



# DEWE-ORION-0816-100x

- 8 simultaneous sampled single-ended channels at 1 MS/s each
- 16-bit resolution
- 8 MS/s data throughput
- Two 32-bit synchronous counter / encoder
- 16 synchronous digital inputs
- 8 digital outputs
- Optional: two high speed CAN 2.0B controller, additional digital I/O and counter/encoder channels



### Recommended Usage:

- NET Solution
- Data Recorder
- Dynamic Signal Analyzer
- Transient Recorder
- Power Network Analyzer
- Combustion Analyzer

### Online Information:

[www.dewetron.info/orion](http://www.dewetron.info/orion)

Model	Analog input channels	Max. sampling rate / channel	Digital input channels	Digital I/O	Ext. Clock	Ext. Trigger	Counter Encoder TTL	Counter Encoder DIFF	CAN
DEWE-ORION-0816-1000	8	1 MS/s	2 (8*)	8	1	1	2	-	-
DEWE-ORION-0816-1001	8	1 MS/s	2 (8*)	8	1	1	2	-	2
DEWE-ORION-0816-1002	8	1 MS/s	10 (40*)	8	1	1	2 + 8	-	-
DEWE-ORION-0816-1003	8	1 MS/s	10 (40*)	8	1	1	2 + 8	-	2
DEWE-ORION-0816-1004	8	1 MS/s	10 (40*)	8	1	1	2	8	-
DEWE-ORION-0816-1005	8	1 MS/s	10 (40*)	8	1	1	2	8	2

\* Without using counter inputs

DEWE-ORION-0816-100x Series			
<b>Analog input</b>		<b>Counter / digital inputs</b>	
Number of channels	8 simultaneously sampled	Counter modes	Simple event counting Up/down counting Gated event counting Single period measurement Pulse width measurement Two pulse edge separation Encoder input (X1, X2, X4 or up/down) Frequency measurement
Input configuration	Single ended with remote sense	Resolution	32-bit
Resolution	16-bit	Time base	80 MHz
Effective number of bits	14.3	Specification of Counter/Encoder TTL	Level compatibility Maximum input frequency
Type of ADC	Successive approximation (SAR)	Specification of Counter/Encoder DIFF	Input configuration Input trigger level Input coupling Voltage range Maximum input frequency
Sampling rate	1 S/s to 1 MS/s per channel	Environmental	Operating temperature Storage temperature Relative humidity Maximum altitude Pollution degree (indoor use only)
<b>Amplifier characteristics</b>		Power requirements	+3.3 V <sub>DC</sub> +5 V <sub>DC</sub> +12 V <sub>DC</sub>
Input ranges	±1.25, ±2.5, ±5 or ±10 V	Physical	Dimensions (not including connectors) Analog I/O connector
Analog bandwidth (-3 dB)	600 kHz		175 x 107 mm (6.9 x 4.2 in.) 68-pin SCSI-II PCB male
Input impedance	10 MΩ in parallel with 30 pF		
Overvoltage protection	±30 V		
Channel separation (cross talk)	> 90 dB @ f <sub>in</sub> 1 kHz		
<b>Transfer characteristics</b>			
Gain (amplitude accuracy)	±0.02 %		
Offset (residual DC)	±0.02 % of range, ±150 μV		
Gain drift (typ)	±8 ppm/K		
Offset drift (typ)	±5 ppm/K of range		
<b>Dynamic characteristics</b>			
Signal to noise	88 dB		
THD (f <sub>in</sub> = 1 kHz)	-90 dB		
Crosstalk (f <sub>in</sub> = 1 kHz)	93 dB		
Inter channel gain mismatch	±0.015 %		
Inter channel phase mismatch	0.006° * f <sub>in</sub> (kHz) + 0.08°		
<b>Maximum working voltage</b>			
Channel-to-ground	10 V, installation category I		
Channel-to-channel	10 V, installation category I		
<b>CAN</b>			
Specification	CAN 2.0B		
Physical Layer	High Speed		
<b>Trigger / Clock I/O</b>			
Clock frequency range	DC to 1000 kHz		
Level compatibility	TTL/CMOS		



DEWE-ORION-0816 with additional digital inputs



DEWE-CAN-CAB2 option Connects the built in Lemo conn. with your DSUBs



ORION-CAN-PANEL 9-pin DSUB connectors for CAN channel 0 and 1



ORION-1616-SYNC option Synchronization with PC based instruments



Typical application: 64 ch. DEWE-501 with built-in DEWE-ORION A/D cards