

TECHNICAL REFERENCE MANUAL

IOLITE® V26-1



Physical			
Dimensions	483 x 148 x 133 mm	266 x 169 x 139 mm	321 x 155 x 151 mm
Weight	IOLITE-RACK: 2.85 kg IOLITE-GATE (4× RJ45): 260 g IOLITE-GATE-L (2× LEMO, 2× RJ45): 280g	2.6 kg	2.6 kg
1) Extended operating temperature range depends of module configuration			

Hint



For detailed explanation of IOLITE-R8 and IOLITE-R8r chassis shock and vibration specifications check this [LINK](#).

Interface	IOLITE Single channel	IOLITE Multi channel
Data interface	EtherCAT	EtherCAT
Data Rate	100 Mbps Full Duplex bus speed	100 Mbps Full Duplex bus speed
Sync Accuracy	< 200 ns within same EtherCAT chain < 2 µs using sync for multiple EtherCAT chains below 1 sample to Sirius®	< 200 ns within same EtherCAT chain < 2 µs using sync for multiple EtherCAT chains below 1 sample to Sirius®
Bus connectors	Ethernet RJ45	Ethernet RJ45
Max. cable length between devices	100 m	100 m
Max. Throughput per Chain	From 6 MB/s to 10 MB/s (see 1)	From 6 MB/s to 10 MB/s
Data interface connection	Ethernet RJ45, Single cable for data, power and sync, daisy chainable	Ethernet RJ45, single cable for data, power and sync, daisy chainable (see 2)
Power		
Power supply	9 V - 48 V	9 V - 48 V
Power consumption	~2 W (see individual modules)	~4 W (see individual modules)
Power supply connector	-	SCDN-THR 3.81/04/90G 3.2SN BK BX
Environmental		
Operating Temperature	-20 to 60 °C	-40 to 85 °C
Storage Temperature	-20 to 60 °C	-40 to 85 °C
Humidity	95 %, no condensation	95 %, no condensation
IP rating	IP20	IP20
Physical		
Dimensions	82 x 62 x 52 mm (might differ for different modules)	137 x 119 x 35 (might differ for different modules)
Weight	130 g (might differ for different modules)	530 g (might differ for different modules)
1) 55 per chain (@ 20 kS/s total sample rate per device), multiple chains possible. Additional power injectors are necessary.		
2) Passive PoE is supported for devices produced after September 2024.		

6.8. DIGITAL AND COUNTER MEASUREMENT

IOLITE digital input / output and counter products are represented with six different module types:

- IOLITEr-32xDI (rack version)
- IOLITEr-32xDO (rack version)
- IOLITEr-8xDI-4xDO (rack version)
- IOLITEr-4xCNT (rack version), IOLITE-4xCNT (modular version)
- IOLITEi-4xDI (modular version)
- IOLITEi-4xDO (modular version)

IOLITEr-32xDI, IOLITEr-32xDO, IOLITEr-8xDI-4xDO include a power out option, where unregulated power supply voltage is brought to the 2-pin PWR OUT connector.

Digital output modules also offer watchdog functionality.

They are a perfect choice for control applications.

IOLITE 4xCNT includes SUPERCOUNTER® technology.



Hint

IOLITEi-4xDO offers a software option for PWM output.



Hint

Find out more about Watchdog feature in Watchdog User Manual:

<https://download.dewesoft.com/list/manuals-brochures/software-manuals>

In the *Software Manuals* section click the download link of the Watchdog User Manual entry.

6.8.6. IOLITE-4xCNT

IOLITE CNT has 4 channels, each capable of 3x digital inputs, 1x event counter, encoder, period, pulse-width, duty-cycle, and precise frequency and angle measurement using patented SUPERCOUNTER® technology.



IOLITEr-4xCNT



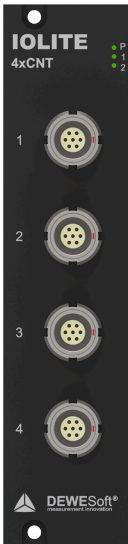
IOLITE-4xCNT

6.8.6.1. IOLITE 4xCNT: Specifications

Counter	
Number of channels	4
Timebase	100 MHz
Time base accuracy	Typical: 5 ppm, Max: 20 ppm
Max. bandwidth	10 MHz
Input Filter	500 ns, 1 µs, 2 µs, 4 µs, 5 µs and 7.5 µs
Input Level Compatibility	TTL (Low: <0.8 V, High >2 V)
Input impedance	100 kΩ pull-up to +3.3 V
Input Protection	±25 V continuous
Counter modes	counting, waveform timing, encoder, gear-tooth sensor
Isolated Sensor Power Supply	
Output Voltage +5 V	5.1 V +/- 10 % 100 mA max. (400 mA to supply 4 channels)
Output Voltage +12 V	12.1 V +/-5 % 50 mA max. (100 mA to supply 4 channels)
Isolation	Ch to GND isolation
Additional Specifications	
Rack	IOLITE-4xCNT
Input connector	7-pin LEMO 1B series EEG.1B.307.CLNY Waterproof version: 7-pin Lemo 1T series EEG.1T.307.CLN
Power Consumption @ 24 V	Typ. 1.9 W
Power supply	9 - 48 V DC
Slice Dimensions	128.4 x 115.4 x 30.1 mm
Modular	IOLITE-4xCNT
Input connector	7-pin LEMO 1B series EEG.1B.307.CLNY
Power Consumption @ 24 V	Typ. 1.9 W
Power supply	9 - 48 V DC
Slice Dimensions	137 x 115.0 x 35.0 mm

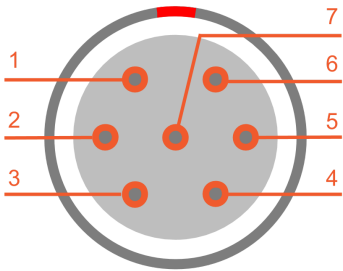
6.8.6.2. IOLITE 4xCNT: Lemo Connector

IOLITE-4xCNT and IOLITEr-4xCNT modules have four 7-pin LEMO connectors for digital, counter and encoder inputs.



IOLITEr-4xCNT Front

6.8.6.2.1. CNT: Lemo Connector: Pinout



CNT connector: pin-out (7-pin LEMO female)

Connector on the module: EGG.1B.307.CLL
Mating cable connector: FGG.1B.307.CLAD52

Pin	Name	Description
1	IN0/A	Digital input 0/A
2	IN1/B	Digital input 1/B
3	IN2/Z	Digital input 2/Z
4	GND	Ground
5	+5V	5 V supply
6	+12V	12 V supply
7	GND	Ground

6.8.6.2.2. Waterproof version: IOLITErw-4xCNT

Connector on the module: EEG.1T.307.CLN
Mating connector: FGG.1T.307.CLAC45