PD2-DIO

PowerDAQ 2 PCI Digital I/O Boards

- 64 or 128 lines (5V/TTL) of I/O in 16-bit ports
- Generate interrupts on any line
- Four separate high-speed IRQ lines (100 ns)
- Custom logic chip replaces obsolete 8255 and equivalents
- Ideal for solid-state relays
- User-defined power-up state in 16-bit groups (High, Low, Tri-stated)
- Two Enhanced Synchronous Serial Interfaces (ESSIs) for high-speed devices such as codecs
- Onboard 16-bit FIFO: 2k samples
- Three 24-bit counter/timers
- Port-scan list
- High-speed pattern generation and digital streaming
- High-speed event counts streaming (2 Mwords/s)
- Start/stop external trigger line

General Description

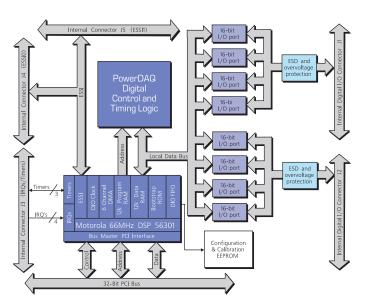
For applications that involve a high number of digital I/O lines, UEI offers four models in the PD2-DIO family with either 64 or 128 I/O lines. Instead of following the industry trend of implementing discrete I/O with cumbersome and limiting 8255-type devices, we work with 16-bit line drivers under control of a DSP and custom logic.

As a result, you no longer need to create external circuitry to guarantee power-on startup states; our software allows you to configure startup states in groups of 16-bit ports. You no longer need to design separate interrupt circuitry; our hardware comes with four high-speed interrupts waiting for you to use. The digital I/O lines are protected against electrostatic discharge and automatically detect shorts on power up.

Besides digital I/O, the board features three 24-bit counter/timers as well as two high-speed ESSI (Enhanced Synchronous Serial Interface) ports. The onboard DSP and optimized PCI-bus interface also allow the card to optionally stream digital data to or from disk at rates as high as 2 Mbytes/s and count events up to 16.5 MHz

Distribution panels make all the board's I/O capabilities available for field connection. Further, an optional accessory (PD2-DIO-CONN64-4) distributes 64 of the digital I/O points into four sets of 16 lines through industry-standard 50-pin IDC connectors. They, in turn, attach directly to relay panels available from UEI and many other sources.

Block Diagram:





Supports UEIDaq Framework Data Acquisition Software Library for Windows. Linux and QNX drivers available. Visit our website for more details.

Technical Specifications:

lecinical specifi	cacions.			
DC Electrical Characteri	stics Over Operating	Range		
Input High Level	Guaranteed logic	2.0V min		
	High level			
Input Low Level	Guaranteed logic	0.8V max		
	Low level			
Input High Current	$V_I = 5V$	±1 μA max		
Input Low Current	$V_1 = Gnd$	±1 μA max		
3-State Output Current	Vo = 2.7V	±1 μA max		
3-State Output Current	$V_0 = 0.5V$	±1 μA max		
Short-Circuit Current	Vo = Gnd	-80 mA min		
	(momentary)	-140 mA typ		
		-250 mA max		
Input Hysteresis		100 mV typ		
Output Drive Character	istics			
Output Drive Current	$V_0 = 2.5 V$	-32 mA per pin		
		-180 mA per port		
Output High Voltage	Iон = -3 mA	3.5V typ, 4.8V max		
Output High Voltage	loн = -15 mA	3.5V typ, 4.7V max		
Output High Voltage	Iон = -32 mA	2.4V min, 3.0V typ		
Output High Voltage	$l_{0L} = 64 \text{ mA}$	0.2V typ, 0.55V max		
I/O Power Off Leakage	Vi/o ≤ 4.5V	±1 µA max		
Counter /Timer Prescaler	1 (21 hit)			
Number of Channels	1 (21-bit)			
Resolution	-			
	24 bits			
Maximum Frequency	16.5M S/s for external clock and			
	33M S/s for internal DSP clock			
Minimum Frequency	0.0000002 S/s for internal clock, no			
Minimum Pulse Width	low limit for external clock			
	20 ns			
Output High Level	2.0V min @ -4 mA			
Output Low Level	0.5V max @ 4 mA			
Input High range		input supply voltage		
Protection	7 kV ESD,			
have at Law Malta wa	±30V overshoot/undershoot			
Input Low Voltage	0.0-0.8V			

Input High Voltage ESSI Characteristics

The Motorola 56301 DSP contains two fast Enhanced Synchronous Serial Interfaces. The PowerDAQ DIO board allows access to both. Each ESSI port contains three transmitters and one receiver and has a maximum operational speed of 15M bits/sec.

