PCIe-WDG-CSMA
Watchdog Timer & I/O Card
## Datasheet and Installation Instruction

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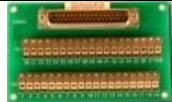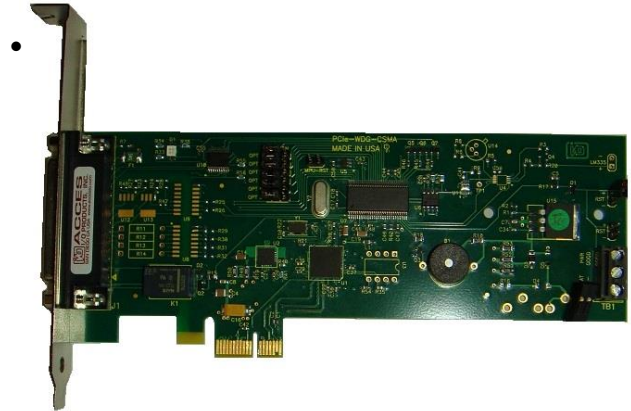
FACTORY OPTIONS
- Extended temperature operation (-40° to +85°C)
- RoHS Compliance
- Low Profile Mounting Bracket

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

ADAP25M	CAB25-X	STB-25	DIN-SNAP-6
25 pin male screw terminal board	Ribbon Cable Assy, X=length in feet	Screw terminal board, panel or SNAP-TRACK mounting	SNAP-TRACK for DIN-rail mounting STB-25

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

Logic Levels	3V	
Low Inputs	≤ 0.8V	≤ 1uA
High Inputs	≥ 2.0V	≤ 1uA
Low Outputs	≤ 0.4V	≤ 8mA
High Outputs	≥ 2.4V	≤ 8mA

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

DB25F Connector Pin Assignments

Pin	Signal	Pin	Signal
1	RELAY 1C	14	RELAY 2C
2	RELAY 1N0	15	RELAY 2NO
3	RELAY 1NC	16	RELAY 2NC
4	ISOL IN RETURN*	17	ISOL IN 4*
5	ISOL IN 3*	18	ISOL IN 2*
6	ISOL IN 1*	19	ISOL OUT 2 VBB*
7	ISOL OUT 1 VBB*	20	ISOL OUT 2 VOUT*
8	ISOL OUT 1 VOUT*	21	ISOL OUT RETURN*
9	LVTTL IN 2	22	GND
10	LVTTL IN 1	23	GND
11	LVTTL OUT 2	24	GND
12	LVTTL OUT 1	25	GND
13	+3.3 VDC via 500mA polyfuse		
*Indicates PCIe-WDG-CSMA version only			

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