



Product Brief

iMOTION™ MADK platform

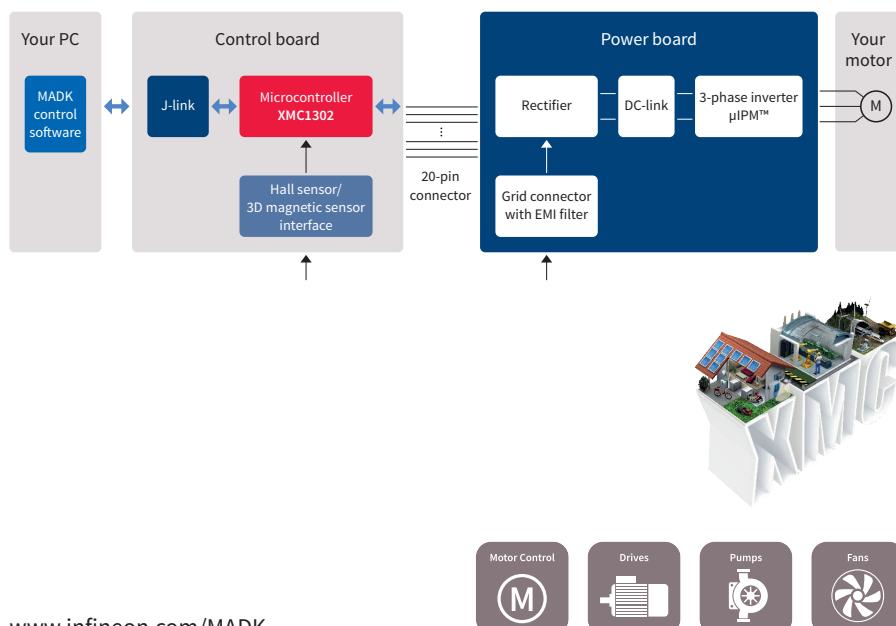
Complete and scalable system solution for motor drives

Infineon Technologies introduces the new iMOTION™ Modular Application Design Kit (MADK) platform for evaluation and testing compact and flexible 3 phase motor drive system solutions.

The iMOTION™ MADK evaluation platform covers 115/230 V motor drive applications up to 300 W. The platform is offering a modular and scalable system solution with 2 different control board options and a range of power boards. One control board option is a standard ARM® Cortex®-M0 Microcontroller XMC1302 with tailored motor control peripherals and MATH hardware accelerator. Another option is an iMOTION™ IRMCK099 digital motion control IC with integrated Motor Control Engine (MCE).

The first iMOTION™ MADK evaluation kits combine two control board options with four different power boards. Using iMOTION™ MADK standardized M1 platform Interface, different control and power boards can be combined in a system that perfectly matches the requirements of the application. This modular approach with a standardized interface between the different controller and power boards allows users to mix and match for a maximum flexibility and scalability during evaluation and development phase at affordable cost.

Block diagram with XMC1302 based MADK



www.infineon.com/MADK

Key benefits

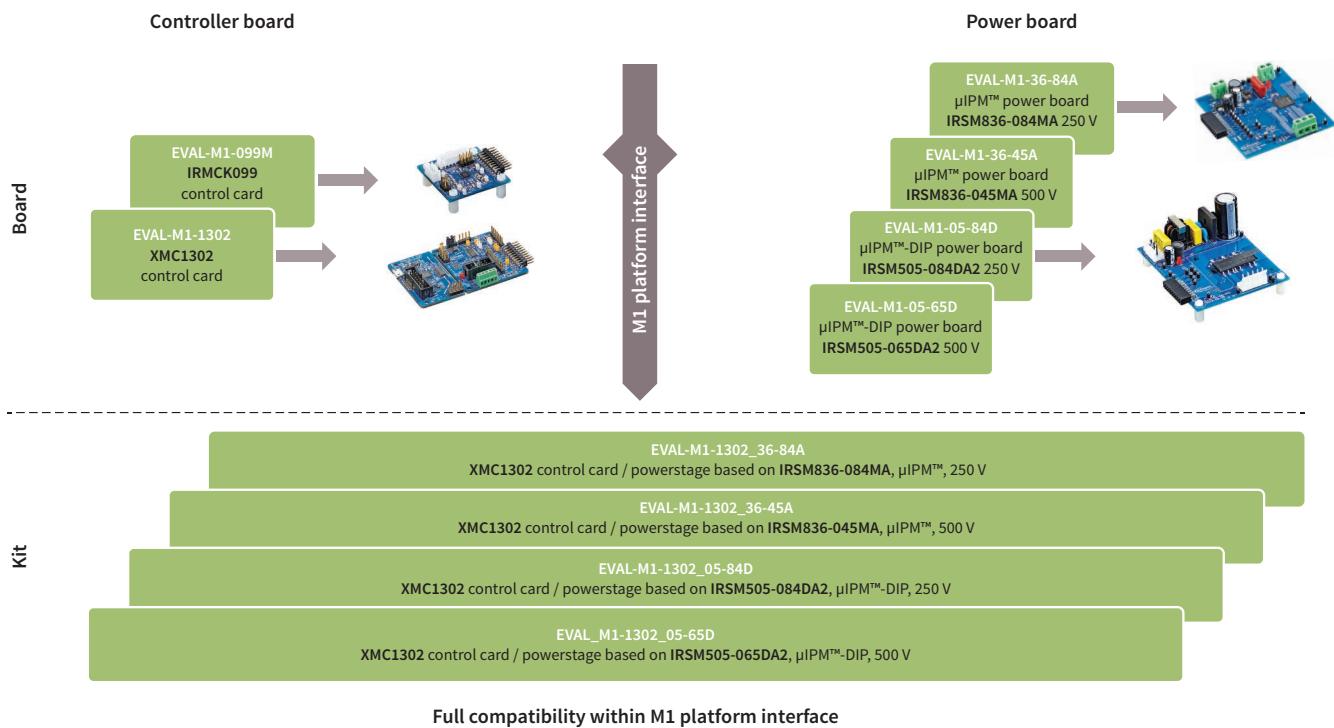
- › Easy to set up a complete motor drive system in less than 1 hour
- › Fast time to market – reduced design time & effort
- › Standard MADK platform M1 interface enables modularity, flexibility and scalability
- › Scalable power levels with μIPM™ and μIPM™-DIP

