



# Text for PAM4 Modulation

Contribution to IEEE 802.3cy

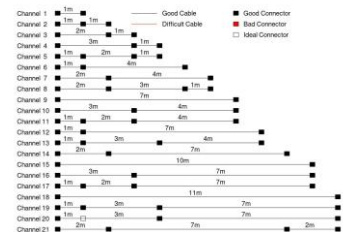
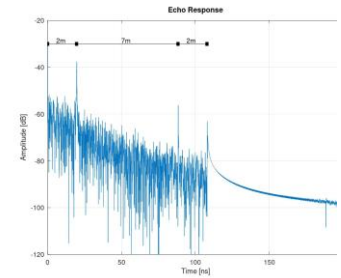
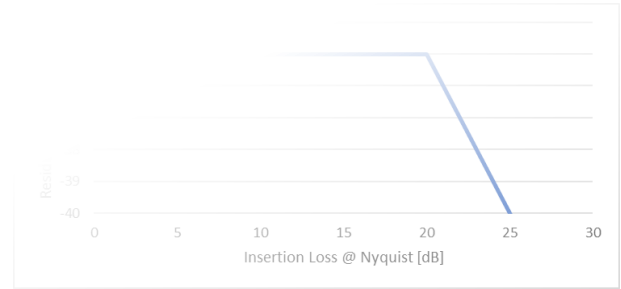
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# Introduction

- PAM4 modulation is a good candidate for 802.3cy
- In particular, the PAM4 modulation defined in 802.3ch is a good starting point for 802.3cy modulation
- We suggest adopting modulation text from 802.3ch with appropriate changes for 802.3cy



# Proposed Modulation Related Text for 802.3cy

We suggest to adopt the text (with minor adjustments) from the following clauses:

- ❑ 149.3.1
- ❑ 149.3.2
  - Except for EEE sub-clause 149.3.2.2.22, which needs more discussion
- ❑ 149.3.3
- ❑ 149.3.4
- ❑ 149.3.5
- ❑ 149.5.2.4
- ❑ 149.5.2.5
- ❑ 149.5.2.6

# Text Changes for 802.3cy

- The text from clause 149 needs to be updated to reflect 25Gbps data rate
- The RS-FEC block size may need to be changed to something other than (360,326)

## **Specific changes to the text:**

- XGMII changes to 25GMII
- 2.5G/5G/10G changes to 25G
- The S value changes to 2.5
- The L values for 25G are 1, 2, 4, and TBD

# Conclusion

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PAM4 modulation has many benefits for 802.3cy

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No other modulation has been shown to perform better over multiple cables

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We suggest to adopt for 802.3cy the modulation text from 802.3ch with appropriate changes



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