



## F650 ADDENDUM TO 2.20 FIRMWARE VERSION

### 8. BOOTCODE AND FIRMWARE UPDATE

FIRMWARE AND BOOT CODE VERSIONS COMPATIBILITY	
FIRMWARE VERSION	BOOT CODE VERSION
2.20	4.00

#### 13.7.1. F650 FIRMWARE REVISION HISTORY

FIRMWARE VERSION	BOOT CODE VERSION	CHANGES DESCRIPTION	MODELS	DATE
2.20	4.00	<p><b>USER INTERFACE</b></p> <p><b>ENERVISTA F650 SETUP</b></p> <ul style="list-style-type: none"> <li>Data Logger visualization changes.</li> <li>File name available in "Config file converter" tool.</li> </ul> <p><b>COMMUNICATIONS</b></p> <ul style="list-style-type: none"> <li>DNP Scale factor correction.</li> <li>IRIGB synchronization:               <ul style="list-style-type: none"> <li>§ Date and time synchronization available.</li> <li>§ 980 ms delay correction.</li> </ul> </li> </ul> <p><b>INPUTS/OUTPUTS</b></p> <ul style="list-style-type: none"> <li>Inputs Activation/Deactivation correction.</li> <li>Voltage threshold setting range from 20 to 230 Vdc.</li> <li>Debounce time settings:               <ul style="list-style-type: none"> <li>§ Timestamp before debounce time</li> <li>§ Setting range from 1 to 50 ms.</li> </ul> </li> </ul> <p><b>METERING</b></p> <ul style="list-style-type: none"> <li>Power calculations using ARON method.</li> <li>New measurements provided when using Delta connection and VN as auxiliary voltage input:               <ul style="list-style-type: none"> <li>§ Neutral voltage available.</li> <li>§ Phase to ground voltages available.</li> <li>§ Single phase power measurements available.</li> </ul> </li> </ul> <p><b>PROTECTION</b></p> <ul style="list-style-type: none"> <li>Neutral, ground and sensitive ground directional units available with delta connection and VN as auxiliary voltage input.</li> <li>Minor changes in Forward Power elements.</li> </ul> <p><b>REGISTER</b></p> <ul style="list-style-type: none"> <li>Ground current available in Fault report.</li> <li>Corrected 150 ms delay in Snapshot events measurements.</li> </ul>	All models, excepting: Options 4 and 5 for inputs outputs boards. Option 6 for IEC61850 protocol.	November 25 <sup>TH</sup> 2005