News & Updates from STMicroelectronics

October 2016

High-efficiency wireless battery-charging chipset for wearables

The combination of ST's STWBC-WA charging-transmitter controller and STWLC04 wireless battery-charger receiver enables power transfers up to 1 W with smaller coils than any other chipsets: just 11 mm diameter coils on the receive side and 20 mm for the transmitter allow slimmer form factors. The fully-featured chipset supports wireless-charging for Li-ion or Li-polymer battery chemistries and includes safety mechanisms such as foreign-object detection (FOD), active transmitter-presence detection, and receiver thermal protection. Read more

LPS22HB adapter board for a standard DIL 24 socket

The STEVAL-MET001V1 adapter board offers an effective solution for fast system prototyping MEMS solutions based on LPS22HB absolute pressure sensors from directly within the user's application via a standard DIL 24 socket. This adapter is supported by the STEVAL-MKI109V2 motherboard, which includes a high-performance 32-bit MCU as a bridge between the sensor and a PC, on which it is possible to use the downloadable GUI or dedicated software routines for customized applications. Read more

Hands-on development for industrial Safety Integrity Level systems

Evaluate the performance of the 60 V IPS160H single high-side switch with protections and diagnostics for Safety Integrity Level (SIL2 and SIL3) compliant systems using the STEVAL-IFP028V1 evaluation board. With its thermally-optimized layout, a galvanically-isolated connection for the command and diagnostic lines, the board complies with IEC 61000-4-2, -4, and -5 requirements to safely drive complex loads with one side connected to ground, such as valves, relays and lamps in factory automation or process control applications. Read more

0.7 A / 3.3 V synchronous buck converter replaces high-current linear solutions

This STEVAL-ISA055V2 evaluation board is based on an ST1S12 synchronous step-down DC-DC converter with Enable function. Optimized for powering low-voltage digital cores in HDD applications, it uses tiny capacitors and inductors to replace high-current linear solutions when power dissipation may cause high heating of the application environment. The ST1S12 device is thermal-protected and current-limited to prevent damage due to accidental short-circuits. Read more

Complete ECMF solution strengthens USB port protection

The ECMF2-0730V12M12 is a highly integrated common-mode filter designed to suppress EMI/RFI common-mode noise on LTE, GSM and GPS bands. It brings attenuation below -20 dB from 0.7 to 2.7 GHz and integrates a strong 12V / 1500W TVS to protect the V_{BUS} line against surge events coming either from the mains supply or car charger. All embedded in a 1.3 x 2.55 mm µQFN package. Read more

New tool for testing our octal high-side smart-power solid-state relays

The STEVAL-IFP032V1 evaluation board, based on the VNI8200XP-32 high-side driver, is intended for device testing in terms of power management and digital interface. The board's isolated interface between the device and host controller are implemented using high-speed opto-couplers for driving

the device, and low-speed opto-couplers to receive device status information via a 30-pin connector and 4x2 LED matrix. A user-friendly GUI is also available for use with the STEVAL-PCC009V2 IPS universal interface board. Read more

Free smart ESD protection device simulator saves design time and cost

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ESD-SIM is a free online simulation tool that compares and contrasts electrical performance of ESD-protection devices and their impact on signal integrity. It enables optimal component choice for the target application, avoiding design spins, delays, and related expenses thanks to pre-configured simulation setups and signal tests. This saves any need for the user to create complex SW bench tests from scratch and ensure compliance with the relevant standards. The simulations are also customizable, and users can save and share designs with local teams or the ESD-SIM community. Read more

Recent blog posts

Audio is the New Eldorado and ST's IoT and Bluetooth Solutions are Golden

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ST held its Developers Conference on October 4 in Santa Clara, California. In anticipation of this event, we published a series of blog posts to preview some of the sessions' topics and introduce the engineers, managers or experts that made this day special. Read more

Show me Your Body Area Network and I Will Tell You What Kind of Sensor You Are

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Sensors are moving from external devices to the body. We've gone from the Six Million Dollar Man to the common folk with a smart watch, fitness tracker, smart wristband, GPS on his wrist, barometer in his pocket, heart monitor on his sleeve, and this is only the beginning. Read more