

### MicroTCA Platform Management

#### Key Benefits

- Manage, Monitor and Maintain multiple MicroTCA platforms
  - ▲ Remote Access from any location
  - ▲ Fault and Threshold Alerts
  - ▲ Monitor Chassis and AMC's in near time
- Rapid Software Integration  
*Designed for quick assimilation into other software applications*
  - ▲ HPI and XML API's ready for use
  - ▲ API commands enable push or pull of data from other software
- Quick Platform Set-up  
*Spend time on the important things*
  - ▲ Identifies the correct AMC for each slot
  - ▲ Automatically finds MicroTCA platforms
- Asset Management  
*Identify all the platform and blade assets in a network*
  - ▲ Access FRU records
  - ▲ Establish and report Platform configurations
- Easy to Use  
*You can be up and running within minutes of installation*
  - ▲ User Friendly GUI
  - ▲ Single screen presentation of hardware management
  - ▲ Step by step instructions
- Quality assured by over 35 years of design experience and a TL-9000 and ISO 9001:2000 certified quality management system (FM 26789)

Control and Management of platforms are critical to the efficient and effective use of Data and Communication networks. From controlling power to fault management, **SpiderWareM<sup>3</sup>** helps run platforms to reduce opex costs, minimize downtime and ensure the best use of manpower.

**SpiderWareM<sup>3</sup>** is platform management software designed for Emerson's MicroTCA systems. The intelligent software tool provides an IPMI compliant platform and blade management solution designed to provide a framework that can remotely Manage, Monitor and Maintain (M<sup>3</sup>) MicroTCA platforms.

The **SpiderWareM<sup>3</sup>** tool acquires information such as voltage, fan speed, temperature, and power supply status, through each blade's 'I<sup>2</sup>C' based IPMI interface. Power supply to AMC's can be limited and AMC's not in use powered down or put on standby, enabling intelligent use of power to maximize efficiency in each platform.

**SpiderWareM<sup>3</sup>** has been especially designed for features to be quickly integrated into middleware or OSS software packages. The software incorporates a choice of XML over TCP/ IP or SAF compliant HPI standard interfaces, enabling developers to rapidly create software that utilizes the functionality of **SpiderWareM<sup>3</sup>**. This means reduced build time and greater flexibility to choose the best integration method with middleware and applications.

With an intuitive Graphical User Interface, **SpiderWareM<sup>3</sup>** provides a good 'out of the box' experience. A self install wizard automates the software set-up on a Windows™ PC and the platform discovery functionality, finds all Emerson MicroTCA platforms on a connected network. The software helps in every aspect of set-up, reducing the time it takes to get started.

**SpiderWareM<sup>3</sup>** detects blade, sensor and FRU (Field Replaceable Unit) data from local and remote management nodes, with a graphical view of each platform in a node. Enabling identification and recording of each platform configuration and it's available payload. The software presents users with descriptions of faults, a graphical view of hot swapping of blades and prioritizes outstanding alarms. It can even send fault alerts via e-mail to specified users. Multiple MicroTCA platforms can be managed from the same remote PC reducing the need for on-site visits and maintenance.



Figure 1: M<sup>3</sup> GUI

**SpiderWare M<sup>3</sup> Shelf Manager consists of four main components:**

- **M<sup>3</sup>Server** – server management application that constantly monitors the health of the system using an IPMI interface. The M<sup>3</sup> Server can run locally in a MicroTCA platform or on a remote server acting as a centralized controller.
- **M<sup>3</sup>Daemon** – a small memory utility that resides on an AdvancedMC module and allows the M<sup>3</sup>Server to run applications and monitor the module. The M<sup>3</sup>Daemon communicates with the M<sup>3</sup>Server using XML over TCP/IP, making it possible to remotely call functional API's.
- **M<sup>3</sup>GUI** (Graphical User Interface) – customizable Java-based client providing full control of the chassis from any platform.
- **M<sup>3</sup>Journal** – a reporting and logging function that records data on login access to M<sup>3</sup> and provides snap shot reporting data on performance and events that have taken place on the platform. Data can be searched using MySQL®.

