The IPMI Controller software is pre-programmed on a Freescale K10 microcontroller and provides all intelligent platform management interface (IPMI) functionality required by the PICMG 3.0 and AXIe 1.0 specifications. Together with Elma’s Shelf Manager, the microcontroller and software form a complete system monitoring and management solution for all field replaceable units (FRUs) including cards, cooling units, power supplies etc. The software package includes intuitive FRU and sensor data record (SDR) GUI compilers for easy configuration of the IPMI Controller. The controller functionality can be added by incorporating the microcontroller into the design of any FRUs to be monitored. Elma’s IPMI Controller can be used in AXIe, ATCA, cPCI Serial and VPX systems.

**Sensors**
The IPMI Controller supports multiple sensors. Each one has a predefined sensor number and if used, has an SDR associated with it. Using the set of SDRs, the IPMI software knows what sensors are implemented by the FRU and how to monitor them.

**Features:**
- Supports both IPMI-A and IPMI-B
- Part of complete system monitoring and management solution including Elma’s shelf manager board
- Pre-programmed IPMI software delivered on a Freescale K10 microcontroller
- Analog inputs for voltage current or temperature measurements
- External I2C for temperature measurements and communication with payload
- Inputs for digital sensors
- Outputs for E-keying
- External thermal-diode for monitoring FPGA or in-chip sensors
- Hot swap switch input LEDs and payload power control outputs
- Serial interface for debug, firmware update and configuration. The firmware update is supported also over IPMB
- Reference schematic
- GUI software for fast and easy configuration
- Small footprint 10x10mm in a TQFP64 package

**Applications and Related Products**
Elma’s system management products for AXIe, ATCA, cPCI Serial and VPX systems can be used in a wide range of embedded computing applications including high performance instrumentation, defense, aerospace, high energy physics, manufacturing, telecommunications as well as others.

**Example Model Number: IPMI-C-AX**
IPMI Controller and controller software
The IPMI Controller uses standard, IPMI compliant FRU and SDR records to monitor the FRU parameters such as:

- Health monitoring
- Voltages
- Fan RPM
- Power management
- Temperature
- Serial numbers
- Part numbers
- Software versions

The SDR repository of a FRU will be a software image of the hardware sensors. Different FRUs have different setup requirements so in order to allow a quick and simple set-up, a GUI SDR compiler is provided.

### Standards Conformance

Elma’s System Management product family is compliant with the following specifications:

- IPMI v1.5, Intelligent Platform Management Interface Specification
- PICMG 3.0 R3.0, Specification for Advanced Telecommunications Computing Architecture (ATCA)
- AXIe-1 R2.0, AXIe-1 Base Architecture Specification
- VITA 46.11, VPX System Management

### Ordering Information

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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>IPMI Controller and controller software for AXIe Systems</td>
<td>IPMI-C-AX</td>
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<td>IPMI Controller and controller software for VPX Systems</td>
<td>IPMI-C-VP</td>
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<td>IPMI Controller and controller software for AdvancedTCA Systems</td>
<td>IPMI-C-AT</td>
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<tr>
<td>IPMI Controller and controller software for CompactPCI Serial Systems</td>
<td>IPMI-C-CS</td>
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Please contact our sales department for specific model configurations, cost and lead-time.