



## Press Release

### **Silicon Line Announces the World's First 10 Gbps Transceiver for USB 3.0 and USB 3.1 Active Optical Cables**

**Munich, Germany, 15 January 2015:**

Silicon Line GmbH, a leading provider of optical link solutions for high-speed video interconnects, today announced the commercial release of the ultra-low power SL86050 USB 3 transceiver. The IC is used to implement active optical cables compliant with both Superspeed USB 3.0 (5 Gbps) and USB 3.1 (10 Gbps) standards.

USB is the most successful interface in the history of computing and has an installed base of 10 billion+ units which is growing at 3 billion+ per year. Superspeed USB 3.0 is already well established in the market and 2015 will see the first introduction of USB 3.1 10 Gbps products. USB 3.1 enables a full 25GB HD movie to be transported in around 30 seconds. A new small form factor USB connector, the Type C connector, has also been introduced which brings this new 10 Gbps capability into the tablet and smartphone markets which require very small form factor connectors and cables.

“The new Superspeed USB 3.1 and small form factor Type C connector standards are expected to be widely adopted not only in traditional PC markets but also in the smartphone and tablet markets”, says Ian Jackson, Senior Manager Sales and Marketing at Silicon Line. “However implementing 10 Gbps cables using traditional copper wires is very challenging. Such electrical cables are normally limited in length to 1m. This can be extended using equalization techniques but results in large, bulky and heavy cables which consume a lot of power”, he added. “The new SL86050 enables active optical cables which are several meters in length as well as being light, thin and flexible. A perfect fit for the new USB Type C connector”.

USB 3 is also being extensively used in the rapidly growing virtual reality headset market where it is combined with HDMI 2.0 in one cable which transports both camera and display data. Silicon Line also provides ICs for optical HDMI 2.0 which, together with SL86050, enables a long, thin and light cable to connect the PC to the headset. This gives much greater freedom of movement to the person using the headset.

The SL86050 contains both a vertical cavity surface emitting laser (VCSEL) driver and a transimpedance amplifier (TIA) specially designed to process USB 3 signals. Together with appropriate photonics it is used to implement an optical link for transporting both USB 3.0 and USB 3.1 data. The device takes its power directly from the USB connector and also processes the LFPS (Low Frequency Periodic Signaling) information. It requires no additional external components which allow all necessary electronics to be fitted into a small Type C connector housing and makes the implementation of an active optical cable simple and straightforward.

The SL86050 has an ultra-low power consumption which enables an active optical cable based on the device to support bus powered peripherals as well as self powered peripherals.

The SL86050 is available as a bare die and is ready for production.

#### **About Silicon Line GmbH**

Silicon Line is a leading global provider of innovative ultra-low power optical link technology for mobile and consumer electronics markets. Silicon Line products enable the power-efficient optical transportation of video, images, voice and data at the multi-gigabit speeds demanded by both today and tomorrows digital consumer lifestyles.

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