| FEATURES   | FEATURES  | SYSTEM REQUIREMENTS  | SYSTEM REQUIREMENTS  | SPECIFICATIONS  |
|--|---|--|--|---|
| <ul style="list-style-type: none"> <li>▪ Remote monitoring of multiple MicroTCA platforms</li> <li>▪ Automated acquisition and update of IPMI information from AMC modules and platforms</li> <li>▪ Intelligent Alarm monitoring and prioritization</li> <li>▪ Sensor Threshold setting</li> <li>▪ Monitor CPU and memory usage</li> <li>▪ Temperature control and threshold setting</li> <li>▪ Field Replaceable Unit information</li> <li>▪ XML over TCP/IP and HPI interfaces</li> <li>▪ Log of events, incidents and alarms</li> <li>▪ DHCP configuration management, allowing allocation to slots of IP addresses and boot image</li> </ul> | <ul style="list-style-type: none"> <li>▪ Event Logging and reporting of events, alarms, login access, and change history</li> <li>▪ Custom report generation</li> <li>▪ Three levels of password protected administrative control:               <ul style="list-style-type: none"> <li>▲ Full</li> <li>▲ Partial</li> <li>▲ Read only</li> </ul> </li> <li>▪ M<sup>3</sup>Graphical User Interface</li> <li>▪ M<sup>3</sup>Journal, logging and reporting functionality</li> </ul> | <p><b>M<sup>3</sup>Server/M<sup>3</sup>Daemon/M<sup>3</sup>Journal</b></p> <ul style="list-style-type: none"> <li>▪ Runs on a Processor AMC or remotely on a Linux host</li> <li>▪ TCP/IP interface for remote access</li> <li>▪ KosaiPM AMC module with MMC and GbE interface (or Intel based processor)</li> <li>▪ Linux systems supported:               <ul style="list-style-type: none"> <li>▲ Redhat</li> <li>▲ MontaVista</li> </ul> </li> </ul> | <p><b>M<sup>3</sup>GUI</b></p> <ul style="list-style-type: none"> <li>▪ Requires a Java Runtime Environment (JRE) or Java Software Development Kit (JDK), version 1.5.0_04 or later</li> <li>▪ Minimum PC requirements:               <ul style="list-style-type: none"> <li>▲ Microsoft Windows XP or later</li> <li>▲ Redhat Enterprise Workstation 4.0 Linux</li> <li>▲ Intel Pentium 1.0 GHz or greater</li> <li>▲ 512Mb of memory or more</li> <li>▲ Recommended 1280 x 1024 or higher screen resolution</li> </ul> </li> </ul> | <p><b>Integration</b></p> <ul style="list-style-type: none"> <li>▪ Written in 'C', the application runs as a native executable</li> <li>▪ AMC.0 R</li> <li>▪ IPMI</li> <li>▪ MicroTCA spec V</li> </ul> |

