# SattLine Version 3 Hardware
## Outline of modules

SattLine is a family of rail-mounted modules, consisting of CPU:s, communication modules, power supply modules and various accessories.

### Features / CPUs

<table>
<thead>
<tr>
<th>Feature</th>
<th>CPU80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article number</td>
<td>3BSE088456R1</td>
</tr>
<tr>
<td>Processor Unit</td>
<td>CPU80 incl: 1 CPU80 and required optional items.</td>
</tr>
<tr>
<td>Clock frequency</td>
<td>450 MHz</td>
</tr>
<tr>
<td>Memory (RAM)</td>
<td>256 MB</td>
</tr>
<tr>
<td>RAM available for application</td>
<td>208.985 MB</td>
</tr>
<tr>
<td>Processor type</td>
<td>MPC8270</td>
</tr>
<tr>
<td>Flash memory for storage</td>
<td>Yes</td>
</tr>
<tr>
<td>of application and data</td>
<td></td>
</tr>
<tr>
<td>CPU redundancy support</td>
<td>No</td>
</tr>
<tr>
<td>Flash PROM for firmware storage</td>
<td>16 MB</td>
</tr>
<tr>
<td>Power supply</td>
<td>24 V DC (19.2-30 V DC) max 5 % ripple acc. to IEC 61131-2</td>
</tr>
<tr>
<td>Power consumption +24 V</td>
<td>typ/max 660/750 mA</td>
</tr>
<tr>
<td>Power dissipation typ.</td>
<td>15.8 W</td>
</tr>
<tr>
<td>Power Reservoir</td>
<td>Internal 5 ms power reservoir, sufficient for the CPU to make a controlled power down</td>
</tr>
<tr>
<td>Power supply connector</td>
<td>Detachable 4-pole screw terminal block</td>
</tr>
<tr>
<td>Redundant power supply status</td>
<td>Yes: 2 inputs designated SA, SB (Max 30 V, high level &gt;15 V, low level &lt; 8 V)</td>
</tr>
<tr>
<td>Built-in back-up battery</td>
<td>No</td>
</tr>
</tbody>
</table>

The SattLine version 3 hardware update includes a new controller, CPU 80, which supports controller configurations for:
- CI853 (Serial)
- CI854B (ProfiBus)
- CI865 (ControlNet)

