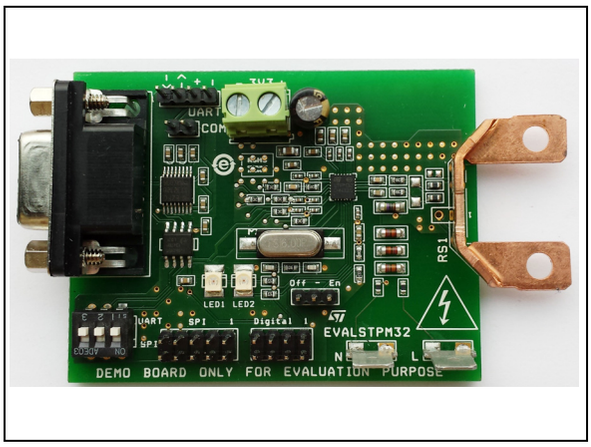
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EVALSTPM32

Single-phase energy metering evaluation board with shunt current sensor based on the STPM32

Data brief



Features

- 0.2% accuracy single-phase meter
- V_{nom}(RMS) = 140 to 300 V, $I_{nom}/I_{max(RMS)}$ = 5/100 A, f_{lin} = 50/60 Hz ± 10%
- Connector for USB isolated hardware programmer tool STEVAL-IPE023V1 and PC GUI
- RS232 and UART isolated connectors to PC GUI
- SPI/UART switch for device peripheral selection
- 2 programmable LEDs on board
- Digital expansion to external system-on-chip or MCU
- 3.3 V power supply: external or through STEVAL-IPE023V1 isolated USB board
- IEC61000 standard compliant
- RoHS compliant

Description

The STPM32 energy metering evaluation board is a class 0.2, single-phase meter with shunt current sensor for power line systems with V_{nom} = 140 to 300 $V_{(RMS)}$, I_{nom} / I_{max} = 5/100 $A_{(RMS)}$, f_{lin} = 50/60 Hz ± 10% and T_{amb} = -40 to +85 °C.

Measured active/reactive power can be output from two programmable LEDs on the board.

The board can be interfaced with a PC running evaluation software through an isolated RS232 port, or through the STEVAL-IPE023V1 USB isolated interface tool for configuration and data reading.

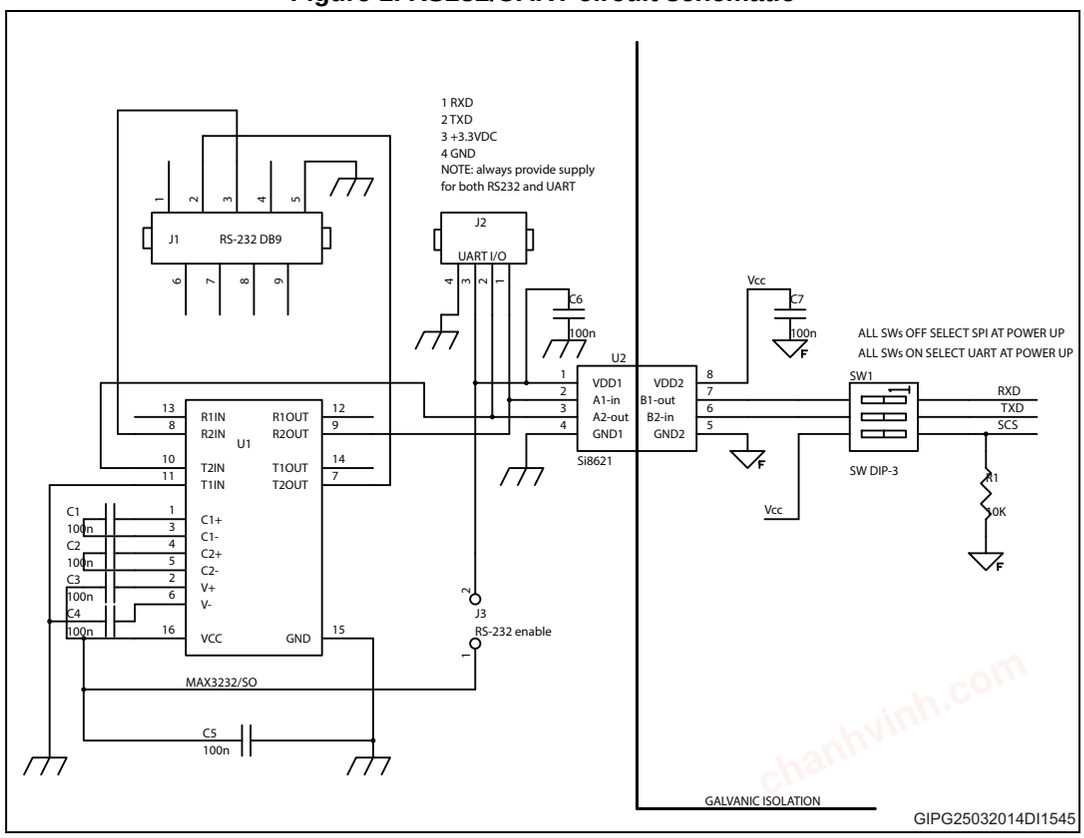
The board also has SPI/UART pins available to interface a microcontroller for application development.