2.0-5.0V

Pinout Diagrams:

DIOS7 1 51 -DIOS6 DIO12 1 51 -DIO120 DIOSN 2 25 -DIO13 DIO12 3 53 -DIO18 DIOS9 4 52 -DIO15 DIO12 3 53 -DIO18 DIOS9 4 55 -DIO52 DIO12 4 55 -DIO18 DIO61 7 57 -DIO150 DIO12 7 57 -DIO115 DIO62 8 58 -DIO49 DIO12 7 57 -DIO111 DIO64 7 57 -DIO110 DIO12 7 -DIO111 DIO64 10 7 -DIO12 CBON 10 do -DIO111 DIO64 10 -DIO14 CBON 10 do -DIO111 DION6 10 CIO47 CBON 10 do -DIO102 DGNN 14 66 -DIO103 CBON 10 do DIO16								
DioSe 3 53 -01054 Dio122 3 52 -01018 DiOSe 4 5 -0053 Dio122 4 5 55 -Di017 DiOSe 4 5 -0053 Di0122 4 5 55 -Di0176 DiGH 6 56 -Di051 Di0126 7 5 -Di0176 DiGH 7 7 Di014 5 55 -Di0178 DiGH 7 7 Di014 6 56 -Di0178 DiGH 10 6 0 Di022 7 Di014 57 -Di0160 Di024 56 -Di0179 DiGN 10 0 Di024 4599 12 62 -Di0161 Di0179 Di024 5799 12 62 -Di0179 Di0179	DIO57-	1	51	- DIO56	DIO121-	1	51	- DIO120
DioSo 4 5.4 -10633 DioTa 4 5.4 -106177 DioRo 5 5 -0052 DioTa 5.5 -01016 DioRo 5 5 -0053 DioTa 5.5 -01016 DioRo 6 5.6 -0053 DioTa 5.5 -01014 DioRo 8 5.5 -01048 DioTa 8 -01013 DioRo 8 5.5 -01048 DioTa 8 -01011 DioNo 16 6 -01048 DioTa 9 5.5 -01010 DioNo 11 61 -01046 DioTo -111 61 -01010 DioNo 11 63 -01044 +5VP 11 63 -01010 DioNo 11 64 -0103 DioTo 64 -01010 DioNo 15 65 -01040 DioTo 106 01010 DioNo 17 7 </td <td>DGND-</td> <td>2</td> <td>52</td> <td>- DIO55</td> <td>DGND-</td> <td>2</td> <td>52</td> <td></td>	DGND-	2	52	- DIO55	DGND-	2	52	
Dicko, G. S. S. Dicko, C. Dicko, G. S. Dicko, G. Dicko, G. <thdicko, g.<="" th=""> Dicko, G. <thdicko, g.<="" th=""> Dicko, G. D</thdicko,></thdicko,>	DI058-	3	53	- DIO54	DI0122 -	3	53	- DIO118
Deckno 6 556 -10051 Deckno 6 556 -100115 DIGGI 7 77 -01050 DIG12 7 77 -010114 DIGGI 7 57 -01014 DIG12 7 77 -01014 DIGGI 7 557 -01014 DIG12 7 59 -010113 DIGGI 9 559 -01048 DIG12 7 59 -010113 DGNN 16 -01044 DGNN 16 -01010 -01011 DGNN 16 -01044 DGNN 16 -01010 -01010 SFNP 13 63 -01044 DGNN 15 64 -01010 DGNN 15 65 -01042 DGNN 16 66 -010104 DGNN 17 7 -01040 DGNN 16 66 -010101 DGNN 20 70 -01037 DGNN 20 -01031	DI059-	4	54	- DIO53	DIO123 -			
DioGi - 7. 57 -01050 DiOZ - 8 58 -01014 DiOGA - 8 58 -01049 DiOZ - 8 58 -01013 DiOGA - 9 55 -01049 DiOZ - 8 58 -01013 DiOGA - 9 55 -01013 DiOZ - 8 58 -01013 DGNN - 10 60 -01047 DGNN - 10 60 -01014 JSNN - 11 61 -01016 DiOZ - 8 58 -01013 JSNN - 11 61 -01016 DiOX - 10 50 -01019 JSNN - 11 66 -01043 DGNN - 11 66 -01016 DGNN - 11 66 -01043 DGNN - 10 66 -010103 DGNN - 10 66 -01038 DGNN - 20 -010101 DGNN - 20 -010101 DGNN - 20 1013 DGNN - 20 -01031 DGNN - 20 -010101 DGNN - 20 1017 -01036 DGNN - 20 -010101 DGNN - 20 -010101 DGNN - 20	DI060-	5	55	- DIO52	DI0124 -	5	55	- DIO116
Dick: 8 Size Dicki Bize Dicki Dick: 9 35 Dicki	DGND-	6	56	- DIO51		6	56	- DIO115
DiGG - 9 250 -DiO48 DiO27 -9 500 DGND - 10 60 -DiO47 DGND - 10 60 DiO112 DGND - 10 60 -DiO46 DGND - 10 60 DiO111 DGND - 11 61 -DiO46 DGND - 10 60 DiO111 F5VP - 12 62 -DIO45 +5VP - 12 62 -DIO101 DGND - 11 66 -DIO41 DGND - 11 66 -DIO101 DGND - 15 65 -DIO30 DGND - 15 65 -DIO102 DGND - 15 65 -DIO41 Unit - 16 66 -DIO101 DGND - 10 66 -DIO41 Unit - 16 66 -DIO102 DGND - 20 70 -DIO39 PROP0 - 18 66 -DIO102 DGND - 20 -DIO102 DGND - 21 71 -DIO36 DGND - 21 71 -DIO30 DGND -	DIO61-	7	57	- DIO50			57	- DIO114
