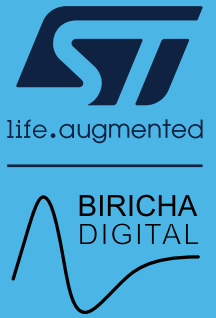


Digital Power Supply

PSU/PFC Design Workshop with STM32 MCUs



Learn to design MCU controlled digital power supplies and PFCs in just four days

Learn how to design digital power supplies from ground up quickly and easily with this in-depth laboratory based design workshop.

The workshop is 4 days long and is aimed at analog PSU designers and embedded systems engineers who need to design high performance stable digital power supplies and Digital PFCs.

First the engineering concepts, theoretical material and step-by-step design procedures are thought in the class and then these are all put into practice with numerous laboratory exercises. The design practices taught in the class can be applied to any MCU with all labs based on ST's Arm® based [STM32G474](#).

ALL ATTENDEES WILL RECEIVE:

- 4 days of intensive engineering training and lab based exercises
- All necessary software templates and easy to program exercises to start you on your digital power projects
- Workshop material, lab notes, lunch and refreshments

DATES AND LOCATIONS

- Tuesday September 14th -
Friday September 17th 2021,
Reading, Berkshire, UK
- Tuesday November 23rd -
Friday November 26th 2021,
Munich Germany
- Tuesday February 8th -
Friday February 11th 2022
Schaumburg, IL, USA





For over 10 years, Biricha has provided world-leading industrial training and consulting services to the power industry. The company specializes in digital PSU and PFC design workshops which are aimed at power supply designers and embedded systems engineers who need to design digital power supplies and PFC stages.

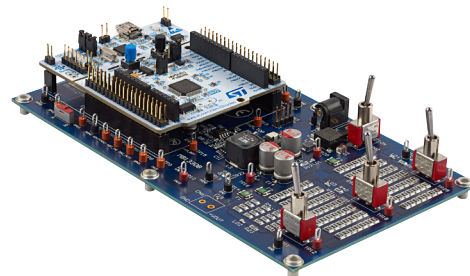
Training schedule

Day 1: Introduction to Digital Power Programming

- Fundamentals of digital power design
- Closed loop control of switch mode power supplies in both analog & digital
- Number formatting for digital compensator, design with various architectures including 16- & 32-bit
- Fixed point format, floating point & Arm® Hands-on labs based on STMicroelectronics' new range of Arm® processors

Day 2: Digital Power Supply Design

- Detailed discussion and design of digital power control loops
- Implementing a stable digital voltage mode controller for your digital power supply
- 2p2z and 3p3z compensator design and coefficient calculation
- Hands-on labs based on STMicroelectronics' new range of Arm® processors

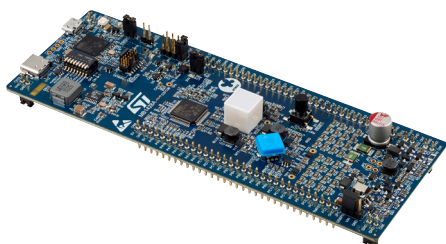


Day 3: Peak Current Mode Control

- Detailed review analog peak current mode design
- Digital peak current mode controller design
- Analog and digital slope compensation
- Hands-on labs based on STMicroelectronics' new range of Arm® processors

Day 4: Digital PFC Design & Implementation

- Single Phase and interleaved CCM Boost PFC topology operation & design
- Step-by-step digital PFC control loop design (voltage loop and current loop)
- Voltage feed-forward & filter design in digital domain
- Hands-on design exercises and live demos



Take your design one step further with **B-G474E-DPOW1**

DIGITAL POWER WEBPAGE



Discover a complete set of resources from hardware, software and embedded firmware to training resources and documentation designed to support and accelerate the design of digital power applications.

st.com/stm32-digital-power

New Biricha's software free available

Biricha has teamed up with STMicroelectronics to provide a special release of "PLD - PFC Loop Design Tool" and "WDS - Power Supply Design Tool" for use with the STM32 range of MCUs from STMicroelectronics. Those ST PLD and ST WDS design tools are free-to-use and allows the user to quickly stabilize their digital PFC stage or digital power supply controlled using an STM32 MCU.

- ST WDS - Power Supply Design Tool for STM32 from Biricha at www.biricha.com/st-wds
- ST PLD - PFC Loop Design Tool for STM32 from Biricha at www.biricha.com/st-pld



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