Key features

- › MCU control card with XMC1302 MCU and SEGGER J-Link debug interface
 - μC Probe-based GUI for motor parametrization and tuning with XMC1302
 - FOC motor control Software for XMC1302
 - Fully supported by Infineon's free-of-charge DAVE™ IDE and other 3rd party ARM® IDEs (For XMC 1302)
- › Alternatively IRMCK099 Control Card with MCE TOOL V2
 - MCE Designer GUI for motor parametrization and tuning with IRMCK099
 - Hardware implemented FOC algorithm
- › 4 different power boards with μIPM™ or μIPM™-DIP with integrated 500 V or 250 V MOSFET & 600 V Gate-Driver

iMOTION™ MADK platform

Complete and scalable system solution for motor drives



MADK platform evaluation boards & kits

Evaluation board/kit	Content	OPN	SP number
Eval-M1-05-65D	IRSM505-065DA2 µIPM-DIP, mounted on the board, 3-pole & 5-pole connector	EVALM10565DTOBO1	SP001591474
Eval-M1-05-84D	IRSM505-084DA2 µIPM-DIP, mounted on the board, 3-pole & 5-pole connector	EVALM10584DTOBO1	SP001591850
Eval-M1-36-45A	IRSM836-045A µIPM, mounted on the board	EVALM13645ATOBO1	SP001592052
Eval-M1-36-84A	IRSM836-084A µIPM, mounted on the board	EVALM13684ATOBO1	SP001592062
Eval-M1-099M	IRMCK099 mounted on the board & MCE TOOL V2 & required. wires	EVALM1099MTOBO1	SP001591856
Eval-M1-1302	XMC1302, mounted on the board	EVALM11302TOBO1	SP001591894
Eval-M1-1302_05-65D	Eval-M1-1302, Eval-M1-05-65D, USB cable, 3-pole & 5-pole connector	EVALM113020565DTOBO1	SP001591902
Eval-M1-1302_05-84D	Eval-M1-1302, Eval-M1-05-84D, USB cable, 3-pole & 5-pole connector	EVALM113020584DTOBO1	SP001591814
Eval-M1-1302_36-45A	Eval-M1-1302, Eval-M1-36-45A, USB cable	EVALM113023645ATOBO1	SP001592034
Eval-M1-1302_36-84A	Eval-M1-1302, Eval-M1-36-84A, USB cable	EVALM113023684ATOBO1	SP001592044

Published by
Infineon Technologies AG
81726 Munich, Germany

© 2016 Infineon Technologies AG.
All Rights Reserved.

Order Number: B133-I0296-V1-7600-EU-EC-P
Date: 05/2016

Please note!

Evaluation boards & kits are provided "as is". We disclaim any and all warranties, express or implied, including but not limited to any warranties of non-compliance with any specification, non-infringement of third party rights and implied warranties of fitness for any purpose or for merchantability.

Evaluation boards & kits are not commercial products and are solely intended to be used for evaluation and testing purposes. They shall not be used for reliability testing or production.

The customer shall ensure that each evaluation board & kit is handled in a way which is compliant with all relevant requirements and standards in the country in which it is operated.

The customer accepts the entire risk arising out of the use of the evaluation boards & kits for any purpose for which the evaluation boards & kits are not intended, including but not limited to any further processing or distribution of the evaluation board & kits.

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 the evaluation boards & kits or any suitability for a particular purpose.

We reserve the right to change this document and/or the information given herein at any time.

For further information, 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.