

STEVAL-IPE006V2

High end meter Demonstration board

Data Brief

Features

- Active, reactive, apparent, fundamental active energy, V_{RMS}, I_{RMS} and frequency measurements
- Anti-tampering on neutral wire
- Tamper detection on meter box, time stamp even during power-down
- PFI/PFO: power management, data backup
- LCD display
- Power line communication
- Automatic meter reading demonstration
- SMPS power supply
- RS232 IAP
- PC interface control
- Class 1



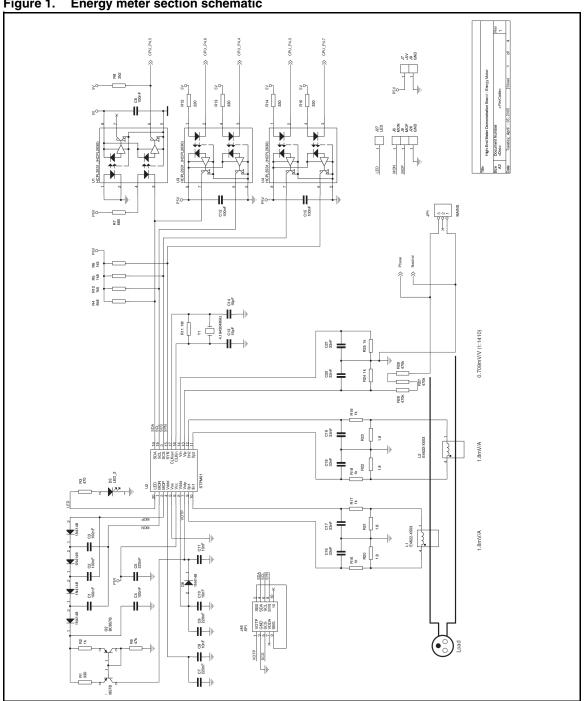
Applications

The STEVAL-IPE006V2 is a first modular metering solution integrating all features for single multifunction energy meter. The measured values can be observed on the board's LCD or trough the serial interface on a PC screen. All the parameter settings are changeable using a user friendly GUI. For safety reasons, the power supply and metering parts are galvanically isolated from the rest of the board. Application engineers can use this board to evaluate the components or quickly start with their own power meter product development project. All software and firmware source codes, as well as Gerber files and the bill of material are provided to help you get started easily and allow you to focus on the specific requirements of your application.

Board schematic STEVAL-IPE006V2

Board schematic 1

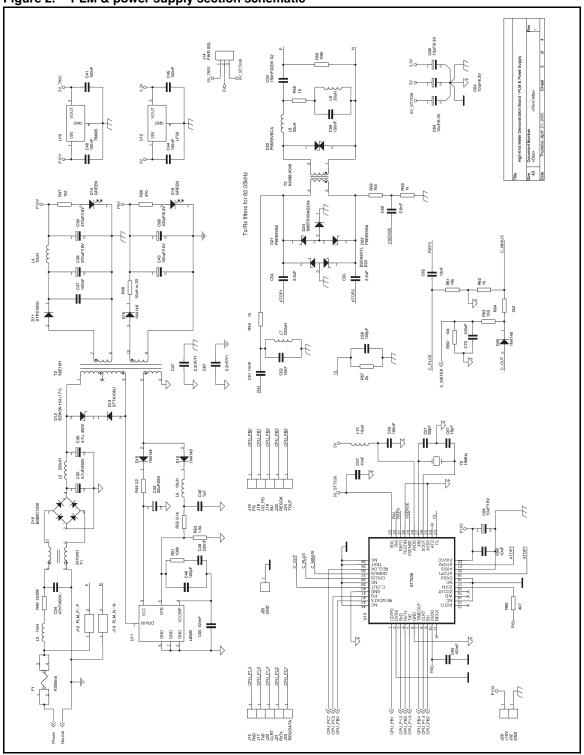
Energy meter section schematic



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STEVAL-IPE006V2 Board schematic

Figure 2. PLM & power supply section schematic



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Board schematic STEVAL-IPE006V2

Figure 3. Microcontroller section schematic C74 100nF TERR 120 GND 100 GN D28 1N4148 C78 100hF R81 470 R74 10k R73 10k D26 JEN R80 H72 10k 770 10k R69 10k C84 10nF 70k 11-99 U J36 P3.4 J37 J38 J39 J40 J41 J42 J42 J42 J45 GND C79 10uF/6.3V CPU P1.0 CPU P1.1 CPU P4.0 CPU P4.1 CPU P4.2 J35 Vref \Box C77 10hF C76 10uF/6.3V 1 2 - C71 22pF C72 22pF CPU_NTT % 2 CPU_PDT % 3 CPU_PDT % 5 CPU_PDT 7 CP Vdd OE/ST OUT GND

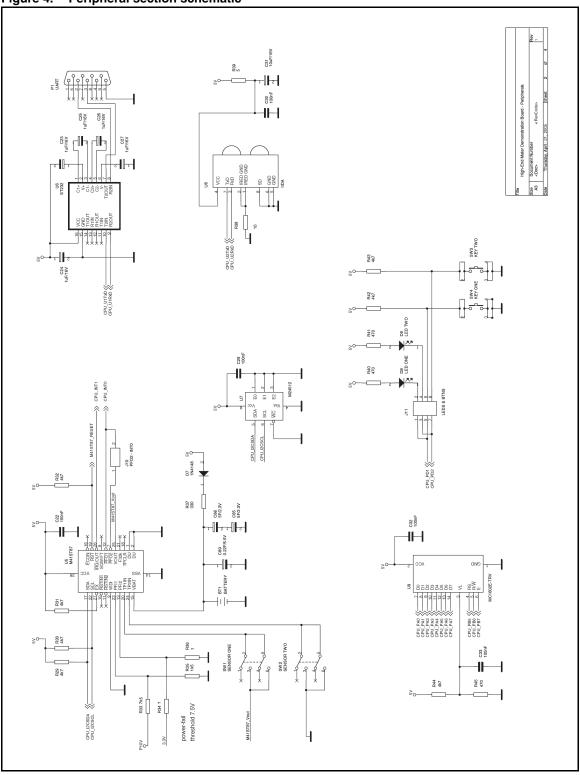
3.200



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H82 4k7 STEVAL-IPE006V2 Board schematic

Figure 4. Peripheral section schematic



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Revision history STEVAL-IPE006V2

2 Revision history

Table 1. Revision history

Date	Revision	Changes
13-Jul-2006	1	Initial release.

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