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STMicroelectronics Accelerates Creation of Advanced High-Efficiency Power Solutions with STM32 Digital-Power Ecosystem

- ❖ *D-Power ecosystem assembles resources to create innovative digital power supplies using STM32 microcontrollers*
- ❖ *STM32 D-Power website consolidates embedded software, development kits, demo boards, tools, documentation, and training*
- ❖ *Practical workshops delivered by ST Authorized Partner and digital-power specialist Biricha Digital*

Geneva, June 18, 2020 - STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, has launched a web-based ecosystem to help designers build digital-power solutions using STM32 microcontrollers (MCUs).

Digital power supplies are an emerging class of devices able to optimize energy efficiency and capture rich data for diagnostics and safety. Digital control also lets designers increase power density to realize size and weight savings that are important in data centers, 5G infrastructure, smart lighting, and mobile devices.

The [STM32 D-Power website](#) consolidates developer resources that include the all-in-one STM32 digital-power Discovery Kits, embedded software components, software tools created by ST Authorized Partner [Biricha Digital](#), and dedicated power-supply boards that demonstrate various designs and power ratings. Documentation, videos, and guides cater to beginners up to expert power-supply designers, and a four-day hands-on workshop created by Biricha shows how to build digital power supplies using STM32 MCUs.

The ecosystem is scaled to support three levels of STM32 microcontrollers that combine the benefits of industry-standard Arm® Cortex®-M cores with integrated features optimized for digital-power applications. The entry-level [STM32F334](#), advanced [STM32G474](#), and high-performance [STM32H7 series MCUs](#) each contain a flexible high-resolution timer to generate highly accurate pulse-width modulated (PWM) signals for stable control of switched-mode power circuits.

“Our D-Power ecosystem helps designers learn about, design in, and take advantage of digital power to create solutions that are smaller, lighter, cleaner, and smarter,” said Ricardo de Sa Earp, Group Vice President, Microcontroller Division General Manager, STMicroelectronics. *“Users ranging from beginners to experienced designers can enhance their expertise and accelerate development of digital-power applications leveraging the high feature integration and efficiencies of the STM32 family.”*

Dr Ali Shirsavar, Director of Biricha Digital added, *“The embedded software and practical workshops we have developed to support the STM32 D-Power ecosystem deliver high value for*

designers wherever they are on their digital-power journey. Customers can easily engage with these resources to jump-start their designs and advance their expertise.”

Most of the materials and resources are available free on the [STM32 D-Power website](#).

Further technical information

ST's STM32 D-Power ecosystem introduces entry-level users to [digital power-supply](#) and [PFC](#) design with an online presentation, which contains basic technical information. Access to curated hardware and software products include the [B-G474E-DPOW1 Discovery kit](#) based on the [STM32G474RET6](#) microcontroller and the STM32F334 Discovery kit ([STM32F3348-DISCO](#)), with associated videos and application notes including LED control and STM32 HRTimer cookbooks.

The D-Power software development kit (SDK) contains [ST-WDS power-supply design software](#) and [ST-PLD power-factor correction design software](#) created by Biricha Digital, made available as a dedicated free-to-use version for STM32 developers. There are also STM32Cube-compatible embedded-software examples for buck/current mode and buck/voltage mode running on the [B-G474E-DPOW1](#). Additional examples and topologies will be added in the near future.

Digital power-supply evaluation boards with power-factor correction are available in various topologies, such as totem-pole PFC and LLC resonant full-bridge, and power ratings from 500W upwards, including front-end rectifiers and complete AC/DC SMPS.

The [Biricha workshop](#) is a four-day hands-on experience that shows how to design stable digital power supplies and power-factor correction in both voltage mode and current mode for DC/DC and off-line applications, and includes training exercises leveraging the hardware, firmware, and SDK available through the D-Power ecosystem, based on the [STM32F334](#) and [STM32G474](#) MCUs.

You can also read our blogpost at <https://blog.st.com/biricha/>

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By getting more from technology to get more from life, ST stands for life.augmented. In 2019, the Company's net revenues were \$9.56 billion, serving more than 100,000 customers worldwide. Further information can be found at www.st.com.

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