

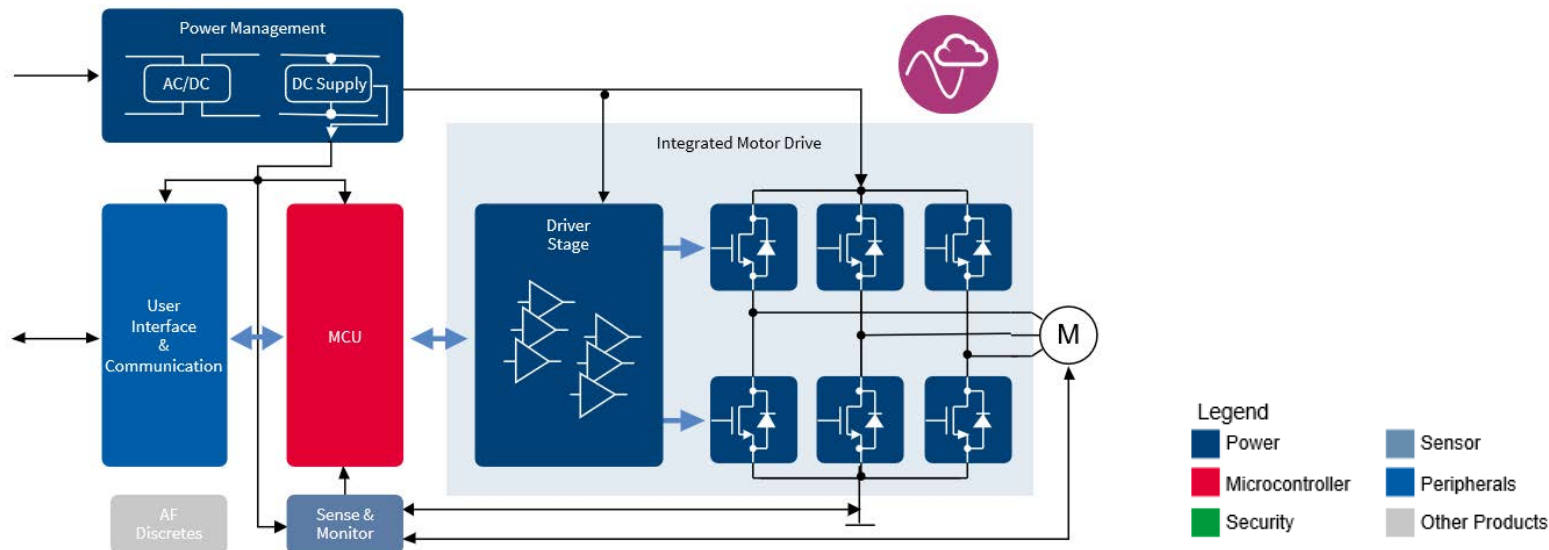
Refrigerator system solution



인피니언 전력반도체 솔루션
가상부스에 오신 걸 환영합니다!



