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Eutelsat and STMicroelectronics Announce Low-Cost, Low-Power System-on-Chip for Interactive Satellite Terminals

ST and Eutelsat complete development of state-of-the-art chip for Eutelsat's next-generation SmartLNB

Paris, France and Geneva, Switzerland – March 8, 2017 – Eutelsat Communications (NYSE Euronext Paris: ETL), one of the world's leading satellite operators, and STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, have achieved a new milestone with a new-generation chip that will power Eutelsat's SmartLNB interactive terminal.

ST's advanced, low-power System-on-Chip ([STiD337](#)) represents a big step down in the overall cost of interactive satellite terminals. The STiD337's first adoption is in Eutelsat's SmartLNB, lowering cost, upgrading service, and significantly reducing power consumption.

The SmartLNB is an electronic feed that replaces the traditional Ku-band reception of DTH satellite signals, embedding one or more satellite tuners/demodulators directly inside the LNB (low-noise block) and adding a narrowband return link optimized for transmissions of IP packets. The SmartLNB enables a wide range of connected TV applications, providing a transparent bidirectional IP link compatible with existing services. Not limited to the TV and broadcast market, applications also cover the exploding sector of connected objects (Machine-to-Machine, Internet of Things, SCADA, home-automation, Smart Buildings, etc.) with a cost-effective solution via satellite.

ST has employed its very low-power 28nm FD-SOI (Fully Depleted Silicon on Insulator) process technology that enables deep sleep and auto wake up for the system. With a maximum 3.5W power dissipation at full speed and less than 50mW (typical) during sleep, the STiD337 is the most power-efficient device available today to take the SmartLNB to a new level of performance and efficiency.

The STiD337 adds the latest DVB-S2X satellite standard for the forward link, as well as GSE (Generic Stream Encapsulation) for efficient data handling; it can achieve throughput of over 100Mb/sec. The return path implements a software-radio approach that is optimized for the enhanced spread-spectrum technique with asynchronous access typically used for the SmartLNB. The device also includes the full complement of hardware mechanisms to support real-time multiple-access techniques. The return modulation is calculated on the internal processors. The platform includes a dual ARM® Cortex®-A9 core with NEON™ co-processors and four ST231 DSP offload coprocessors to enhance its compute power and ensure complete flexibility in the choice of return-channel modulation type.

The new SoC will be available in secure and standard versions. The secure version includes pre-loaded encryption keys, serial numbers, safe-boot, and many other features to increase the level of protection of data-delivering and gathering operations by the SmartLNB.

“We wanted a step change in the cost and performance for the next generation of our SmartLNB interactive service. We know from our customers that security is a major concern and we wanted to address that head on. Furthermore, with satellite terminals becoming more ubiquitous and employed in a greater range of use cases we needed to pay even greater attention to power consumption,” said Antonio Arcidiacono, Director of Innovation at Eutelsat. *“The design objectives we set have all been met and we’re aiming to roll out higher-performance, lower-cost, secure, and above all, lower-power consumption SmartLNB terminals based on ST’s new satellite SoC by the end of 2017.”*

“Working closely with Eutelsat, we’ve developed the lowest-cost, lowest-power, secure, and most advanced interactive satellite-modem SoC to date,” said Jocelyne Garnier, Group VP, General Manager, Aerospace, Defense, and Legacy Division, STMicroelectronics. *“From the outset we knew we could bring innovations to the market that played to many of the strengths we have in ST, especially in digital satellite systems, our system-on-chip experience, our low-*

power technologies, and of course, our security IP.”

ST provides a hardware evaluation platform, a Linux-based operating system, and a basic driver set. Final production samples of the STiD337 are available now and full production is scheduled for May 2017. Further information is available on ST.com and under NDA.

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 2016, the Company's net revenues were \$6.97 billion. Further information on ST can be found at www.st.com.

About Eutelsat Communications

Established in 1977, Eutelsat Communications (Euronext Paris: ETL, ISIN code: FR0010221234) is one of the world's leading and most experienced operators of communications satellites. The company provides capacity on 39 satellites to clients that include broadcasters and broadcasting associations, pay-TV operators, video, data and Internet service providers, enterprises and government agencies.

Eutelsat's satellites provide ubiquitous coverage of Europe, the Middle East, Africa, Asia-Pacific and the Americas, enabling video, data, broadband and government communications to be established irrespective of a user's location.

Headquartered in Paris, with offices and teleports around the globe, Eutelsat represents a workforce of 1,000 men and women from 37 countries who are experts in their fields and work with clients to deliver the highest quality of service.

For more about Eutelsat please visit www.eutelsat.com

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