



DEWE-ORION-1616-50x

- 16 simultaneous sampled single-ended channels at 500 kS/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

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-1616-500	16	500 kS/s	2 (8*)	8	1	1	2		-
DEWE-ORION-1616-501	16	500 kS/s	2 (8*)	8	1	1	2		2
DEWE-ORION-1616-502	16	500 kS/s	10 (40*)	8	1	1	2 + 8		-
DEWE-ORION-1616-503	16	500 kS/s	10 (40*)	8	1	1	2 + 8		2
DEWE-ORION-1616-504	16	500 kS/s	10 (40*)	8	1	1	2	8	-
DEWE-ORION-1616-505	16	500 kS/s	10 (40*)	8	1	1	2	8	2

* Without using counter inputs

DEWE-ORION-1616-50x Series			
Analog input		Counter / digital inputs	
Number of channels	16 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	14.7	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 500 kS/s per channel	Environmental	Operating temperature Storage temperature Relative humidity Maximum altitude Pollution degree (indoor use only)
Amplifier characteristics		Power requirements	+3.3 V _{DC} +5 V _{DC} +12 V _{DC}
Input ranges	±1.25, ±2.5, ±5 or ±10 V	Physical	Dimensions (not including connectors) Analog I/O connector
Analog bandwidth (-3 dB)	300 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 _{in} 1 kHz		
Transfer characteristics			
Gain (amplitude accuracy)	±0.02 %		
Offset (residual DC)	±0.01 % of range, ±150 μV		
Gain drift (typ)	±8 ppm/K		
Offset drift (typ)	±5 ppm/K of range		
Dynamic characteristics			
Signal to noise	89 dB		
THD (f _{in} = 1 kHz)	-86 dB		
Crosstalk (f _{in} = 1 kHz)	93 dB		
Inter channel gain mismatch	±0.015 %		
Inter channel phase mismatch	0.012° * f _{in} (kHz) + 0.08°		
Maximum working voltage			
Channel-to-ground	10 V, installation category I		
Channel-to-channel	10 V, installation category I		
CAN			
Specification	CAN 2.0B		
Physical Layer	High Speed		
Trigger / Clock I/O			
Clock frequency range	DC to 500 kHz		
Level compatibility	TTL/CMOS		



DEWE-ORION-1616-50x with additional digital inputs



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



ORION-CB-CNT8 optional connection box with galvanic isolation



DEWE-31-16: 16 channel signal connection with MDAQ signal conditioning



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