Deckno 10 260 10047 Deckno 10 260 10047 Deckno 11 27 10045 Eckno 11 26 10109 45VP 12 27 10045 Eckno 11 26 10109 45VP 13 63 101044 45VP 12 63 10108 DGNN 14 64 10107 16 66 101018 DGNN 15 65 101042 DecNn 16 66 101010 DGNN 16 66 10103 DecNn 16 66 101010 DGNN 16 66 10103 DecNn 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 <	DI062 -	8	58	- DIO49		8	58	- DIO113
DCKND 11 61 -01046 DCKND 11 61 -01010 54VP1 12 62 -01045 54VP1 13 62 -01045 DGKND 14 64 -01045 54VP1 13 63 -01010 DGKND 14 64 -01043 DGKND 16 66 -01010 DGKND 16 66 -01041 Lint 16 66 -01010 DGKND 16 66 -01041 Lint 16 66 -01010 PROPO 18 88 -01039 PROPO 18 68 -01010 DGKND 20 -01037 DGKND 20 -01010 DGKND 20 -01010 DGKND 21 71 -01035 DGKND 21 -01010 DGKND 21 -01030 DGKND 21 -01010 DGKND 21 -01030 DGKND 21 -01010 DGKND 21	DIO63 -	9	59	- DIO48			59	
5-W0 12 62 -D045 +5-W1 12 62 -D0109 5-W0 12 62 -D044 +5-W1 12 62 -D0109 5-W0 13 62 -D044 +5-W1 13 63 -D0107 DGND 16 64 -D0142 DGND 16 66 -D01017 DGND 16 64 -D0142 DGND 16 66 -D01017 DGND 17 67 -D040 DGND 17 67 -D0104 DGND 17 67 -D040 DGND 10 0 D01012 DGND 20 177 -D038 DGND 20 0 D01010 DGND 21 71<-D038	DGND-	10	60	- DIO47	DGND-	10	60	- DIO111
+5-YP, 13 13 53 -01044 +5-YP, 13 153 -010108 DGND - 14 26 -01043 DGND - 14 65 -010106 DGND - 15 55 -01042 DGND - 14 65 -D10106 DGND - 16 66 -01034 DGND - 17 67 -D10106 DGND - 17 67 -01040 DGND - 17 67 -D10101 DGND - 17 67 -01040 DGND - 17 67 -D10101 DGND - 16 66 -01033 DGND - 17 -D10101 DGND - 20 70 -01035 DGND - 20 71 -D10101 DGND - 21 72 -01035 DGND - 20 71 -D10101 DGND - 22 72 -01035 DGND - 20 71 -D1099 DGND - 23 72 -01034 DGND - 20 72 -D1097 DGND - 26 76 -01031 DGND - 20 77 -D1094 DGND - 28 72 -01028 DGND - 20<	DGND-	11	61	- DIO46	DGND-	11	61	- DIO110
DCND 14 64 -1043 DCND 15 65 -10107 DGND 15 65 -101042 DGND 16 66 -101045 DGND 15 65 -101042 DGND 16 66 -101045 DGND 17 67 -101040 DGND 17 67 -101010 DGND 17 67 -101040 DGND 17 67 -101010 DGND 16 -10103 DGND 00 010101 DGND 00 010101 DGND 21 71 -10136 DGND 21 71 -10100 DGND 23 72 -10131 DGND 23 72 -10195 DGND 25 -10132 DGND 26 76 -10195 DGND 26 77 -10131 DGND 26 78 -10193 DGND 27 77 -10133 DGND	+5VPJ-	12	62	- DIO45	+SVPJ-	12	62	- DIO109
Derkin 15 85 -10042 Derkin 15 85 -101016 Linho 16 66 -101041 Linho 16 66 -101016 DRND 17 -7 -10141 Linho 16 -010131 DRND 17 -7 -10140 Derkno 16 66 -101033 DRND 17 -7 -10133 Derkno 16 66 -101031 DGND 20 70 -10137 Derkno 20 -101011 DGND 22 72 -10135 Derkno 23 -10199 DGND 22 72 -10193 Derkno 23 -10199 DGND 26 76 -10131 Derkno 23 -10199 DGND 26 76 -10131 Derkno 26 76 -10197 DGND 26 76 -10192 Derkno 26 76 -10197	+5VPJ-	13	63	- DIO44	+SVPJ-	13	63	- DIO108
Linb 16 262 -10141 Linh 16 262 -101035 DGND 17 27 -10140 DGND 27 -101013 DGND 17 27 -10140 DGND 16 -10133 DGND 16 68 -10133 DGND 10 -101010 DGND 20 -10133 DGND 20 -101010 DGND 21 71 -10136 DGND 21 71 -10136 DGND 21 71 -10134 DGND 21 71 -10198 DGND 23 72 -10134 DGND 23 72 -10199 DGND 25 75 -10131 DGND 26 72 -10193 DGND 28 74 -10129 DGND 28 74 -10193 DGND 28 74 -10129 DGND 28 74 -10193 DGND	DGND-	14	64	- DIO43	DGND-	14	64	- DIO107
DCKND [17] [27] - O10040 DCKND [17] [27] - O101044 PROPO 16 9 0033 PROP 16 9 00101 DGKND 19 63 - O1033 CBCND 19 63 - D10101 DGKND 20 70 - O1037 DGKND 20 70 - D10101 DGKND 21 71 - O1033 DGKND 20 70 - D10101 DGKND 22 71 - O1033 DGKND 22 72 - D1039 DGKND 22 72 - O1033 DGKND 23 73 - D1099 DGKND 26 76 - O1031 DGKND 26 76 - D1097 DGKND 28 78 - O1029 DGKND 27 - D1093 DGKND 28 78 - O1027 DGKND 28 - 01026 DGKND 28 - 01027 DGKND 28 - 01026	DGND-	15	65	- DIO42	DGND-	15	65	- DIO106