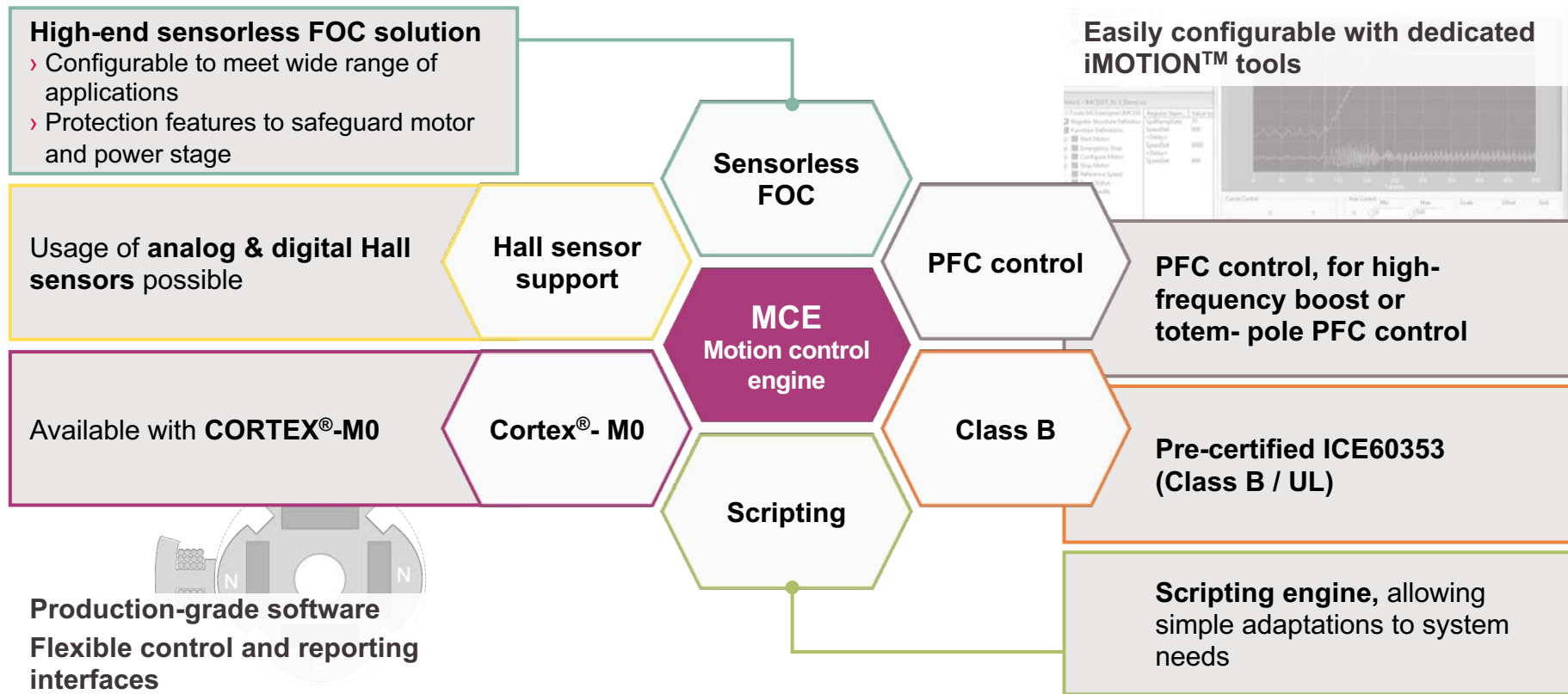
Customer perspective: Why are system solutions beneficial?



- › Proven integration → fast time-to-market and solid functionality
- › Reduced R&D efforts on the customer side → reduced cost
- › Complete functionality and protection → low risk

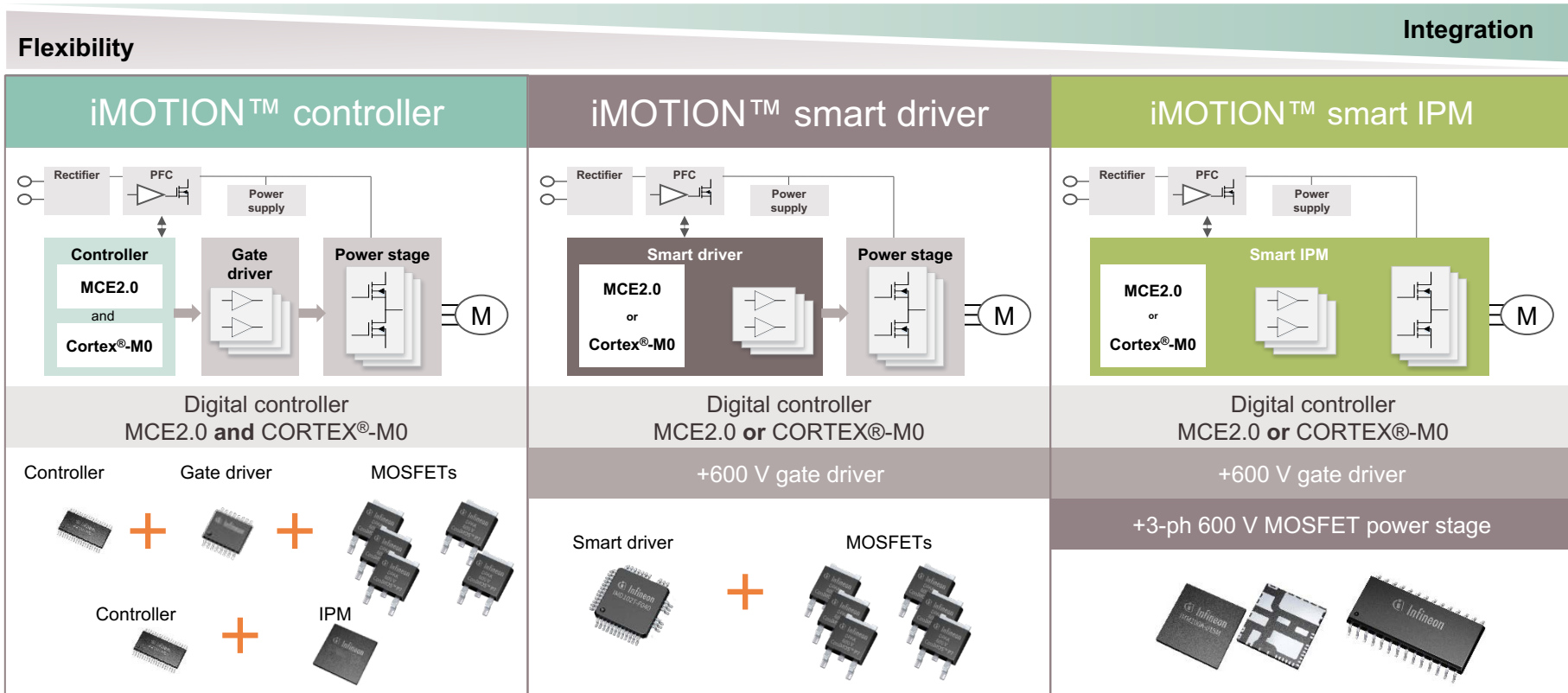
Motion control engine (MCE)

