

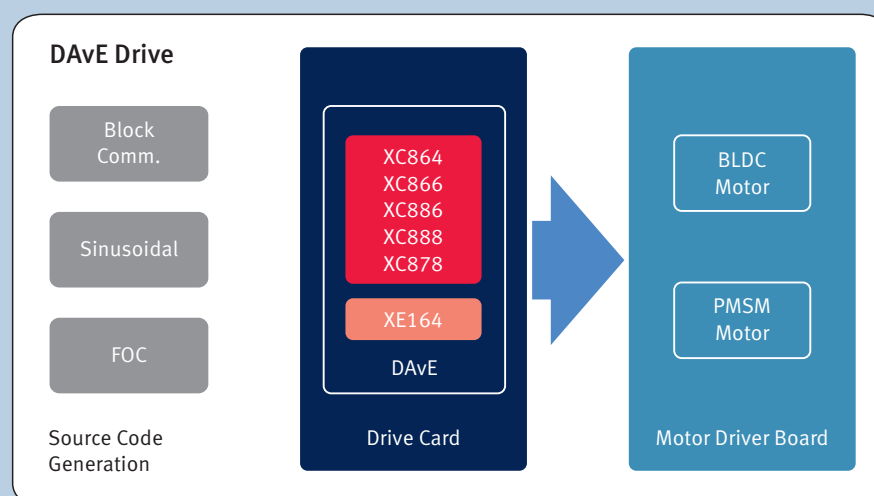


# DAvE Drive

## Application Code Generator for PMSM and BLDC Motor Control with Infineon's 8- and 16-bit Microcontrollers

DAvE DRIVE is a GUI based software tool that allows application developers to configure XC800 and XE164 Classic software for control of brushless synchronous 3-phase motors in a very efficient way. With DAVe Drive, the developer is only a few mouse clicks away from customized code reflecting choice of motor, motor speed, type of control and various other options. DAVe Drive uses the full power of Infineon's microcontroller, e.g. it generates optimized FOC code for XC878 using the enhanced Vector Computer which usually requires expert knowledge in both motor control and assembler programming.

DAvE Drive is an application centric add-on to DAVe, Infineon's Digital Application Virtual Engineer. DAVe provides initialization, configuration and driver code to ease programming for beginners as well as experts. This tool generates complete algorithms in source code, ready to be compiled and debugged by popular tools, as Keil compiler or Tasking compiler.



### Order Code

- KIT\_AK\_DAVEDRIVE\_V3

### Key Features

- Motor types: BLDC, PMSM
- Control algorithm: sensorless field oriented control, block commutation with hall sensors and sensorless
- Microcontrollers: 8-bit XC800 and 16-bit XE164 Classic microcontroller series
- Flexibly generates optimized code and is not based on static libraries
- Configures Infineon's powerful and flexible motor control peripherals
- Compresses a detailed user manual into a few mouse clicks
- Helps designers to quickly and easily implement advanced motor control techniques on low-cost components
- Is based on the successful DAVe software for chip-level
- Is pre-configured for Infineon's 3-phase high voltage Motor Drive Applications Kit (KIT\_AK\_3PHASE\_DRIVE\_V1) and the low voltage DAVe Drive Application Kit (KIT\_AK\_DaveDrive\_V3)

### Applications

- Industrial motor control
- Transportation systems
- Consumer motor control
- Appliance motor control

# DAvE Drive

## Scalable Motor Control Solutions using XC800 and XE166 Families

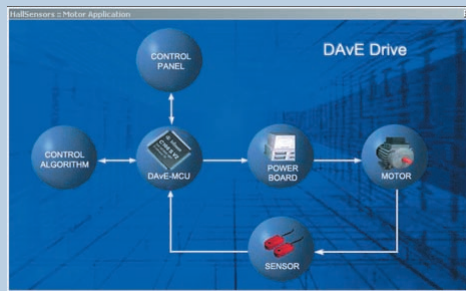
				XE164 → MAC Unit
			XC878 → Enhanced Vector Computer	
		XC886/888 → Vector Computer		
XC866-1FR	XC866-2/4FR			
PWM Unit with Hall Sensor	PWM Unit with Hall Sensor	PWM Unit triggers ADC	Two PWM Units trigger ADC	Three PWM Units trigger two ADC Units
Block Commutation	Block Commutation	Field Oriented Control sensorless	Field Oriented Control sensorless + digital PFC	Dual Motor Field Oriented Control sensorless + digital PFC

### 8-bit MCU XC878

- Cost-effective 8-bit  $\mu$ Cs with 16-bit motor-control performance
- Built-in enhanced vector computer for Field Oriented Control
- Powerful motor control peripheral set: CAPCOM6 and 10-bit ADC
- Up to 64kB Flash
- Up to 3kB RAM
- LQFP-64

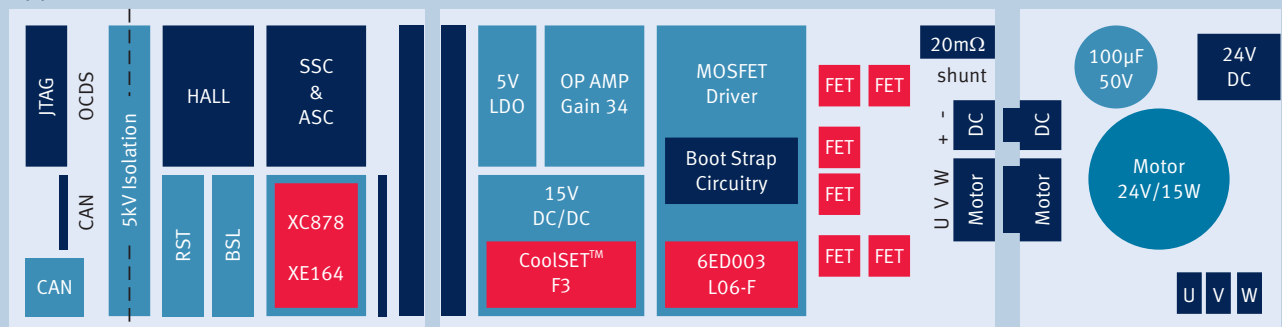
### 16-bit MCU XE164 Classic

- High performance 16-bit  $\mu$ Cs with MAC unit supporting single cycle 16 x 16bit multiplication and accumulation
- Powerful motor control peripheral set
- 3x CAPCOM6 modules
- 2x 10-bit ADC modules
- Up to 768kB Flash
- Up to 82kB RAM
- LQFP-100



**Graphical User Interface of DAVe Drive**  
Infineon's DAVe and DAVe Drive are GUI based configuration tools and source code generators. DAVe Drive let's you select motor type, motor speed and torque.

## Application Board



- Power board for up to 400W power rating (24V - 56V DC, 7.5A)
- DriveMonitor: USB-CAN bridge for real time monitoring
- XC878 and XE164 Classic Drive Card included

How to reach us:  
<http://www.infineon.com>

Published by  
Infineon Technologies AG  
81726 Munich, Germany

© 2009 Infineon Technologies AG  
All Rights Reserved.

**Legal Disclaimer** The information given in this Product Brief shall in no event be regarded as a guarantee of conditions or characteristics. With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation, warranties of non-infringement of intellectual property rights of any third party.

**Information** For further information on technology, delivery terms and conditions and prices, please contact the nearest Infineon Technologies Office ([www.infineon.com](http://www.infineon.com)).

**Warnings** Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office. Infineon Technologies components may be used in life-support devices or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Infineon:](#)

[KITAKDAVEDRIVEV3TOBO1](#)