
10GBASE-T: Open Issues

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Open issues

- **SNR margin**
 - ✓ Is there enough margin for 100m?
 - ✓ How much SNR margin is required to declare link operational?
- **Noise**
 - ✓ Alien crosstalk from disturbers other than 10GBASE-T
 - ✓ Susceptibility to other electro-magnetic interferences
 - ✓ Crosstalk scenarios with stations at different lengths from network side
- **Transmit PSD**
 - ✓ TX PSD specification is too loose
 - ✓ TX PSD features: specified spectral nulls at dc and/or $1/2T$? near zero-excess bandwidth?

Open issues

- **Channel specifications**

- ✓ Class E appears to be equal or better than Class F (?)
- ✓ Uncertainty about AFEXT specifications

- **Precoding**

- ✓ Small set of fixed precoders vs. programmable precoder
- ✓ Length of programmable precoding response
- ✓ Limiting constellation expansion by constraining precoding coefficients