Leoni to showcase high-speed connections for data centers with transfer rates of 400 Gbit/s and more at the DesignCon

Direct Attach Copper cable assemblies (DACs) and Active Optical Cables (AOCs) provide outstanding signal integrity (SI) together with low power consumption

Friesoythe, January 22, 2019 – Leoni, a global provider of energy and data management solutions in the automotive sector and other industries, will present its high-speed connections for data centers at the DesignCon from January 29 to 31, 2019 in Santa Clara, CA (Booth 949). Alongside an extended range of DAC products, Leoni will be displaying its own AOCs for the first time at the event. The outstanding SI of the latest ‘50s’ generation of twinax ParaLink copper cables will be demonstrated in a measurement setup.

The DesignCon is the premier event in the United States for high-speed and semiconductor communication. Innovations on this market come in the tiniest increments of saved energy or gained transmission lengths. Their impact on constantly growing bandwidths and therefore on data flows worldwide is huge. At the conference, Leoni will show DACs for transmitting up to 400 Gbit/s and AOCs for up to 100 Gbit/s as well as its own loopback test adapters and its latest series ‘50s’ ParaLink copper cables. These high-performance cables transmit up to 112 Gbit/s via a single copper data pair. The outstanding transmission properties of ParaLink 50s will be presented in a live demo at booth #949.

Thanks to our expertise in the development and production of copper and fiber optic cables coupled with precise connection technologies and our own printed circuit board (PCB) design, all Leoni assemblies have excellent SI. For example, Leoni’s QSFP28 AOCs transmit 100 Gbit/s across as much as 100 m (329 ft) while typically consuming less than 2 W per end.

**More bandwidth via copper and fiber optic**

Leoni will present its AOCs for the first time at the DesignCon.  
With OEM-qualified backshells, these lightweight and thin cables reliably transmit 25 and 100 Gbit/s in high-speed applications. Leoni’s further advanced DACs for QSFP-DD and OSFP interfaces transmit up to 400 Gbit/s across 3 m (9 ft) and are available in various breakout versions: QSFP-DD/OSFP to 2QSFP-DD/OSFP, QSFP-DD/OSFP to 4QSFP, QSFP-DD/OSFP to 8SFP. Any data center can easily switch from one technology to another while continuing to operate. All assemblies are hot plug-enabled. The fiber-optic MPO/MTP and LC patch cables from Leoni's extensive range of connections for data centers can also be used with additional transceiver modules for such data transfer with low loss.

**Analyzing and optimizing SI**

Alongside its own high-performance cables, Leoni relies on state-of-the-art, high-frequency measuring technology to develop and optimize its expanded range of products for data centers. All SI analysis readings are taken in the company’s own high-frequency lab. The SI of Leoni’s connections is measured using a vector network analyzer (VNA), time-domain reflectometry (TDR) as well as scope and spectrum analysis (incl. BERT) up to 67 GHz. Leoni has automated testing systems and its own test adapters. Tests are furthermore run in a climate chamber at up to +80°C (176°F) and to measure mechanical stress. The SI is precisely mapped by recording insertion and return loss, conversion parameters, crosstalk analysis as well as impedance and skew measurements. The findings from these analyses are incorporated in the design of the transmission channel and its components. Leoni thereby harmonizes its entire transmission channel of cables, PCBs and connectors, achieving sector-leading transmission-length and energy-consumption readings with all its high-speed assemblies.

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☞ *Illustration material is available for download next to this release at* [*https://www.leoni.com/de/presse/mitteilungen/details/leoni-to-showcase-400gbits-solutions-for-data-centers-at-designcon*](https://www.leoni.com/de/presse/mitteilungen/details/leoni-to-showcase-400gbits-solutions-for-data-centers-at-designcon)

About the Leoni Group

Leoni is a global provider of products, solutions and services for energy and data management in the automotive sector and other industries. The value chain encompasses wires, optical fibers, standardised cables, special cables and assembled systems as well as intelligent products and smart services. As an innovation partner and solutions provider, Leoni supports its customers with pronounced development and systems expertise. The market-listed group of companies employs more than 88,000 people in 31 countries and generated consolidated sales of EUR 4.9 billion in 2017.

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