

## Product brief

# Econo low and medium power modules with integrated shunts

## Reduced system costs by higher integration

Infineon's low and medium power products EconoPACK™ 2 and 3 and EconoDUAL™ 3 are available with integrated shunt resistors for current monitoring in the AC path. The integration of additional functionality into the IGBT module is a very effective way to optimize the overall system costs of an inverter. External current sensors are no longer needed. This saves space in the system, reduces material costs and lowers manufacturing efforts.

In addition to the reduction in system costs, high current measurement accuracy across a wide temperature range is achieved. This leads to a precise motor control.

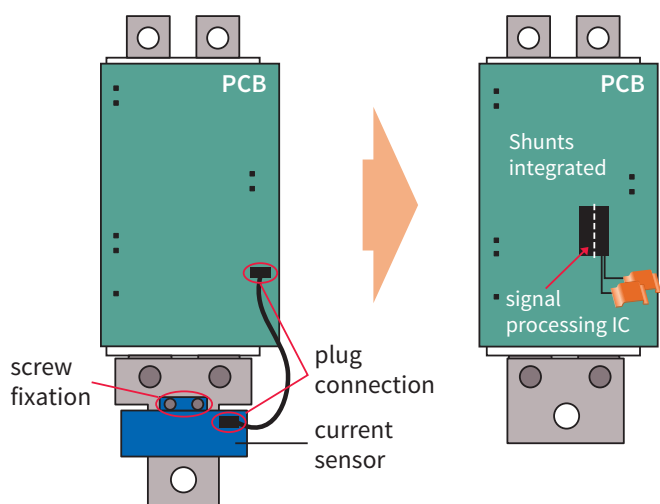
The Econo medium power modules with integrated shunts can be used in a wide variety of applications, such as AC motor drives, switched-mode power supplies and solar. For an easy design in, a reference design is available.

With the Econo shunt module family, Infineon supports current ranges from 75 A to 600 A at 1200 V and 1700 V. The modules are available with pre-applied thermal interface material for lowest thermal resistance and longest lifetime. The PressFIT housing enables a fast and cost efficient assembly.

The modules can be combined with Infineon's microcontrollers with integrated delta sigma demodulator function, e.g. XMC4400 and beyond.

### Key features

- > 1200 V and 1700 V state of the art IGBT4 technology
- > Integrated shunts for current measurement
- > Easy and ultra-reliable assembly: PressFIT control pins and screw power terminals for completely solderless connections
- > TIM – pre-applied thermal interface material to achieve longest lifetime
- > Compact modules with only 17 mm height
- > Optimized thermal resistance to heat sink
- > Ideal for low-inductive system designs
- > Highest power density for compact inverter designs
- > Isolated base plate



- > Reduced space
- > Less cabling, adapters, screws
- > Reduced mounting efforts

### Applications




- > General purpose drives
- > Servo drives
- > E-bus/hybrid bus
- > Commercial and agricultural vehicles
- > Renewable energy systems
- > Uninterrupted energy supplies

# Econo shunt module portfolio

From 75 A to 600 A

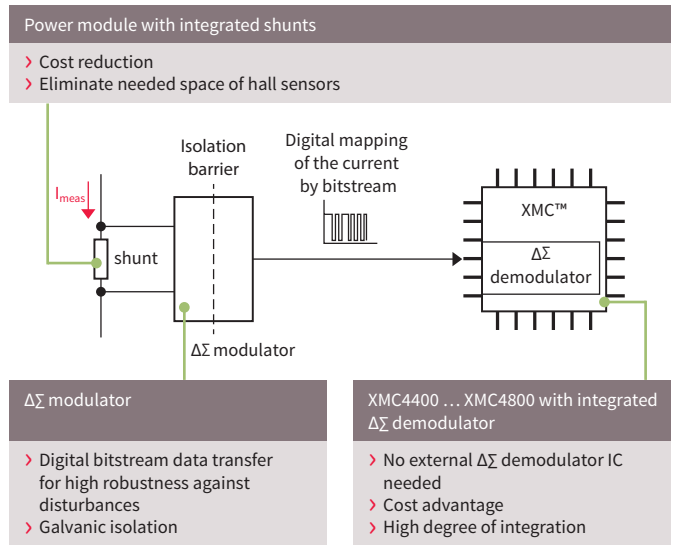
## Product overview

### Low and medium power portfolio

I <sub>c</sub> [A]	EconoPACK™ 3 		EconoPACK™ 2 		EconoDUAL™ 3 
	6-pack		2-pack		2-pack
	1200 V	1700 V	1200 V	1700 V	1200 V
75	IFS75B12N3E4_B31				
100	IFS100B12N3E4_B31 IFS100B12N3E4P_B11	IFS100B17N3E4P_B11			
150	IFS150B12N3E4_B31 IFS150B12N3E4P_B11	IFS150B17N3E4P_B11			
200	IFS200B12N3E4_B31				
300			IFF300B12N2E4P_B11	IFF300B17N2E4P_B11	IFF300B12ME4P_B11
450					IFF450B12ME4P_B11
600					IFF600B12ME4P_B11

## XMC microcontroller portfolio with ΔΣ demodulator

ARM® Cortex®-M4F	Frequency [MHz]	ΔΣ demodulator	Memory	Package
XMC44x	120	4 ch	Flash 256–512 kB RAM 80 kB	TQFP-64 LQFP-100
XMC45x	120	4 ch	Flash 512 kB – 1 MB RAM 128–160 kB	LQFP-100/144 LFBGA-144
XMC47x	144	4 ch	Flash 1.5–2 MB RAM 276–352 kB	LQFP-100/144 LFBGA-196
XMC48x	144	4 ch	Flash 1–2 MB RAM 276–352 kB	LQFP-100/144 LFBGA-196



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