

- 400GBASE-ZR is specified for 64 channels, ranging from 191.375 to 196.1 THz.
- The EVM measurement methodology defined by Slides 5-9 of [pittala_3ct_01a_0120.pdf](https://www.ieee802.org/3/ct/public/20_01/pittala_3ct_01a_0120.pdf) was adopted to enable correlation for the definition of a transmitter metric. [URL: https://www.ieee802.org/3/ct/public/20_01/pittala_3ct_01a_0120.pdf].
- The summary of the current adopted 400GBASE-ZR Transmit, Receive, and Black Link characteristics is provided in [URL: https://www.ieee802.org/3/ct/public/tf_interim/20_0917/issenhuth_3cw_01a_200917.pdf]. Please note some items have proposed values, while others have been left "TBD".

Please note that the following 400GBASE-ZR Transmit, Receive, and "Black Link" characteristics have not been adopted, but have been identified for further study for possible inclusion:

- Transmit Characteristics:
 - Spectral excursion (max)
 - Laser relative intensity noise (avg)
 - Laser relative intensity noise (max)
 - Instantaneous I/Q offset (Dither)
 - Tx Clock Phase Noise
 - Transmitter back reflectance tolerance
- Receive Characteristics:
 - Damage Threshold
 - PMD Tolerance
- "Black Link" Characteristics
 - "Black link" transfer function with a well-defined TX spectrum

At this time no baseline proposals for an EVM Specification to add into the draft have been submitted.

Please note that all baseline decisions are subject to change as the project proceeds through the draft development process.

At this time the IEEE 802.3 Ethernet Working Group also has the IEEE P802.3ct 100 Gb/s over DWDM systems project. This effort is currently ahead of the IEEE P802.3cw project, and, therefore, it is anticipated that Clause 45 management register specifications developed for the IEEE P802.3ct draft will be the basis for the future IEEE P802.3cw draft. We are happy to provide you with the current copy of IEEE P802.3ct draft D2.2. We request that this be shared only with your membership.

We look forward to continued collaboration with the OIF on 400GBASE-ZR technologies.

Sincerely,
David Law
Chair, IEEE 802.3 Ethernet Working Group