# Common Mode Comment Recommendations 101,102,103,104,105

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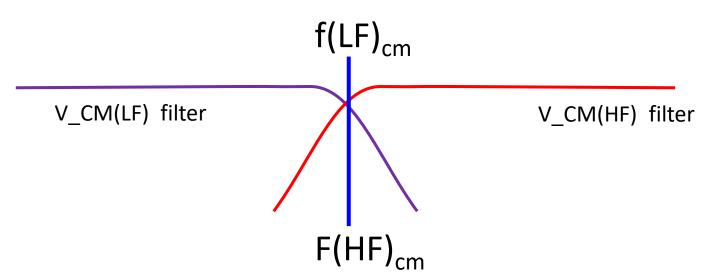
# Supporters

# IEEE 802.3 100 Gb/s, 200 Gb/s, and 400 Gb/s Electrical Interfaces Task Force January 12, 2022, ad-hoc meeting

❑ Reference: mellitz_3ck_adhoc_01_011222

❑ Summary: Recommendations

# Proposal 1: Separate CM voltage specification by frequency Comment: # I-101 & # I-102

❑ Separate low and high frequency measured common mode voltage
  - V_CM(LF) is V_CM filtered with a <u>low</u> pass $4^{th}$ order Bessel Thomson filter with 3 dB point a $f(LF)_{cm}$
  - V_CM(HF) is V_CM filtered with a <u>high</u> pass $4^{th}$ order Bessel Thomson filter with 3 dB point a $f(HF)_{cm}$

❑ $f(LF)_{cm}=f(HF)_{cm} \rightarrow$ **100 MHz**

❑ **It's understood that applicable complementary LF/HF CM specification are to be adjusted accordingly, such as** *"Common-mode to differential-mode return loss, RLdc (min)", "Differential-mode to common-mode return loss, RLcd", "Common-mode to common-mode return loss, RLcc (min)"," Differential-mode to common-mode insertion loss, Ilcd" and "Common-mode to differential-mode insertion loss, Ildc"*



$f(LF)_{cm}$

V_CM(LF) filter

V_CM(HF) filter

$F(HF)_{cm}$

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# Proposal 2: for CL 163 and Annex 120F Comments: #I-101 & #I-102

❑ $V_{CMPP\_LF}$ (max) → 30 mV (new line in tables)
- Used for low frequency

❑ $SCMR_{HF}$(min) → 16 dB (no change)
- Used for high frequency

# Thank You!