



Press Release

Silicon Line Announces the World's Most Power Efficient 12.5 Gbps VCSEL Driver and TIA Chipset using only 34 mW

Munich, Germany, 01 March 2012:

Silicon Line GmbH, a leading provider of ultra-low power analogue ICs, today announced that it has brought to market the SL82022 and SL82012, an ultra-low power 12.5 Gbps VCSEL (Vertical Cavity Surface Emitting Laser) driver and TIA (transimpedance amplifier) chipset. Implemented in standard CMOS using Silicon Line's world leading ultra-low power design architectures, the chipset only consumes a total of less than 34 mW at 12.5 Gbps. Including typical VCSEL modulation currents an entire optical link based on these ICs would consume less than 50 mW. This corresponds to below 4 pJ per bit.

"Silicon Line has pioneered the use of ultra-low power optical links in the mobile consumer market for such products as notebooks / ultrabooks, tablets and smart phones. These products require ever higher data bandwidth as high resolution "retina" type displays, 3D displays and full HD cameras become mainstream. These extremely high data rates create significant EMI issues which impact on the many RF antennas in these devices", says Ian Jackson, Senior Manager Sales and Marketing at Silicon Line. "Increasingly small and thin form factor designs compound these issues", he added. "Replacing electrical links with optical links based on SL82022 and SL82012 solves these issues and the ultra-low power consumption of the chipset helps to prolong battery life".

Silicon Line has an extensive portfolio of leading edge, ultra-low power and cost effective VCSEL drivers and TIAs, including 3 Gbps and 6 Gbps single, dual and quad channel chipsets. The single channel 12.5 Gbps SL82022 and SL82012 are Silicon Line's latest additions to its rapidly expanding product portfolio.

The chipset supports an ultra-wide range of data rates from 20 Mbps to 12.5 Gbps and requires only 34 mW of power at 12.5 Gbps. In sleep mode the chipset consumes less than 2 uW of power. The SL82022 VCSEL driver has an integrated temperature controller which automatically adjusts the VCSEL currents depending on ambient temperature. Burn-in and diagnostic modes are also available. The SL82012 TIA is suitable for both GaAs and Si photodiodes.

SL82022 and SL82012 are ideally suited for a wide range of applications including optical links for high mega-pixel camera sensors and high resolution / high pixel density retina type displays as well as high speed active optical cables such as Thunderbolt.

The SL82022 and SL82012 are available as bare die.

About Silicon Line GmbH

Silicon Line is a fabless analog IC company designing and providing physical layer technologies that enable ultra-low power, low cost optical links at multi-gigabit rates for mobile and consumer platforms. Silicon Line is located at Elsenheimerstrasse 48, D-80687 Munich, Germany. Additional information is available at www.silicon-line.com.

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