DGND TO TO DIO40 DCND TO ZO DIO104 PROPO 16 60 10033 PROP 16 60 10103 DGND 10 20 10037 COND 10 20 10102 DGND 21 21 01037 COND 20 10100 DGND 21 71 01036 COND 22 10199 DGND 22 72 01035 DGND 22 10199 DGND 22 72 01035 DGND 22 72 01099 DGND 22 72 01037 DGND 25 75 01096 DGND 23 73 10134 DGND 26 76 10197 DGND 26 76 10131 DGND 26 76 10197 DGND 23 9 1022 DGND 29 9 1092 DGND </td <td>Lin0-</td> <td>16</td> <td>66</td> <td>- DIO41</td> <td>Lin1-</td> <td>16</td> <td>66</td> <td>- DIO105</td>	Lin0-	16	66	- DIO41	Lin1-	16	66	- DIO105
Derkin 19 60 -1038 Derkin 19 60 -10102 Derkin 60 70 -1037 Derkin -0037 Derkin -00102 Derkin 60 71 -1035 Derkin -21 -71 Derkin -00107 Derkin 21 -1035 Derkin -22 -72 -1039 Derkin 22 72 -1033 Derkin -22 -73 -1059 Derkin 22 72 -1033 Derkin -25 -70 -0097 Derkin 26 76 -1031 Derkin -70 -1099 Derkin -108 Derkin -108 </td <td>DGND-</td> <td>17</td> <td>67</td> <td>- DIO40</td> <td>DGND-</td> <td>17</td> <td></td> <td></td>	DGND-	17	67	- DIO40	DGND-	17		
Deckno 20 700 -10037 Deckno 20 700 -100101 DGND 20 71 -10035 DGND 22 72 -10039 DGND 22 72 -10035 DGND 22 72 -10039 DGND 22 72 -10034 DGND 22 72 -10039 DGND 23 73 -10034 DGND 23 74 -10039 DGND 23 75 -10032 DGND 25 75 -10036 DGND 25 75 -10030 DGND 27 77 -10094 DGND 27 77 -10026 DGND 20 702 -10091 DGND 23 26 -1027 DGND 20 70 -10091 DGND 21 27 -10226 DGND 23 27 -10091 DGND 23 21 -10226 DGND <t< td=""><td>PROP0-</td><td>18</td><td>68</td><td>- DIO39</td><td>PROP1-</td><td>18</td><td>68</td><td>- DIO103</td></t<>	PROP0-	18	68	- DIO39	PROP1-	18	68	- DIO103
Deckno. 21 71 - 10036 Deckno. 21 71 - 10100 DGND. 21 72 - 1035 DGND. 21 72 - 10098 DGND. 23 72 - 1033 DGND. 23 72 - 10098 DGND. 23 75 - 10133 DGND. 24 74 - 10197 DGND. 26 75 - 10133 DGND. 26 75 - 10193 DGND. 26 75 - 10131 DGND. 26 75 - 10199 DGND. 28 78 - 10129 DGND. 27 - 10199 DGND. 28 78 - 10127 DGND. 28 79 - 10193 DGND. 31 29 - 10122 DGND. 38 - 10188 - 10188 DGND. 32 29 - 10122 DGND. 38 - 10184 - 10186 DGND. 33 38 - 10122	DGND-	19	69	- DIO38	DGND-	19	69	- DIO102
DCND 22 72 -1035 DCND 22 72 -10999 DGND 23 74 -1033 DGND 24 74 D1997 DGND 25 75 -1033 DGND 24 74 D1997 DGND 25 75 -1033 DGND 26 75 -1093 DGND 26 76 -1033 DGND 26 76 -1099 DGND 26 77 -1030 DGND 27 70 -1030 DGND 27 70 -1030 DGND 28 98 -1099 DGND 28 99 -1099 DGND 28 -1099 DGND 28 -1099 DGND 28 -10195 DGND 28 -10193 DGND 28 -10199 DGND 28 -10193 DGND 28 -10193 DGND 28 -10193 DGND 28 -10193 DGND 38 -10193	DGND-	20	70	- DIO37	DGND-	20	70	- DIO101
DCND 23 72 -10034 DCND 23 72 -10098 DCND 24 74 -10037 DCND 25 75 -10032 DGND 25 75 -10032 DCND 26 76 -10995 DGND 26 76 -10131 DCND 26 76 -10195 DGND 27 77 -10133 DGND 26 76 -10193 DGND 28 78 -10129 DGND 28 79 -10193 DGND 28 79 -10129 DGND 20 29 -10193 DGND 30 80 -10127 DGND 30 81 -10193 DGND 32 32 -10122 DGND 30 81 -10189 DGND 32 32 -10122 DGND 32 32 -10184 DGND 35 66 -10121 DGND 36 <td>DGND-</td> <td>21</td> <td>71</td> <td>- DIO36</td> <td>DGND-</td> <td>21</td> <td>71</td> <td>- DIO100</td>	DGND-	21	71	- DIO36	DGND-	21	71	- DIO100