Overview





iMOTION™: motor control platform with scalable integration of HW and SW



Overview of system solutions

Control	Driver	Power switch
iMOTION™ IMC101T	EiceDRIVER™ 6EDL	650 V TRENCHSTOP™ IGBT6 in DPAK

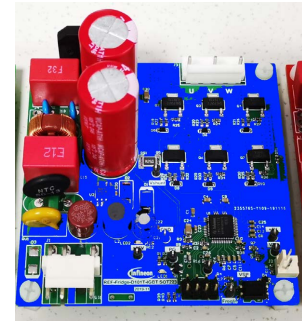
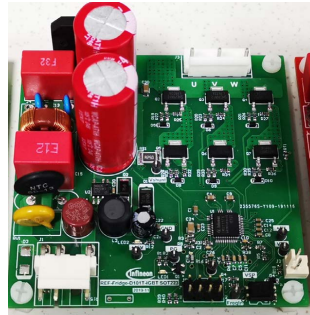
Most typical discrete configuration enables highest flexibility and scalability, optimized for best EMI performance

iMOTION™ Smart Driver IMD111T-6F040	600 V CoolMOS PFD7 or 600 V RC-D2 in SOT223
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System solutions enable compact and scalable designs optimized for light load efficiency or EMI performance

iMOTION™ IMC101T	CIPOS™ Micro IPM IM231
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Integrated solution enables short time to market and increased reliability