For further information contact your local STMicroelectronics sales office. www.st.com

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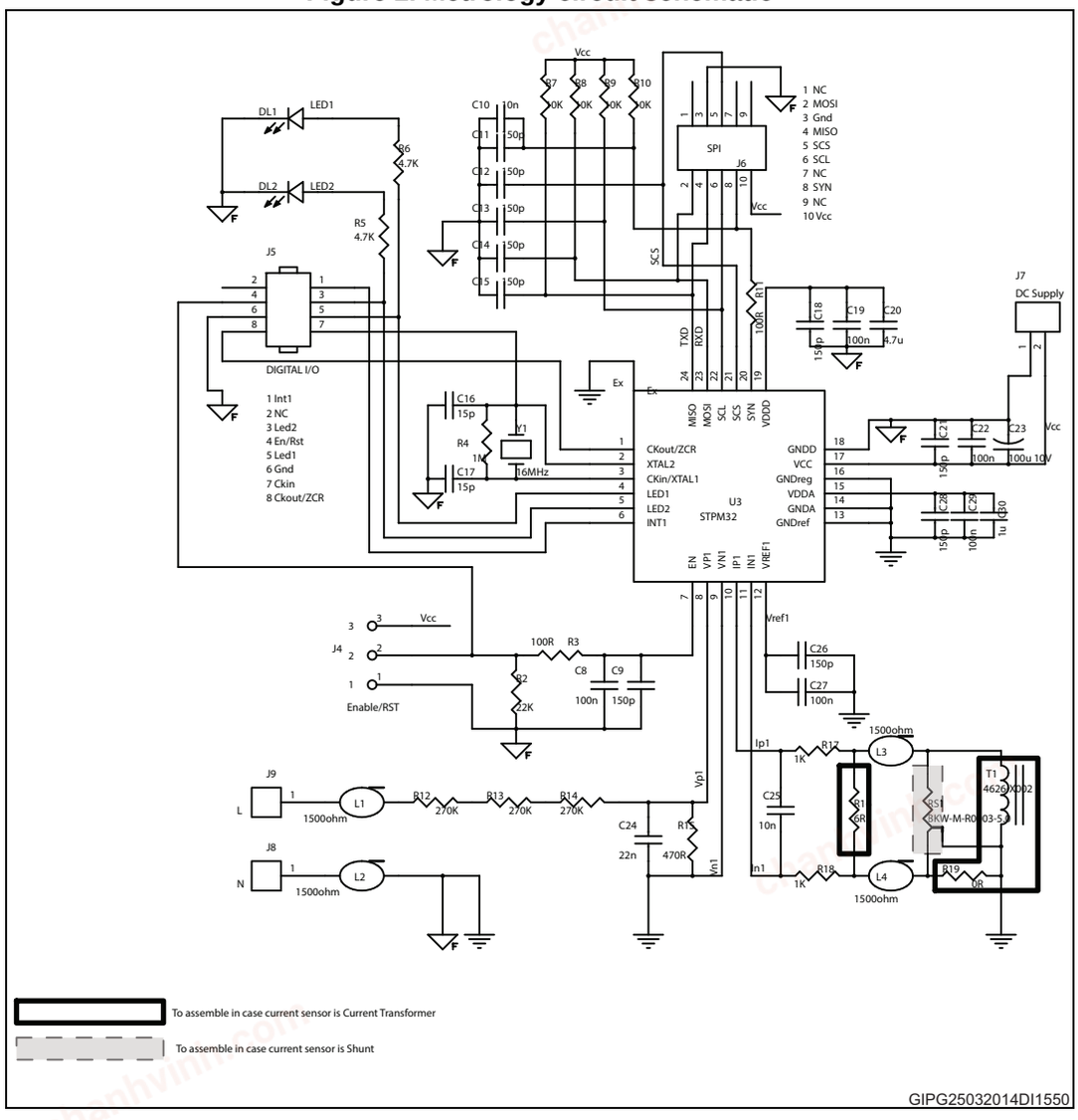
1 Schematic diagrams

Figure 1. RS232/UART circuit schematic



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Figure 2. Metrology circuit schematic



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2 Revision history

Table 1. Document revision history

Date	Revision	Changes
31-Mar-2014	1	Initial release.

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