DCND 23 72 -10034 DCND 23 72 -10098 DCND 24 74 -10037 DCND 25 75 -10032 DGND 25 75 -10032 DCND 26 76 -10995 DGND 26 76 -10131 DCND 26 76 -10195 DGND 27 77 -10133 DGND 26 76 -10193 DGND 28 78 -10129 DGND 28 79 -10193 DGND 28 79 -10129 DGND 20 29 -10193 DGND 30 80 -10127 DGND 30 81 -10193 DGND 32 32 -10122 DGND 30 81 -10189 DGND 32 32 -10122 DGND 32 32 -10184 DGND 35 66 -10121 DGND 36 <td>DGND-</td> <td>22</td> <td>72</td> <td>- DI035</td> <td>DGND-</td> <td>22</td> <td>72</td> <td>- DIO99</td>	DGND-	22	72	- DI035	DGND-	22	72	- DIO99
DCND 22 74 -1033 DCND 24 74 -1097 DCND 25 75 -1032 DCND 25 -1096 DGND 26 75 -1033 DCND 25 -1099 DGND 26 75 -1033 DCND 26 76 -1099 DGND 27 77 -1030 DCND 28 78 -1099 DGND 28 79 -1022 DCND 28 79 -1099 DGND 28 79 -1025 DCND 28 -1099 DGND 38 -1025 DCND 28 20 -0089 DGND 38 38 -1025 DCND 38 -1018 DGND 38 -1025 DCND 38 -1018 D018 DGND 38 -1022 DCND 38 -1018 D018 DGND 36 6-1022 DCND				- DIO34	DGND-	23		- DIO98
DCND 25 75 -1033 DCND 25 75 -10964 DCND 26 77 -1033 DCND 26 77 -10944 DGND 26 77 -1033 DCND 28 78 -10934 DGND 28 79 -1023 DCND 28 79 -1029 DGND 28 79 -1023 DCND 28 79 -1029 DGND 28 79 -1022 DCND 30 10191 DGND 32 79 -1022 DCND 30 10191 DGND 32 22 -1022 DCND 32 28 -1028 DGND 33 8 -1022 DCND 32 28 -1028 DGND 34 8 -1021 DCND 36 8 -1084 DGND 35 88 -1019 DGND 36 8 -1084 <t< td=""><td></td><td></td><td></td><td>- DIO33</td><td>DGND-</td><td>24</td><td></td><td></td></t<>				- DIO33	DGND-	24		
DCND 27 77 -01030 DCND 27 77 -01094 DCND 28 79 -01029 DCND 28 79 -01092 DGND 28 79 -01028 DCND 28 79 -01092 DGND 28 79 -01028 DCND 28 -01091 DGND 38 80 -01027 DGND 38 -01089 DGND 21 22 -01025 DCND 32 38 -01088 DGND 34 84 -01023 DCND 38 80 -01087 DGND 36 85 -01021 DCND 36 85 -01083 DGND 36 86 -01012 DCND 36 86 -01082 DGND 36 86 -01012 DCND 36 86 -01082 DGND 36 86 -01012 DCND 36 86 -0108	DGND-			- DIO32	DGND-	25	75	- DIO96
DCND 27 77 -01030 DCND 27 77 -01094 DCND 28 79 -01029 DCND 28 79 -01092 DGND 28 79 -01028 DCND 28 79 -01092 DGND 28 79 -01028 DCND 28 -01091 DGND 38 80 -01027 DGND 38 -01089 DGND 21 22 -01025 DCND 32 38 -01088 DGND 34 84 -01023 DCND 38 80 -01087 DGND 36 85 -01021 DCND 36 85 -01083 DGND 36 86 -01012 DCND 36 86 -01082 DGND 36 86 -01012 DCND 36 86 -01082 DGND 36 86 -01012 DCND 36 86 -0108	DGND-	26	76	- DIO31	DGND-	26	76	- DIO95
DCKDD 28 78 -1029 DCKD 28 78 -1093 DCKDD 29 79 -1029 DCKD 29 78 -1093 DCKDD 29 9 -1029 DCKD 29 79 -1093 DCKDD 20 20 -1027 DCKD 30 0 D079 DGKD 31 81 -1026 DCKD 31 81 -0108 DGKD 33 82 -1024 DCKD 33 84 -1028 DGKD 33 84 -1024 DCKD 33 84 -1028 DGKD 35 85 -1022 DCKD 35 85 -1028 DGKD 35 85 -1022 DCKD 35 85 -1088 DGKD 37 7 0120 DCKD 37 85 -1084 DGKD 38 86 1018 DCKD 39 85				- DIO30	DGND-	27		
DCND 29 29 -1022 DCND 29 29 -1092 DGND 30 80 -1007 DGND 30 D1091 DGND 31 81 -1025 DGND 31 81 D1090 DGND 32 62 -1023 DGND 32 82 D1089 DGND 32 62 -1023 DGND 32 82 D1089 DGND 34 84 -1023 DGND 34 84 D1089 DGND 36 85 -1022 DGND 34 84 D1087 DGND 36 85 -1022 DGND 36 85 D1085 DGND 36 85 -1018 DGND 38 D1081 DGND 308 D1083 DGND 36 -1018 DGND 38 D1081 DGND 2083 D1082 DGND 41 91 D1016				- DIO29	DGND-	28	78	- DIO93