Infineon selection guide for motor drive inverter power stages <300 W

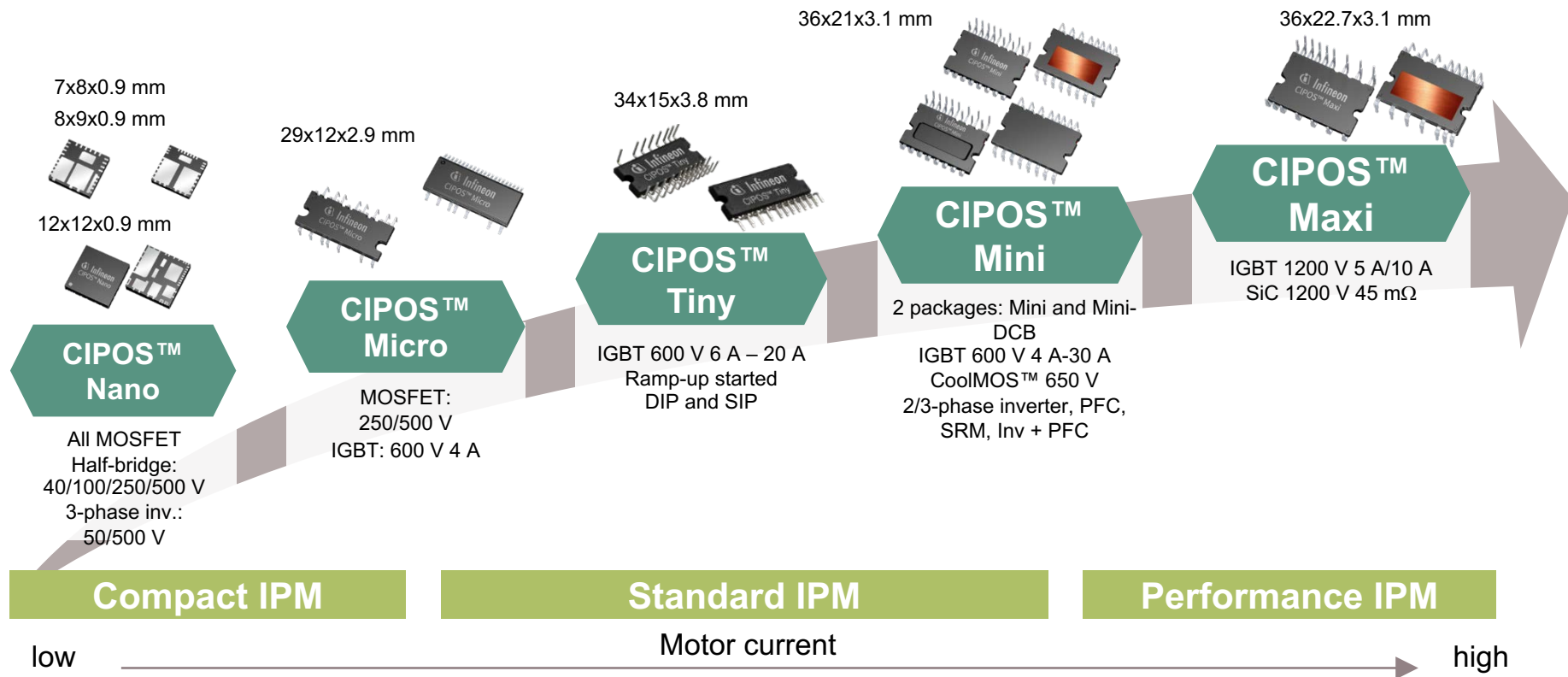


- › Fridge compressors, ceiling fans, hairdryers, circulation pumps, air purifiers, HVAC fans, ...
- › Heat dissipation without the heatsink
- › Active PFC stage is not usually used
- › Motor control is usually sensorless
- › Current is sensed using single shunt in DC- or two shunts in the inverter branches

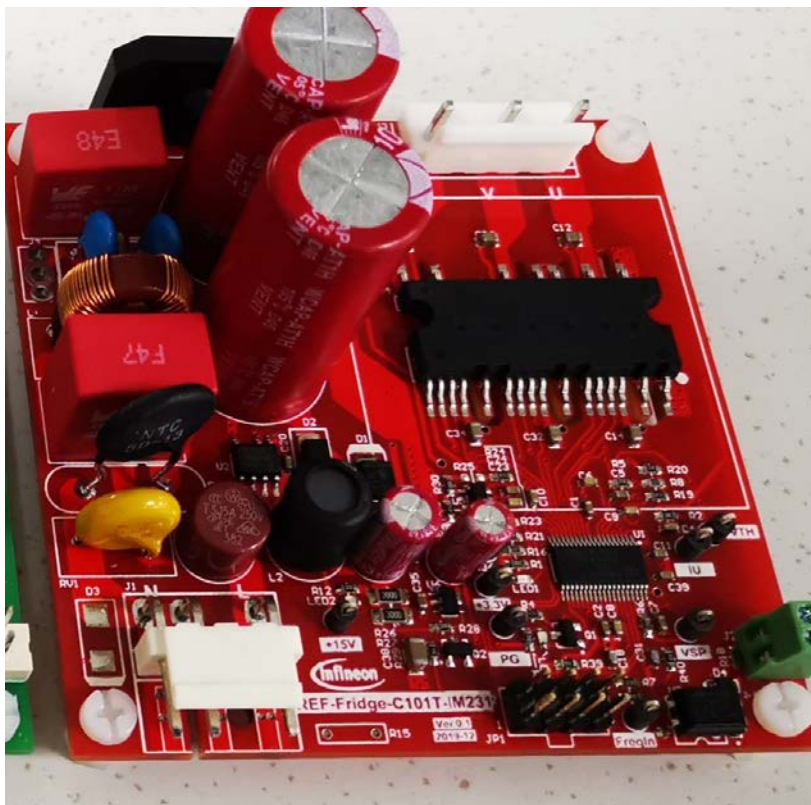
iMOTION™		
Discrete IGBTs	CoolMOS™	CIPOS™
<ul style="list-style-type: none">› Better thermal management, easier to dissipate the losses in the PCB without heatsink› Better cost position (second sourcing, discretes are cheaper)› Flexible EMI noise vs. performance tuning by selecting the right gate resistance		<ul style="list-style-type: none">› Greater integration, reducing PCB/system size and BOM› Shorter time-to-market› Increased reliability
<ul style="list-style-type: none">› Best EMI noise controllability	<ul style="list-style-type: none">› Best efficiency	
<ul style="list-style-type: none">› TRENCHSTOP™ RCD (DPAK)› TRENCHSTOP™ RCD2* (DPAK, SOT223)› TRENCHSTOP™ IGBT6* (DPAK)	<ul style="list-style-type: none">› CoolMOS™ PFD7 (SOT223, DPAK)› CoolMOS™ CFD (DPAK)	<ul style="list-style-type: none">› iMOTION™ Smart IPM (PQFN) <80 W› CIPOS™ Nano (PQFN) <205 W› CIPOS™ Micro (DIP, SOP) <400 W

