Multiphase energy meter daughterboard based on the STPMS2 smart sensor device

Description
The STEVAL-IPE014V1 is a daughterboard based on the STPMS2 "smart sensor" device, and is designed for use with the STPMC1-based STEVAL-IPE010V2 motherboard. Together the system provides a complete, ready-to-use energy meter application. When connected to the motherboard, each STEVAL-IPE014V1 daughterboard serves a single phase, converting and multiplexing the voltage and current information and sending the stream to the STPMC1 energy calculator IC.

Features
- Modular and programmable
- Supports:
  - 3-phase, 4-wire RSTN, 4-system RSTN (tamper); extra module required
  - 3-phase, 4-wire RSTN, 3-system RST
  - 3-phase, 3-wire RST_, 3-system RST_(tamper)
  - 3-phase, 3-wire RST_, 2-system R_T_(Aron)
  - 2-phase, 3-wire _STN, 2-system _ST_(America)
  - 1-phase, 2-wire _TN, 2-system _ST_(tamper)
  - 1-phase, 2-wire _TN, 1-system _T_
- 4 LED indicators to display:
  - Power
  - No load condition
  - Tamper detection
  - Reverse current direction
- Embedded capacitive power supply
- Isolation of current channel
- RoHS compliant
Figure 1: STEVAL-IPE014V1 circuit schematic
2 Revision history

Table 1: Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Rev</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>24-Aug-2011</td>
<td>1</td>
<td>First release.</td>
</tr>
<tr>
<td>03-Nov-2014</td>
<td>2</td>
<td>Description has been updated.</td>
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