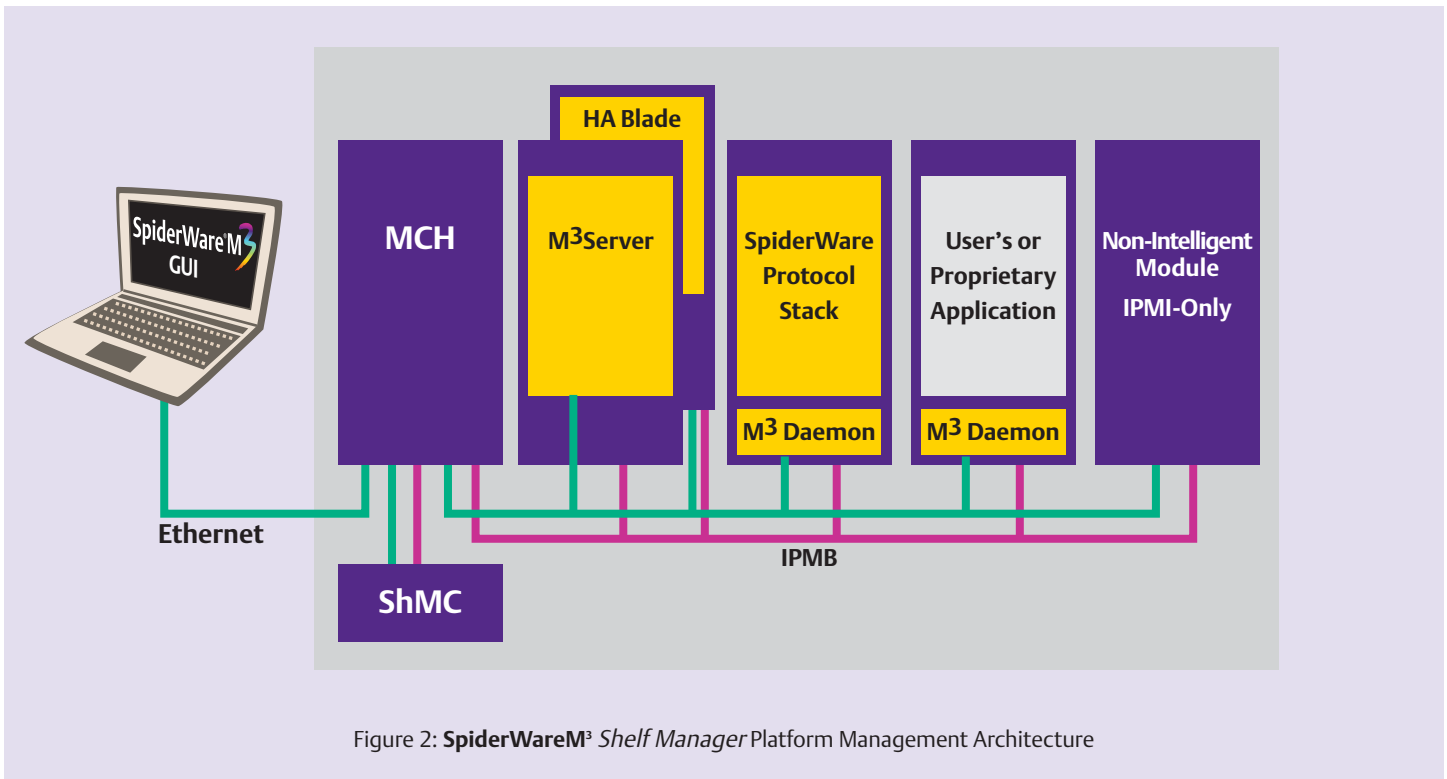


Figure 2: SpiderWareM<sup>3</sup> Shelf Manager Platform Management Architecture

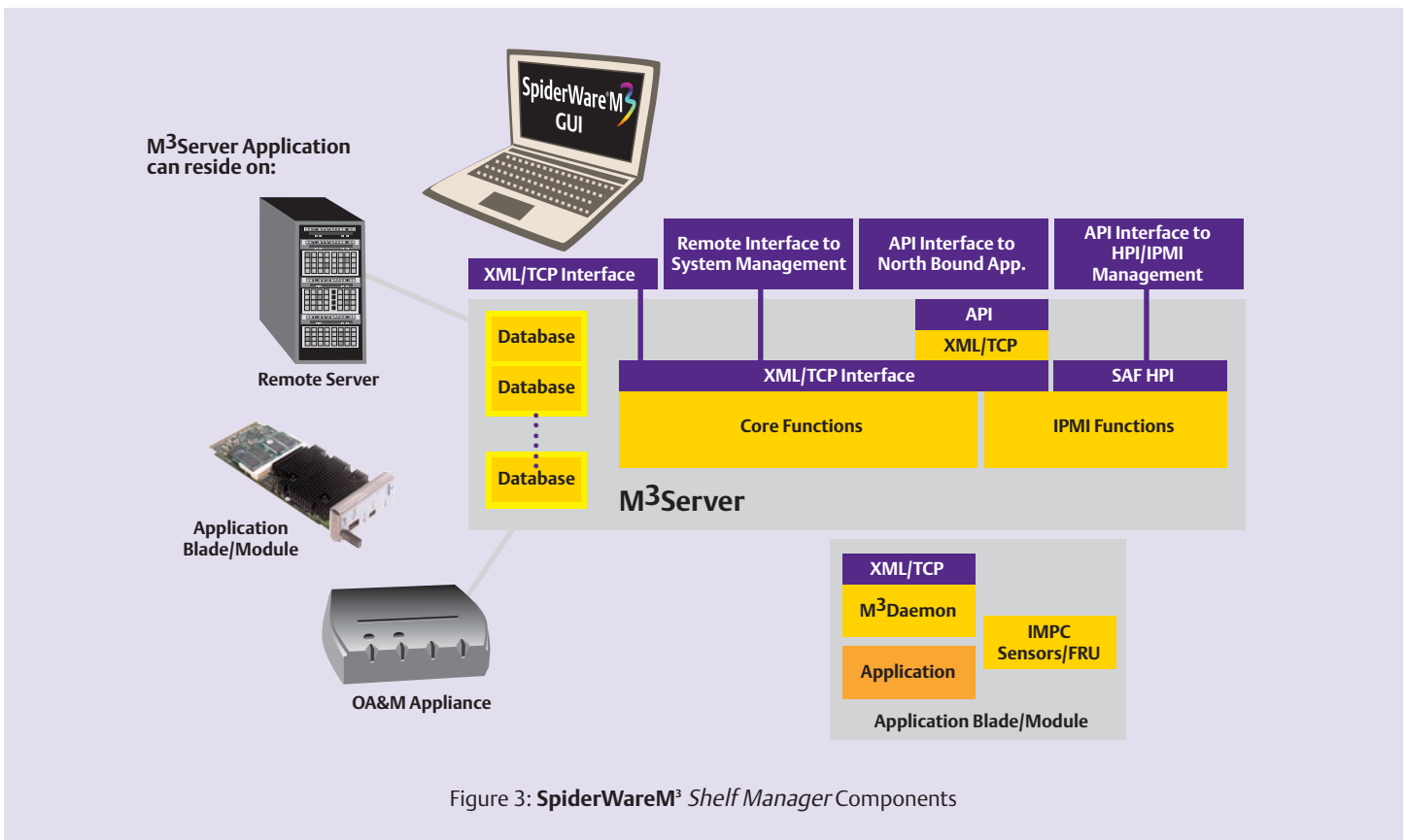


Figure 3: SpiderWareM<sup>3</sup> Shelf Manager Components

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**Emerson Network Power, Embedded Computing**  
8310 Excelsior Drive ■ Madison, WI 53717-1935 USA  
US Toll Free: 1-800-356-9602 ■ Voice: +1-608-831-5500  
FAX: +1-608-831-4249 ■ Email: [info@artesyincp.com](mailto:info@artesyincp.com)

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