life.augmented

Press release

P3519I

STMicroelectronics Reveals Best-In-Class Devices with the Highest Available Qualification for the Worldwide Aerospace Market

New LVDS interface ICs join ST's growing hi-rel device portfolio, offering superior radiation hardness and electrical characteristics

Geneva, June 26, 2014 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications and a leading supplier of high-performance components for space applications, has extended its portfolio of radiation-hardened (rad-hard) devices by adding a series of LVDS[1] drivers, receivers, and multiplexers carrying the US 300krad QML-V qualification[2].

ST's new rad-hard devices exceed the performance of competing solutions, combining proven 130nm process technology with dedicated chip architecture and layout rules to achieve superior radiation-immunity and electrical characteristics. The development has been supported by the French Centre National d'Etudes Spatiales (CNES) and the European Space Agency (ESA) for use in future commercial and government satellite projects. The ST devices are also QML-V qualified, enabling approval for use by space agencies and contractors worldwide.

"These high-performance devices are a new result of the long and fruitful collaboration of ST, ESA, and CNES in the development of rad-hard products for space, and we are eager to see them added to the European Preferred Part List," commented Jean-Louis Venturin, Head of Section, Environment and Components at CNES.

Jean-Francois Vadrot, STMicroelectronics Manager of the Aerospace & Hi-Rel Business Unit, added," Our new LVDS devices have a complete set of radiation test reports and macromodels, including end-of-life and end-of-radiation, delivering a best-in-class solution that further strengthens our offering for the worldwide Aerospace market."

---

[1] LVDS (Low-voltage differential signaling) is a technical standard that specifies electrical characteristics of a differential, serial communication protocol.

[2] Both the United States' Qualified Manufacturer List (QML) Class V and ESCC (European Space Components Coordination) are considered to be the highest qualification for space integrated circuits (ICs).

ST has over 35 years' experience in supporting government and commercial space programs worldwide, with components in the field having accumulated several million successful flying hours. The Company manages a growing portfolio of space- and hi-rel-qualified components including bipolar transistors and MOSFETs, voltage references, gate drivers, linear ICs, and power converters. With proven technologies and design expertise at several process nodes, including 130nm and 65nm, ST also owns the world's only production facility to be certified both by ESA and the Defense Logistics Agency (DLA).

LVDS Family Technical Information:

The new family comprises the RHFLVDS31A and RHFLVDS32A driver/receiver ICs, the RHFLVDSR2D2 (LVDS dual transceiver), and the RHFLVDS228A crosspoint switch. All devices are extremely robust in the presence of heavy ions and high total ionizing dose, operating up to 135 MeV.cm²/mg SEL-free (Single-Event Latch-up) in the case of the LVDS31A/32A and achieving best-in-class SET-withstand (Single-Event Transient) capability. The devices display no significant deviation of static or dynamic features up to a total ionizing dose of 300krad (MIL-STD-883 TM1019).

In addition, the devices have an extremely wide input common-mode range from -4V to +5V, including when operating from a lower supply voltage, such as at 3.3V. This extended range increases tolerance of variations in system ground potential, which simplifies design by easing grounding challenges.

By also achieving shorter propagation-time and reduced channel-to-channel skew compared to other devices in the market, ST's new LVDS devices sustain higher data rates with better synchronization between channels and lower power consumption. In addition, a superior supply-voltage Absolute Maximum Rating (AMR) of 4.8V ensures compliance with space-agency de-rating rules eliminating any need for waivers. 8kV (HBM) ESD protection is provided on LVDS I/Os, and all pins have cold-spare capability for failsafe operation.

For further information please visit www.st.com/radhard-lvds-pr

About STMicroelectronics

ST is a global leader in the semiconductor market serving customers across the spectrum of sense and power and automotive products and embedded processing solutions. From energy management and savings to trust and data security, from healthcare and wellness to smart consumer devices, in the home, car and office, at work and at play, ST is found everywhere microelectronics make a positive and innovative contribution to people's life. By getting more from technology to get more from life, ST stands for life.augmented.

In 2013, the Company's net revenues were $8.08 billion. Further information on ST can be found at www.st.com.

For Press Information Contact:
STMicroelectronics
Michael Markowitz
Director Technical Media Relations
+1 781 591 0354
Michael.Markowitz@st.com