

**DS-  
MPE-  
GPIO 36  
Channel  
Digital I/O  
PCIe  
MiniCard**



**DIAMOND**  
S Y S T E M S



## FEATURES

- 36 buffered digital I/O lines
- Configurable for up to 4 24-bit PWM
- Configurable for 4 programmable counter/timers
- 3245 transceivers for high current output
- Software configurable pull-up/pull-down
- +3.3VDC input power
- Latching connectors for increased ruggedness
- Support for Windows 7, XP, CE, and Linux 2.6
- Universal Driver support for all functions
- Operating temperature -40°C to +85°C
- PCIe MiniCard full size form factor (50.95 x 30mm)

## ◆ Description

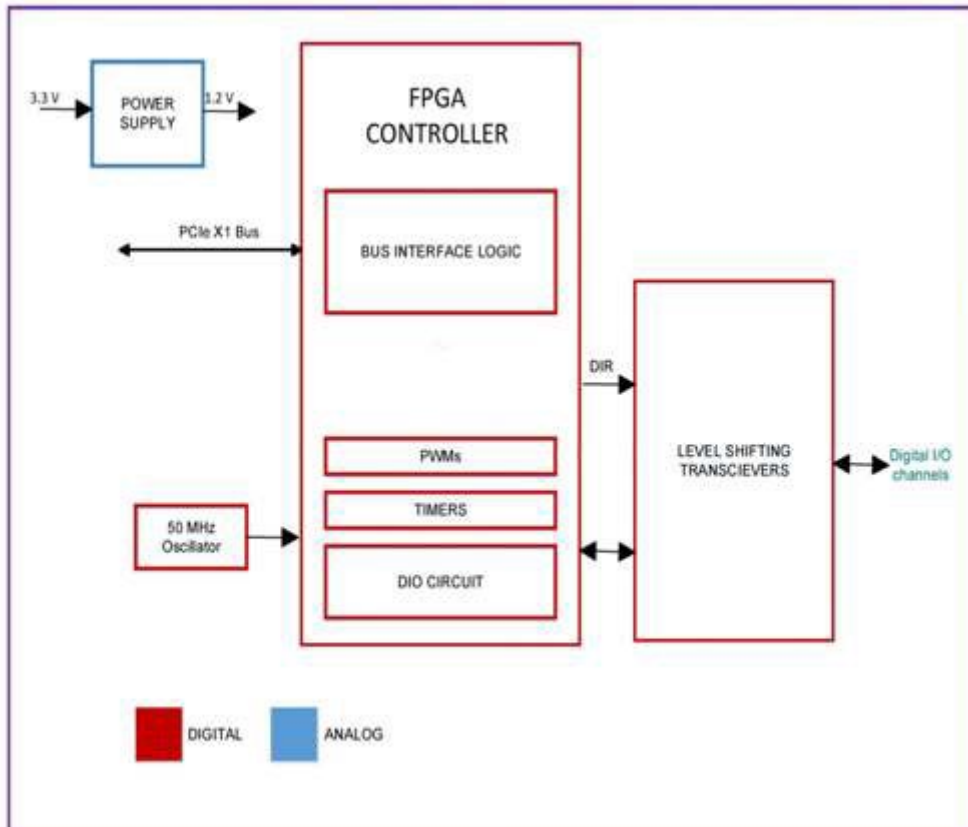
The DS-MPE-GPIO is a rugged, low cost 36-channel digital I/O PCIe MiniCard module that is ideal for digital I/O expansion in embedded and OEM applications.

An FPGA provides 36 buffered digital I/O lines that can be configured to operate in simple I/O mode in the form of 8-bit and 4-bit ports, or in counter/timer and pulse width modulator modes. Two ports are fixed digital I/O ports with programmable direction in 8-bit groups. One port can operate as either a 4-bit DIO or 4 counter/timers with 1 input

and 1 output per counter. One port can operate as either 8 DIO or up to 8 pulse width modulators.

Extended temperature operation of -40°C to +85°C enables the board to operate in environments with extreme temperature swings, such as vehicles or outdoor installations.

The DS-MPE-GPIO product comes with the 36-channel PCIe MiniCard digital I/O module, the CK-DAQ02 cable kit with two digital I/O cables, and a hardware kit with mounting screws.



CK-DAQ02 includes the following cables:

No.	Qty	Cable	Description	Drawing
1	2	6980501	1.25mm 20 Pin IDC	<a href="#">Show</a>

### ◆ Specifications

<b>Number of DIO</b>	36
<b>Pull-up / Pull-down</b>	Software configurable
<b>Transceivers</b>	3245 with high current output
<b>Power-up / Reset</b>	DIO in input mode
<b>Pulse Width Modulators</b>	Up to 4 24-bit circuits configurable 0-100% duty cycle On/off control Programmable polarity

<b>Counter / Timers</b>	4 32-bit circuits configurable Programmable
<b>Input power</b>	+3.3VDC +/-5%
<b>Power consumption</b>	100mA @ 3.3V
<b>Software drivers</b>	Windows 7, XP, CE Linux 2.6.16, 2.6.27, 2.6.31, 2.6.32
<b>Universal Driver</b>	Support for all functions
<b>Form Factor</b>	PCIe MiniCard full size
<b>Dimensions</b>	50.95 x 30mm (2 x 1.18")
<b>Operating temperature</b>	-40°C to +85°C
<b>Operating humidity</b>	5% to 95% noncondensing
<b>MTBF</b>	tbd
<b>Weight</b>	8.5g (0.3oz)
<b>RoHS</b>	Compliant

## ◆ Models and Accessories

### DS-MPE-GPIO

#### available models:

**DS-MPE-GPIO** 36-channel PCIe MiniCard DIO Module Available

Please [login](#) or [signup](#) for an online quote request.

### Cables and accessories

#### available models:

[CK-DAQ02](#) Cable Kit, DS-MPE-GPIO/DAQ0804, Qty 2 6980501 DAQ Cables

[6980501](#) 1.25mm 20 Pin IDC

Please [login](#) or [signup](#) for an online quote request.

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