SattLine version 3 also support Series 200 type of CPU and main components. For updated information regarding SattLine version 3 hardware please visit our web.
<table>
<thead>
<tr>
<th>Features / CPUs</th>
<th>CPU80</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-time clock stability</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Comm. modules on CEX bus</td>
<td>12</td>
</tr>
<tr>
<td>Supply current on CEX bus</td>
<td>Supply current: Max 24 V - 2.4 A (CPU80 has an embedded auto fuse)</td>
</tr>
<tr>
<td>Ethernet channels</td>
<td>2</td>
</tr>
<tr>
<td>Ethernet interface</td>
<td>10/100 Mbit/s</td>
</tr>
<tr>
<td>Control Network protocol</td>
<td>MMS (Manufacturing Message Service)</td>
</tr>
<tr>
<td>Recommended Control Network backbone</td>
<td>100 Mbit/s switched Ethernet</td>
</tr>
<tr>
<td>RS-232C interface</td>
<td>1 for service tool (COM 4)</td>
</tr>
<tr>
<td>Temperature</td>
<td></td>
</tr>
<tr>
<td>• Operating</td>
<td>+5 to +55 °C (+41 to +131 °F)</td>
</tr>
<tr>
<td>• Storage</td>
<td>-40 to +70 °C (-40 to +158 °F)</td>
</tr>
<tr>
<td>Temperature changes</td>
<td>3 °C/minutes according to IEC/EN 61131-2</td>
</tr>
<tr>
<td>Altitude</td>
<td>2000 m according to IEC/EN 61131-2</td>
</tr>
<tr>
<td>Pollution degree</td>
<td>Degree 2 according to IEC/EN 61131-2</td>
</tr>
<tr>
<td>Corrosion protection</td>
<td>G3 compliant to ISA 71.04</td>
</tr>
<tr>
<td>Vibration</td>
<td>10 &lt; f &lt; 50 Hz: 0.0375 mm amplitude, 50 &lt; f &lt; 150 Hz: 0.5 g acceleration, 5 &lt; f &lt; 500 Hz: 0.2 g acceleration</td>
</tr>
<tr>
<td>Emitted noise</td>
<td>&lt; 55 dB (A)</td>
</tr>
<tr>
<td>Shock, no package</td>
<td>150 m/s² in 11 ms, 20 g in 3 ms</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>5 to 95 %, non-condensing</td>
</tr>
<tr>
<td>Isolation voltage</td>
<td>Type test voltage: 500 V AC (corresponding to 700 V DC)</td>
</tr>
<tr>
<td>Environmental conditions</td>
<td>Industrial</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP20 according to EN 60529, IEC 529</td>
</tr>
<tr>
<td>Certificates and Standards</td>
<td>CE- marking: Meets EMC directive 2004/108/EC acc. to EN 61000-6-4, EN 61000-6-2 and Low Voltage Directive acc. to EN 61131-2</td>
</tr>
<tr>
<td></td>
<td>Electrical Safety: EN 50178, IEC 61131-2, UL 60079-15</td>
</tr>
<tr>
<td></td>
<td>Hazardous location: cULus Class1, Zone2, AEEx nA IIC T4, ExnA IIC T4Gc X</td>
</tr>
<tr>
<td></td>
<td>RoHS compliance: EN 50581:2012</td>
</tr>
<tr>
<td></td>
<td>WEEE compliance: DIRECTIVE/2012/19/EU</td>
</tr>
<tr>
<td>Emission</td>
<td>Tested according to EN 61000-6-4 EMC – Generic Emission Standard, Part 2 – Industrial Environment</td>
</tr>
<tr>
<td>Immunity</td>
<td>Tested according to EN 61000-6-4 EMC – Generic Emission Standard, Part 2 – Industrial Environment</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Width 174 x Height 186 x Depth 94 mm</td>
</tr>
<tr>
<td>Weight (including base)</td>
<td>1600 g (3.5 lbs)</td>
</tr>
</tbody>
</table>
### Supported Communication modules

<table>
<thead>
<tr>
<th>Module</th>
<th>PROFIBUS DP</th>
<th>SATT I/O</th>
<th>RS-232 C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article number</td>
<td>3BSE069449R1</td>
<td>3BSE040795R1</td>
<td>3BSE018103R1</td>
</tr>
<tr>
<td>Protocol</td>
<td>DP-V1 (PA via Linking Device)</td>
<td>ABB's Satt I/O</td>
<td>MODBUS RTU master, COMLI master/slave, Siemens 3964R master, User defined protocols</td>
</tr>
<tr>
<td>Master or slave</td>
<td>Master</td>
<td>Master</td>
<td>Master/slave</td>
</tr>
<tr>
<td>Number of channels</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Max units on CEX bus</td>
<td>12</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Transmission speed</td>
<td>9.6 - 12,000 kbit/s</td>
<td>-</td>
<td>75 - 19,200 kbit/s</td>
</tr>
<tr>
<td>Connectors</td>
<td>DB female (9-pin)</td>
<td>BNC</td>
<td>RJ-45 female (8-pin)</td>
</tr>
<tr>
<td>24 V current consumption</td>
<td>typical 190 mA</td>
<td>typical 120 mA</td>
<td>typical 100 mA</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP20 according to EN60529</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CE-marked</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>UL 508</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>UL 60079-15 (Class 1 Zone 2)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>RoHS compliance</td>
<td>EN 50581:2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEEE compliance</td>
<td>DIRECTIVE/2012/19/EU</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>Width 58 x Height 186 x Depth 135 mm (2.3 x 7.3 x 5.3 in.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight (including base)</td>
<td>700 g (1.5 lbs)</td>
<td>600 g (1.3 lbs)</td>
<td>520 g (1.2 lbs)</td>
</tr>
</tbody>
</table>

### Measurements

**CPU80**

![CPU80 Diagram]

**CI854B**

![CI854B Diagram]

**CI865**

![CI865 Diagram]

**CI853**

![CI853 Diagram]

Dimensions in mm