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TR-42 CORRESPONDENCE

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Date: January 31, 2020

To: David Law, IEEE 802.3 Working Group Chair, dlaw@hpe.com

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Re: TR-42 liaison to IEEE on BASE-T1 isolation

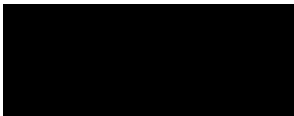
Dear Mr. Law:

TIA TR42.9 requests assistance of IEEE 802.3 Working Group to resolve the complexity between device components and cabling system components regarding high performance EMC compatibility. This may be applicable to the IEEE 802.3cr Task Force which is dealing with isolation.

We have noted that 10BASE-T1L, 10BASE-T1S, 100BASE-T1, and 1000BASE-T1 PHYs do not have a designated common mode voltage range leading to lower common mode saturation levels compared to traditional magnetically coupled twisted pair MDIs with inherent CMR isolation performance. This increases the burden on cabling components and field installation practices to support elevated electromagnetic noise levels of industrial applications.

We request IEEE 802.3 Working Group specify isolation classes and corresponding working common mode voltages for affected applications (e.g., 10BASE-T1L, 10BASE-T1S, 100BASE-T1, and 1000BASE-T1).

Sincerely,



Greg Sandels
Chair, TIA TR-42 Engineering Committee