

CiA 610-3

## CAN XL medium attachment unit

The nonprofit CiA (CAN in Automation) association has released the CiA 610-3 document as Draft Specification Proposal (DSP). It specifies physical medium attachment sub-layer requirements.

In order to achieve bit rates of 10 Mbit/s in CAN XL networks, special transceivers are needed. CiA 610-3 specifies the requirements for CAN SIC XL transceivers, which can achieve this transmission speed. They have already been tested in the [CAN XL plugfest mid of 2021](#). These transceivers support a PWM (pulse-width modulation) coding at the Attachment Unit Interface (AUI), to which CAN XL controllers are connected. The CAN XL data link layer and physical coding sub-layer specification (CiA 610-1) [has been released recently](#).

The switching from the arbitration bit rate (max.: 1 Mbit/s) to the data phase bit rate (10 Mbit/s and more) is performed after the network arbitration, when only one CAN XL node is allowed to transmit. The switching back to arbitration bit rate is done before the Acknowledgement field, when all CAN XL nodes confirm the correct reception of the received CAN XL data frame.

“In order to avoid misunderstanding,” said Holger Zeltwanger, CiA Managing Director, “CAN XL nodes can also use classic high-speed transceiver with and without signal improvement capability (SIC), but then you are limited to lower bit rates in the data phase.” Classic high-speed transceivers are standardized in ISO 11898-2 and CAN SIC transceivers are specified in CiA 601-4. CiA is going to submit the CiA 610-3 specification to be included in the ISO 11898-2 standard, which is currently under review.



(Source: Adobe Stock)

[CW](#)