* Available in Q1-2020

Complete molded IPM portfolio for broad application coverage

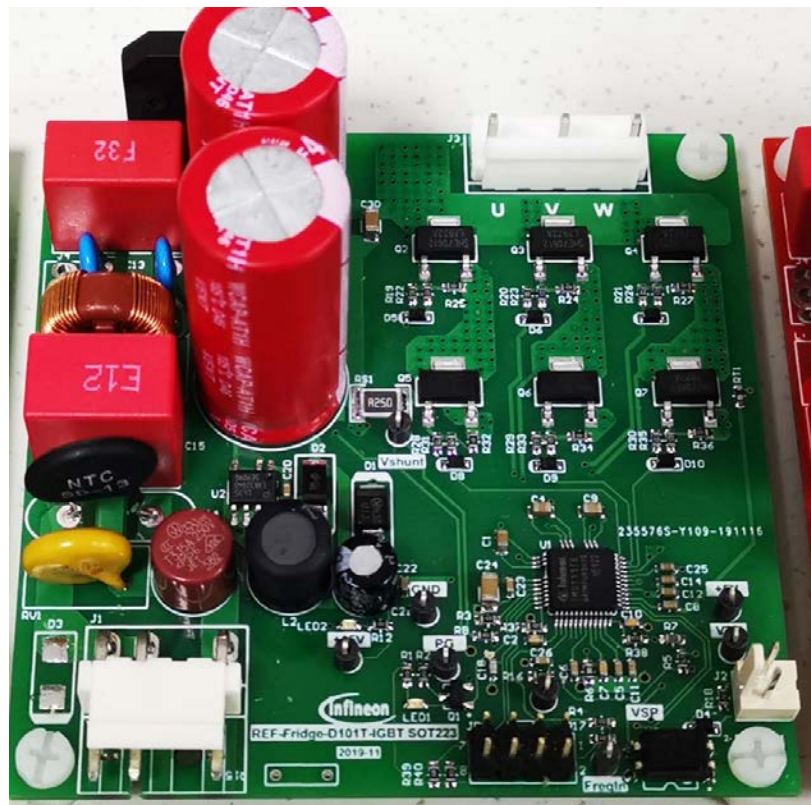


iMOTION™ controller highlights



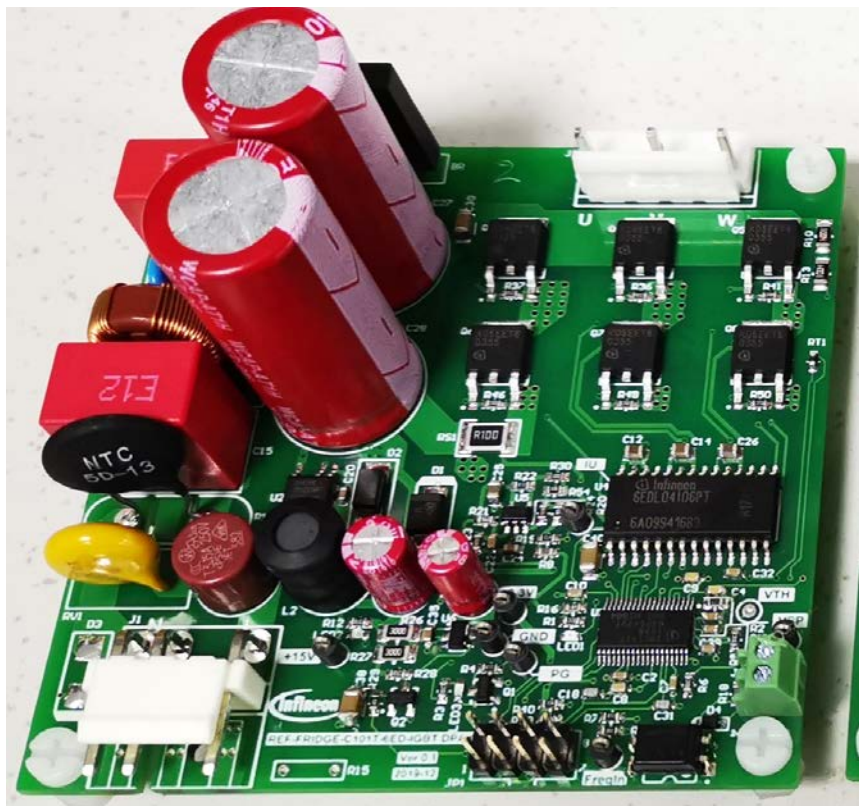
- › iMOTION™ controller IMC101T and CIPOS™ Micro IPM IM231
- › Complete, powerful motion controller with many protection features
- › Highly integrated power stage, reducing PCB/system size
- › System solution enables short time-to-market and increased reliability

iMOTION™ smart driver highlights



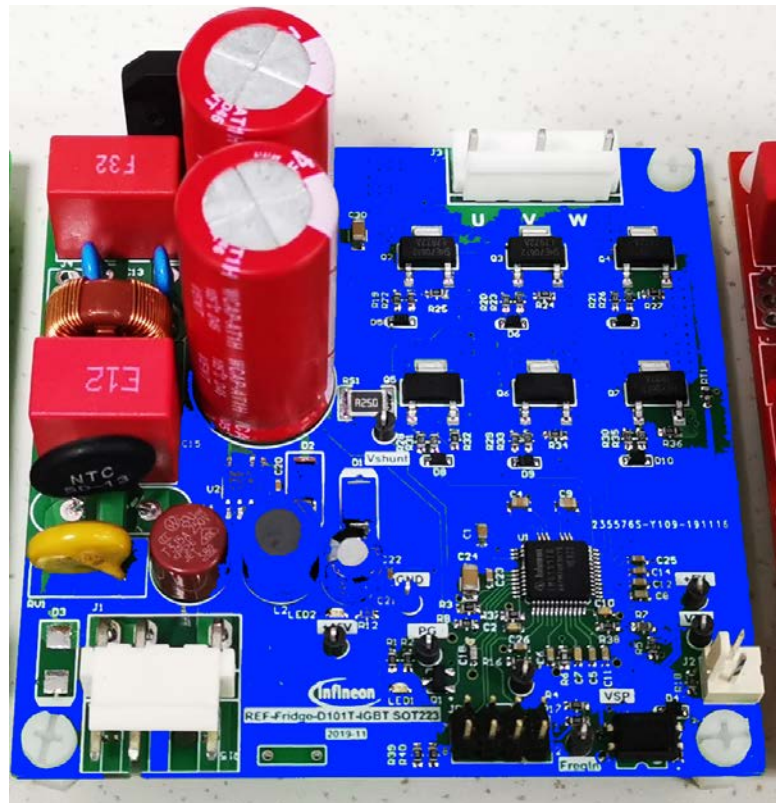
- › iMOTION™ smart driver IMD111T-6F040
- › Ready-to-use motion controller with scripting engine and 6-channel SOI driver
- › RCD2 600 V IGBT in compact SOT223 package for lowest EMI and losses
- › System solution enables highly integrated, flexible design and lowest EMI

iMOTION™ smart IPM highlights



- › iMOTION™ controller IMC101T, EiceDRIVER™ 6EDL and RCD2 600 V IGBT in DPAK
- › Complete, powerful motion controller with many protection features and scripting
- › Powerful, highly robust 6-channel SOI driver
- › System solution enabling highest flexibility and scalability, as well as lowest EMI

iMOTION™ smart driver highlights



- › iMOTION™ smart driver IMD111T-6F040
- › Ready-to-use motion controller with scripting engine and 6-channel SOI driver
- › 600 V CoolMOS™ PFD7 – optimized technology with lowest Q_{rr} , ESD protection and compact SOT223 SMD package
- › System solution enables highest light-load efficiency and compact design



Part of your life. Part of tomorrow.