Derkin - 31 31 -e1028 Derkin - 31 31 -e1099 DGND - 32 82 -01025 DERN - 33 83 -01028 DGND - 33 83 -01025 DERN - 33 83 -01088 DGND - 33 83 -01023 DERN - 33 83 -01088 DGND - 34 84 -01023 DERN - 33 85 -01088 DGND - 34 84 -01023 DERN - 33 85 -01088 DGND - 36 85 -10121 DERN - 36 85 -01088 DGND - 37 38 -10128 DERN - 36 88 -01081 DGND - 38 98 -1019 DERN - 36 98 -01081 DGND - 43 93 -10118 DERN - 41 91 -10180 DGND - 43 93 -1012 DERN - 44 91 -10180 DGN - 44 94 -10177 DERN - 44 94 -10178 DGA - 44 94 -10171 DERN - 44				- DIO28	DGND-	29		
DCKND 31 81 -D1026 DCKND 31 81 -D1090 DGKND 32 82 -D1025 DCKND 33 83 -D1028 DGKND 33 83 -D1024 DGKND 33 83 -D1088 DGKND 34 84 -D1023 DGKND 33 83 -D1088 DGKND 34 84 -D1023 DGKND 34 84 -D1088 DGKND 36 86 -D1021 DGKND 36 86 -D1088 DGKND 36 86 -D1021 DGKND 36 88 -D1088 DGKND 38 82 -D1018 DGKND 38 89 -D1080 DGKND 43 93 -D1016 DGKND 41 91 -D1056 43 92 -D1078 DGC4 43 92 -D1014 D1056 43 92 -D1078 DG4 43	DGND-	30	80	- DIO27	DGND-	30	80	- DIO91
Dickho 22 22 - 1025 Dickho 23 23 - 10089 Dickho 33 35 - 1023 Dickho 34 38 - 10089 Dickho 34 34 - 1023 Dickho - 35 35 - 10087 Dickho 34 34 - 1023 Dickho - 36 35 - 10086 Dickho 36 66 - 1022 Dickho - 36 66 - 1088 Dickho 36 66 - 1012 Dickho - 37 67 - 1020 Dickho - 38 88 - 10188 Dickho - 38 88 - 10188 Dickho - 38 88 - 10183 Dickho - 39 89 - 10180 Dickho - 10180 - 10182 Dickho - 10182 Dickho - 10182 - 10178 Dickho - 10181 Dickho - 10182 - 10178 Dickho - 10182 - 10178 Dickho - 10182 - 10178 Dickho - 10				- DIO26	DGND-	31		
DCND 33 83 -10/24 DCND 33 83 -10/088 DGND 34 84 -10/023 DCND 54 84 -10/087 DGND 35 85 -10/22 DCND 56 86 -10/28 DGND 36 86 -10/22 DCND 73 88 -10/08 DGND 36 86 -10/22 DCND 73 87 -10/08 DGND 36 86 -10/22 DCND 73 88 -10/08 DGND 38 86 -10/28 DCND 73 88 -10/08 DGND 40 90 -10/17 DCND 30 90 -10/08 DGND 40 90 -10/16 DGND 40 90 -10/08 DGND 41 91 -10/17 DGND 41 91 -10/07 DGND 42 92 -10/16 DGND 43				- DIO25	DGND-	32	82	- DIO89
DCND 30 34 -01022 DCND 34 34.2 D1087 DCND 35 38 -01022 DCND 36 38.2 D1087 DGND 35 38 -01021 DCND 36 38 -01085 DGND 36 38 -01021 DCND 36 38 -01084 DGND 37 37 D1032 DGND 36 38 -01083 DGND 36 88 -0109 DGND 38 88 -01083 DGND 36 88 -0109 DGND 38 88 -01080 DGND 41 91 -0105 DGND 41 91 -01078 D104 43 92 -01079 D1066 43 92 -01078 D12 464 94 -01071 D1066 43 93 -01076 D12 463 94 -01071 D1066 43 </td <td>DGND-</td> <td>33</td> <td></td> <td>- DIO24</td> <td>DGND-</td> <td>33</td> <td>83</td> <td>- DI088</td>	DGND-	33		- DIO24	DGND-	33	83	- DI088
Deckno 36 282 -10221 Deckno 36 882 -10855 DGND 37 37 -1020 DGND 38 88 -10120 DGND 38 88 -10138 DGND 38 88 -10138 DGND 38 88 -10138 DGND 38 88 -10188 DGND 38 88 -10188 DGND 38 88 -10188 DGND 38 88 -1018 DGND 38 98 -10188 DGND 39 89 -10188 DGND -1018 DGND -10178 DGND -101			84	- DIO23	DGND-	34	84	- DIO87
Deckno 36 282 -10221 Deckno 36 882 -10855 DGND 37 37 -1020 DGND 38 88 -10120 DGND 38 88 -10138 DGND 38 88 -10138 DGND 38 88 -10138 DGND 38 88 -10188 DGND 38 88 -10188 DGND 38 88 -10188 DGND 38 88 -1018 DGND 38 98 -10188 DGND 39 89 -10188 DGND -1018 DGND -10178 DGND -101	DGND-	35	85	- DIO22	DGND-	35	85	- DIO86
DGND 37 87 -1020 DGND 37 87 -1084 DGND 38 88 -1019 DGND 38 88 -10183 DGND 38 88 -1019 DGND 38 88 -10183 DGND 40 90 -1017 DGND 40 90 -10181 DGND 43 91 -10165 DGA64 42 91 -10161 DIO 42 92 -1015 DI664 42 92 -10178 DIO 42 92 -1015 DI664 42 92 -10178 DIO 42 92 -1015 DI664 42 92 -10178 DIO2 44 94 -1013 DI665 43 93 -10176 DIC3 65 95 -1012 DGND 45 95 -10176 DIC4 44 94 -10101 DI666 47	DGND-	36		- DIO21	DGND-	36	86	- DI085
