



## STEVAL-ISA029V1

Compact power supply for DVD/set-top box demonstration board  
with three  $V_{out}$  (-30 V, +3.3 V, +12 V)

Data Brief

### Features

- Input voltage range: 85 V<sub>AC</sub> – 300 V<sub>AC</sub>
- $V_{OUT1}$  = 12 V ( $\pm 5\%$ )
- $I_{OUT1}$  = 1 A
- $V_{OUT2}$  = 3.3 V ( $\pm 2\%$ )
- $I_{OUT2}$  = 100 mA
- $V_{OUT3}$  = -24 V ( $\pm 10\%$ )
- $I_{OUT3}$  = 40 mA
- Safety EN60950 compliant
- EMI - conducted EN55022-B compliant

### Description

The STEVAL-ISA029V1 demonstration board is an isolated triple-output flyback converter, suitable for wide-range input voltage operation. The converter is based on the smart power VIPer53-E which, in a single package, integrates an enhanced current-mode PWM controller and a high-voltage MDmesh™ power MOSFET. The switching frequency is set to 60 kHz by means of an external RC network connected to a dedicated pin on the IC. The closed loop regulation is performed on the 12 V output using an optocoupler, which drives the COMP pin of the VIPer53-E. The 3.3 V output is post-regulated using a non-integrated low drop linear voltage regulator to achieve the required accuracy. The negative 24 V output is achieved by means of a discrete linear voltage regulator, made up of a Zener diode, a resistor and a PNP transistor.





## 2 Revision history

**Table 1. Document revision history**

Date	Revision	Changes
02-Sep-2008	1	Initial release.

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