



Infineon's solutions for 3D printers

Industry-leading system solution for an efficient and optimized 3D printer

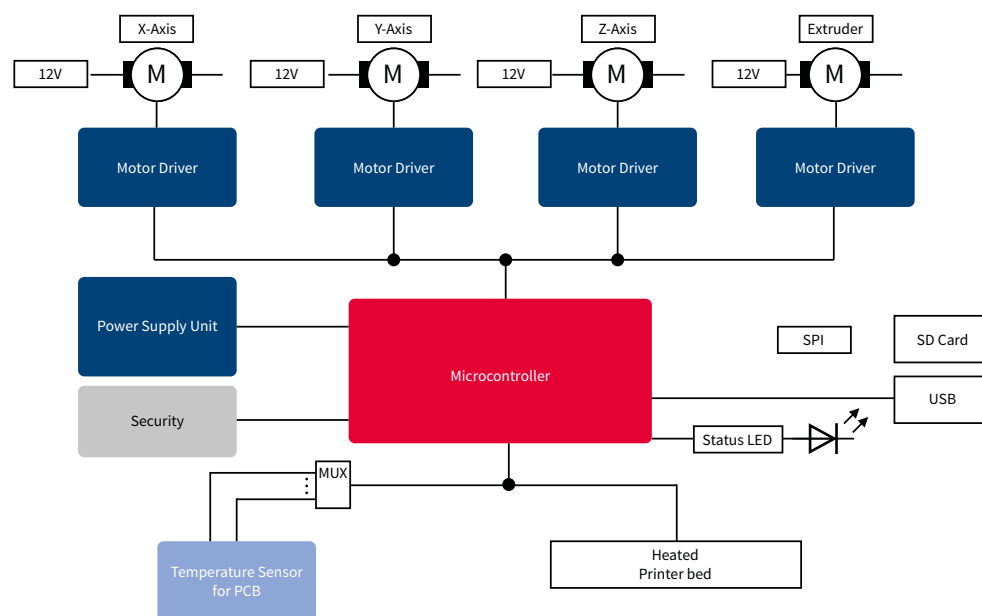
www.infineon.com/3dprinter



Industry-leading solutions for 3D printer

Today, consumers can create a growing list of objects with nothing more than a digital file and a 3D printer. While the big excitement is understandable, 3D printers continue to face a number of limitations – most notably size and speed – that currently prevent the technology from fully replacing a number of assembly line manufacturing processes.

Moving beyond these limitations, to create winning 3D printing designs, a highly reliable motor control solution with excellent speed control and position detection capabilities is required. Furthermore, the compact power supply must offer top energy efficiency and power density.



3D printing solutions from Infineon

As a leader in power management, we offer benchmark product solutions for your power supply designs, ensuring highest efficiency ratings and higher power density. Our high level of integration of motor control solutions (up to 300 W), for example with μ IPM™ or NovalithIC™, allows you to significantly reduce PCB space and to reduce system cost. With our sensor solutions, precise rotor position detection enables more accurate switching points to ensure higher torque in our motor solutions.

Benefits	Offer
Motor control	Our highly reliable product solutions enable energy efficient motor solutions and ensures high precision position control. Moreover, our integrated motor driver solutions provide cost-optimized solutions
Power supply	Using our industry-leading products for your power supply design, you will get the highest energy efficiency based on significantly low conduction and switching losses of our MOSFETs. Consequently, we help to maximize the power density
Security and protection	By integrating our broad portfolio of security solutions, ORIGA™ and OPTIGA™ families, you can secure your 3D printer model and authenticate printer coils, while not needing to compromise ease-of-use. Enhanced security is provided in order to safeguard your business case and your product
Shorter development time	Your design development can be reduced by 30 percent by using reference designs and the Dave™ platform for microcontroller programming

Solutions for 3D printers

Motor control

Solutions for more efficient motor solutions and ensuring higher precision position control

- › μ IPM™
- › NovalithIC™
- › Angle Sensor
- › Hall Switches
- › XMC1100/XMC4500
- › Industrial Transceiver
- › DC-DC Converter

Security and protection

Solutions for printer coil authentication and security of data communication and ESD/ surge protection

- › ORIGA™
- › OPTIGA™ Trust E
- › OPTIGA™ TPM
- › TVS Diodes (for ESD protection)

Power supply

Solutions to enable benchmark energy efficiency and power density across all power stages

PFC stage

- › 600 V CoolMOS™ P6/CE
- › 600 V Co-Pack IGBT with Soft Recovery Diode
- › 650 V AC-DC CoolSET™ F3
- › 650 V Rapid Diode 1 and 2
- › 650 V thinQ!™ Schottky Diodes Gen 5
- › 2EDN EiceDRIVER™

Main stage

- › 600 V QR/LLC Controller
- › 800 V CoolMOS™ C3/CE
- › 600 V CoolMOS™ P6/CE
- › 2EDN/2EDL EiceDRIVER™

Synchronous rectification

- › OptiMOS™ 40 V-60 V
- › 60 V synchronous rectification MOSFETs
- › 2EDN/2EDL EiceDRIVER™

Point-of-Load

- › SuplIRBuck™ single output Point-of-Load Converter
- › DrBlade™
- › DrMOS™ (5x5, 4x4)
- › Digital Controllers: Primarion™

Supportive board material to enhance user experience



Motor control power shield
for Arduino + XMC1100 Boot kit



300 W CCM PFC evaluation board
for SMPS with high efficiency and high power factor; featuring IPP60R190P6 (CoolMOS™ P6)

Demoboards	Components
Motor control power shield for Arduino + XMC1100 Boot Kit	› BTN8982 (NovalithIC™ half-bridge Driver) › XMC1100 (Industrial Microcontroller)

Demoboards	Components
300 W CCM PFC evaluation board	› IPP60R190P6 (CoolMOS™ P6) › IDH02G65C5 (SiC Schottky Diode) › ICE3PCS01G (CCM PFC Controller)

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

© 2015 Infineon Technologies AG.
All Rights Reserved.

Order Number: B152-I0186-V1-7600-EU-EC-P
Date: 10/2015

Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life endangering applications, including but not limited to medical, nuclear, military, life critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.