Dickho 39 39 -1013 Dickho 39 88 Dick2 Dickho 40 90 -1017 Dickbo 41 91 -0106 Dickho 41 91 -01080 Dickho 41 91 -0106 Dickho -20 92 -01079 Dicko 43 93 -01014 Dick6 42 93 -01078 Dicko 44 92 -01013 Dick6 42 93 -01078 Dicko 44 94 -01013 Dick6 42 93 -01078 Dicko 45 95 -01012 Dick6 42 94 -01077 Dicko 46 96 -01077 Dick6 43 96 -01075 Dick 46 96 -01070 Dick6 43 96 -01073 Dick 47 97 -01074 Dick6 43 96 -01073 Dick<	DGND-	37		- DIO20	DGND-	37	87	- DIO84
Dickho 39 39 -1013 Dickho 39 88 Dick2 Dickho 40 90 -1017 Dickbo 41 91 -0106 Dickho 41 91 -01080 Dickho 41 91 -0106 Dickho -20 92 -01079 Dicko 43 93 -01014 Dick6 42 93 -01078 Dicko 44 92 -01013 Dick6 42 93 -01078 Dicko 44 94 -01013 Dick6 42 93 -01078 Dicko 45 95 -01012 Dick6 42 94 -01077 Dicko 46 96 -01077 Dick6 43 96 -01075 Dick 46 96 -01070 Dick6 43 96 -01073 Dick 47 97 -01074 Dick6 43 96 -01073 Dick<	DGND-	38	88	- DIO19	DGND-	38	88	- DIO83
Derkino 401 200 -10107 Derkino 401 200 -10181 DGND 41 21 -101016 DGND 41 201 -10180 DGND 42 62 -10175 DGRA 41 202 -10179 DGND 43 29 -10175 DGRA 42 22 -10179 DGND 43 29 -10174 D1066 43 29 -10179 DGND 45 29 -10121 DGRA 42 -10176 DGNA 45 29 -10121 DGRA 43 29 -10176 DGNA 45 29 -10101 D1067 46 29 -10174 DIGA 44 77 -10101 D1068 47 27 -10174 DIGA 48 80 -10179 D1069 48 28 -10173 DGND 48 98 101073 DGND 49								
Deckho 41 91 -O1056 Deckho 41 91 -D1080 DiO<				- DIO17				
DIO 42 92 - D105 D164 42 92 - D1079 DIO 43 93 - D1014 D1066 - 43 93 - D1078 DIO2 44 94 - D1013 D1066 - 43 93 - D1078 DIO2 44 94 - D1013 D1066 - 44 94 - D1077 DIC4 45 95 - D1012 DC4N 45 95 - D1075 DIC4 44 94 - D1010 D1067 45 95 - D1075 DIC4 43 91 - D1010 D1067 46 96 - D1073 DIC5 46 - D1010 D1068 - 47 97 - D1074 DIOS 46 99 - D102 D1069 - 48 90 - D1073 DINL - 48 99 - D102 D1069 - 48 99 - D1073								
Dich 43 93 -Dich4 Dic65 43 93 -Dic78 Dic2 44 94 -Dic73 Dic66 44 94 -Dic78 Dic2 44 94 -Dic73 Dic66 44 94 -Dic76 Dic3 45 97 -Dic12 Dch0 45 97 -Dic76 Dic4 47 97 -Dic10 Dic66 47 97 -Dic75 Dic4 47 97 Dic10 Dic66 48 96 -Dic73 Dic4 47 97 Dic70 Dic66 48 96 -Dic73 Dic4 96 Dic69 00 Dic68 96 Dic73 Dich4 96 Dic68 97 Dic73 Dic73				- DI015				- DIO79
DIQ2 44 34 -01013 D1666 44.4 34 -01077 DGND 445 95 -01012 DGND 45 95 -01076 D103 466 96 -01012 DGND 45 95 -01076 D103 466 96 -01011 D1667 463 96 -01076 D104 447 97 -01010 D1668 447 97 -01074 D165 448 98 -0109 D1669 443 98 -01073 DGNND 448 99 -0108 DGNND 436 99 -01073								
DGND 45 95 DI012 DGND 45 95 DI076 DI03 46 96 DI011 DI067 46 96 DI075 DI04 447 97 DI010 DI068 47 97 DI074 DI05 448 98 DI079 DI069 48 98 DI072 DGND 449 99 DI08 DGND 49 99 DI072				- DIO13				
DIO3 46 96 DIO11 DIO67 46 96 DIO75 DIO4 47 97 DIO10 DIO68 47 97 DIO74 DIO5 48 98 DIO9 DIO69 48 99 DIO73 DIOND 48 99 DIO3 DGND 49 99 DIO72								
DIO4 - 47 97 - DIO10 DIO68 - 47 97 - DIO74 DIO5 - 48 98 - DIO9 DIO69 - 48 98 - DIO73 DGND - 49 99 - DIO8 DGND - 49 99 - DIO72								
DIO5 - 48 98 - DIO9 DIO69 - 48 98 - DIO73 DGND - 49 99 - DIO8 DGND - 49 99 - DIO72								
DGND - 49 99 - DIO8 DGND - 49 99 - DIO72								
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PowerDAQ PD2-DIO Digital I/O Connectors (J1, J2)

