FEATURES
- Low Profile Watchdog Timer & Computer Status Monitor Card
- Open collector transistor output to ground power good line or reset switch via pass through upon timeout
- 2 form C relay contacts follow reset signal
- 2 LVTTTL outputs
- 2 LVTTTL inputs
- LED Tri-color, RGB
- Onboard speaker
- EEPROM for configuration and firmware

Advanced Model Features
- Analog to Digital Converter with integrated Temp & Humidity sensors and muxed inputs
  - +12V & +3.3V PCIe Power Monitor
  - Ambient light sensor
  - External LM335 temperature sensor
- 4 Isolated digital inputs accept up to 31VDC
- 2 Isolated FETs switch from 5 to 34VDC

FACTORY OPTIONS
- Extended temperature operation (-40° to +85°C)
- RoHS Compliance
- Low Profile Mounting Bracket

FUNCTIONAL DESCRIPTION
This product is a x1 lane Low Profile PCIe Watchdog Timer & Utility I/O card.

The card is 6.6 inches long and 2.535 inches seated height. I/O wiring connections for this board are via a female DB25 connector on the card mounting bracket. A ribbon cable can be used to connect this card to termination panels or a removable screw terminal adaptor board can be used which plugs directly onto the I/O connector.

OPTIONAL ACCESSORIES

<table>
<thead>
<tr>
<th>ADAP25M</th>
<th>CAB25-X</th>
<th>STB-25</th>
<th>DIN-SNAP-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 pin male screw terminal board</td>
<td>Ribbon Cable Assy, X=length in feet</td>
<td>Screw terminal board, panel or SNAP-TRACK mounting</td>
<td>SNAP-TRACK for DIN-rail mounting STB-25</td>
</tr>
</tbody>
</table>

SOFTWARE
The card is supported for use in most operating systems and includes Linux and Windows compatible software packages. This package contains sample programs and source code in Delphi and Visual C++ for Windows. Linux support includes installation files and basic samples for programming from user level via an open source kernel driver. Third party support includes a Windows standard DLL interface usable from the most popular application programs. Embedded OS support includes Windows XPe.
**SPECIFICATIONS**

**Digital Inputs**
- Lines: 2
- Logic Level: 3.3V
- Pull-up resistors: 10k ohm

**Digital Outputs**
- Lines: 2
- Logic Level: 3.3V

<table>
<thead>
<tr>
<th>Logic Levels</th>
<th>3V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Inputs</td>
<td>≤ 0.8V</td>
</tr>
<tr>
<td>High Inputs</td>
<td>≥ 2.0V</td>
</tr>
<tr>
<td>Low Outputs</td>
<td>≤ 0.4V</td>
</tr>
<tr>
<td>High Outputs</td>
<td>≥ 2.4V</td>
</tr>
</tbody>
</table>

**Relay / Reset Outputs**
- Contacts: Dual Form C (DPDT)
- Nominal Ratings: 1A, 30VDC, 0.5A 125VAC (resistive)
- Open Collector Transistor to ground the power good line

**Isolated Digital Inputs**
- Type: Optically isolated from the PC, sharing a common return
- Voltage Range: 3 to 31 VDC
- Isolation: 500V channel-to-ground
- Input Resistance: 1.8K ohms in series with opto coupler
- Responsiveness: Rise Time = 10 uS / Fall Time = 30 uS

**Isolated FET Outputs**
- Output Type: High Side Power MOSFET Switch. Protected against short circuit, over-temp., ESD, can drive inductive loads.
- Voltage Range: 5-34VDC recommended (customer supplied) for continuous use, 40VDC absolute maximum
- Current Rating: 2A maximum
- Minimum load: Required (a voltmeter by itself does not provide enough of a load)
- Turn-on time: 90 uS (typical)
- Turn-off time: 110 uS (typical)

**Environmental**
- Operating Temperature: 0° to 70°C, optional -40° to +85°C
- Storage Temperature: -55° to +150°C
- Humidity: 5% to 95% RH, w/o condensation
- Card Dimensions: 6.6" Length; Height 2.535" seated

**ORDERING GUIDE**
- PCIe-WDG-CSM: PCI Express Watchdog Timer
- PCIe-WDG-CSMA: Advanced Watchdog Timer Card

**Factory Options**
- Extended temperature operation (-40° to +85°C)
- RoHS Compliance
- Low Profile mounting bracket

<table>
<thead>
<tr>
<th>Pin</th>
<th>Signal</th>
<th>Pin</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RELAY 1C</td>
<td>14</td>
<td>RELAY 2C</td>
</tr>
<tr>
<td>2</td>
<td>RELAY 1N0</td>
<td>15</td>
<td>RELAY 2N0</td>
</tr>
<tr>
<td>3</td>
<td>RELAY 1NC</td>
<td>16</td>
<td>RELAY 2NC</td>
</tr>
<tr>
<td>4</td>
<td>ISOL IN RETURN*</td>
<td>17</td>
<td>ISOL IN 4*</td>
</tr>
<tr>
<td>5</td>
<td>ISOL IN 3*</td>
<td>18</td>
<td>ISOL IN 2*</td>
</tr>
<tr>
<td>6</td>
<td>ISOL IN 1*</td>
<td>19</td>
<td>ISOL OUT 2 VBB*</td>
</tr>
<tr>
<td>7</td>
<td>ISOL OUT 1 VBB*</td>
<td>20</td>
<td>ISOL OUT 2 VOUT*</td>
</tr>
<tr>
<td>8</td>
<td>ISOL OUT 1 VOUT*</td>
<td>21</td>
<td>ISOL OUT RETURN*</td>
</tr>
<tr>
<td>9</td>
<td>LVTTL IN 2</td>
<td>22</td>
<td>GND</td>
</tr>
<tr>
<td>10</td>
<td>LVTTL IN 1</td>
<td>23</td>
<td>GND</td>
</tr>
<tr>
<td>11</td>
<td>LVTTL OUT 2</td>
<td>24</td>
<td>GND</td>
</tr>
<tr>
<td>12</td>
<td>LVTTL OUT 1</td>
<td>25</td>
<td>GND</td>
</tr>
<tr>
<td>13</td>
<td>+3.3 VDC via 500mA polyfuse</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Indicates PCIe-WDG-CSMA version only