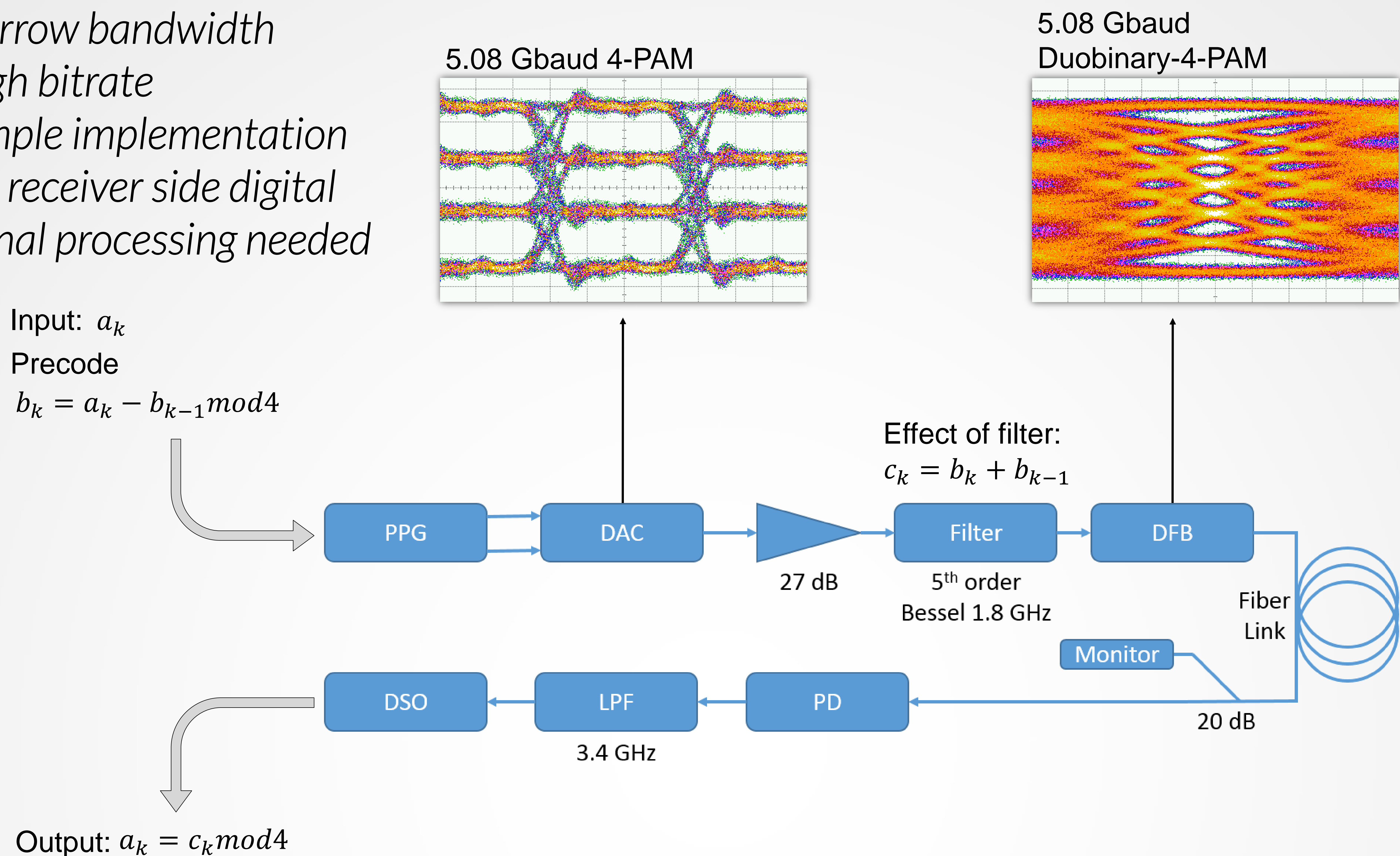
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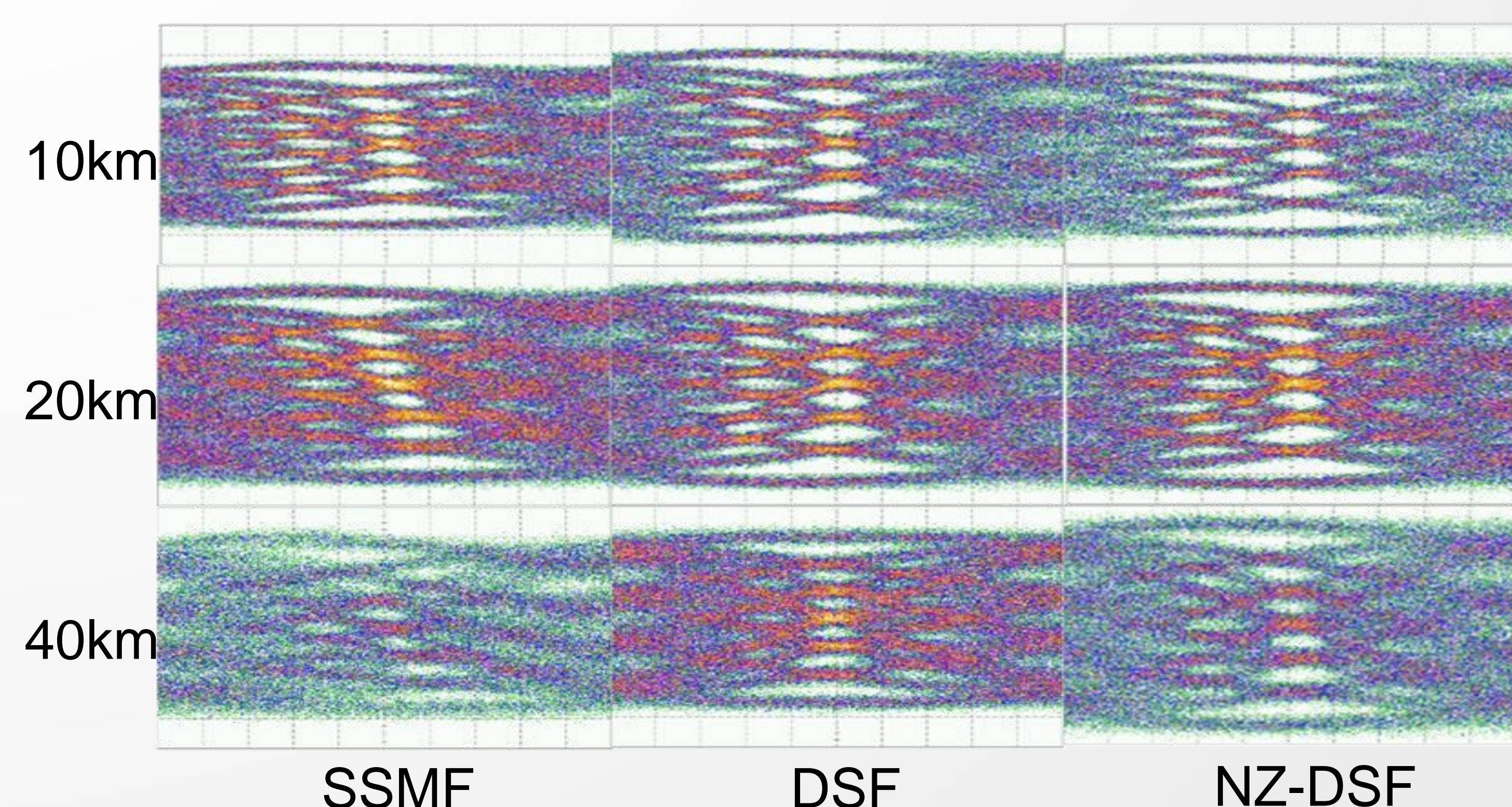
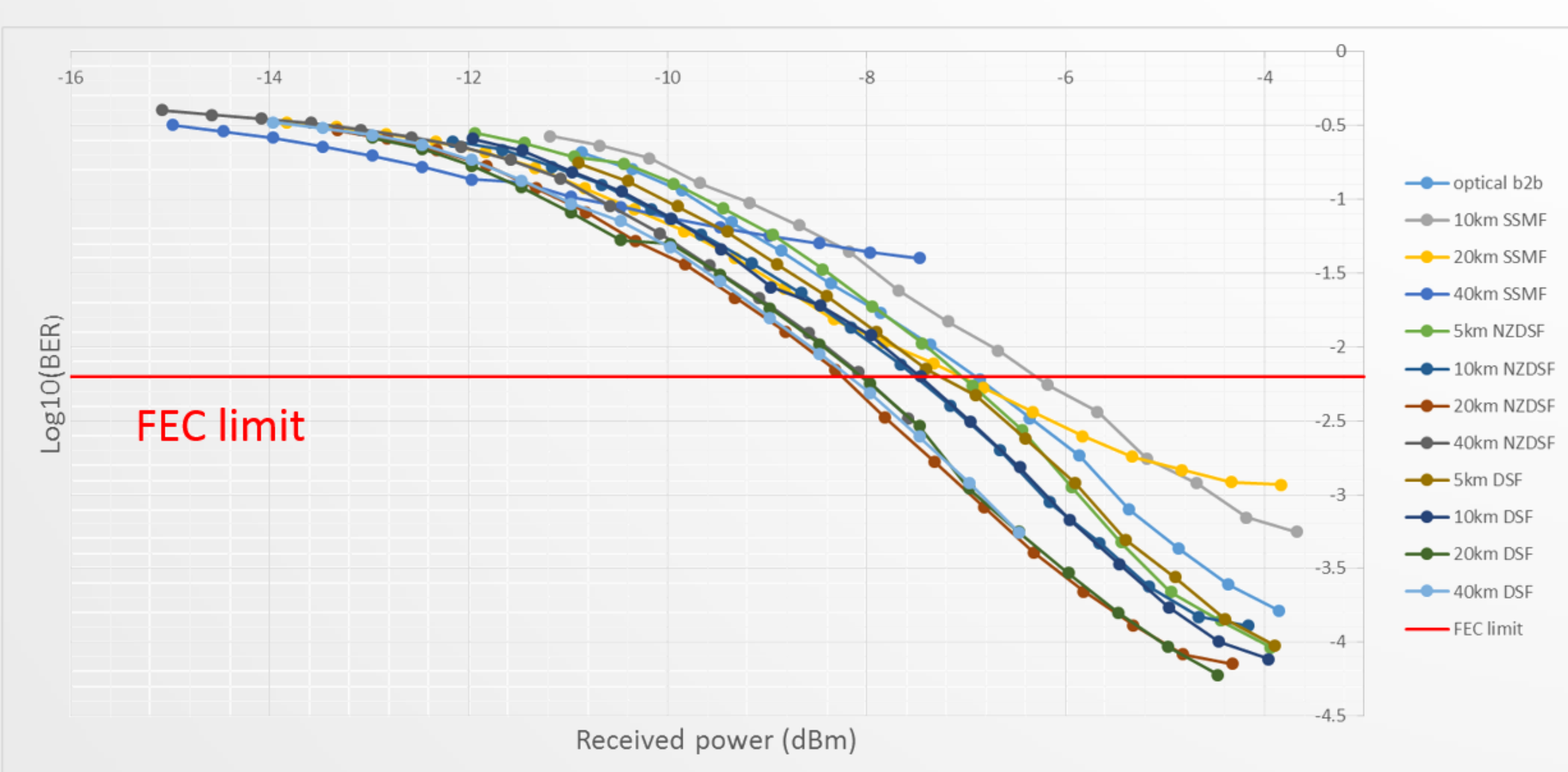
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Duobinary-4-PAM:

- Narrow bandwidth
- High bitrate
- Simple implementation
- No receiver side digital signal processing needed



Results



Advantages

- Very simple transmitter and receiver
- Half the spectrum of 4-PAM
- Robust transmission performance

Drawbacks

- Receiver sensitivity penalty
- Short sampling window
- Dispersion sensitive

Conclusion:

Duobinary-4-PAM allows transmission of 10Gbps signals over 2.5GHz equipment.

Useful for limited bandwidth applications, e.g. Radio-over-fiber