CTM0-	1	2	DGND
CTM1-	3	4	DGND
CTM2-	5	6	DGND
IRQ_A-	7	8	DGND
IRQ_B-	9	10	DGND
IRQ_C-	11	12	DGND
IRQ_D-	13	14	- DGND

PowerDAQ PD2-DIO Counter/Timers/IRQ Lines Male Connector (J3)

STD1-	1	2	- DGNI
SRD1-	3	4	- DGND
SCK1-	5	6	- DGNI
SC10 -	7	8	- DGNI
SC11-	9	10	- DGNI
SC12 -	11	12	- DGNI

PowerDAQ PD2-DIO ESSI Male Connector (J4)

STD0-	1	2	- DGND
SRD0-	3	4	- DGND
SCK0-	5	6	- DGND
SC00-	7	8	- DGND
SC01-	9	10	- DGND
SC02-	11	12	- DGND

PowerDAQ PD2-DIO ESSI Male Connector (J5)

Ordering Information:

Part Number	Description
PD2-DIO-64	64 digital I/O channels, 3 counter/timers, 2 ESSI ports, 4 high-speed IRQ lines (100 ns)
PD2-DIO-128	128 digital I/O channels, 3 counter/timers, 2 ESSI ports, 4 high-speed IRQ lines (100 ns)