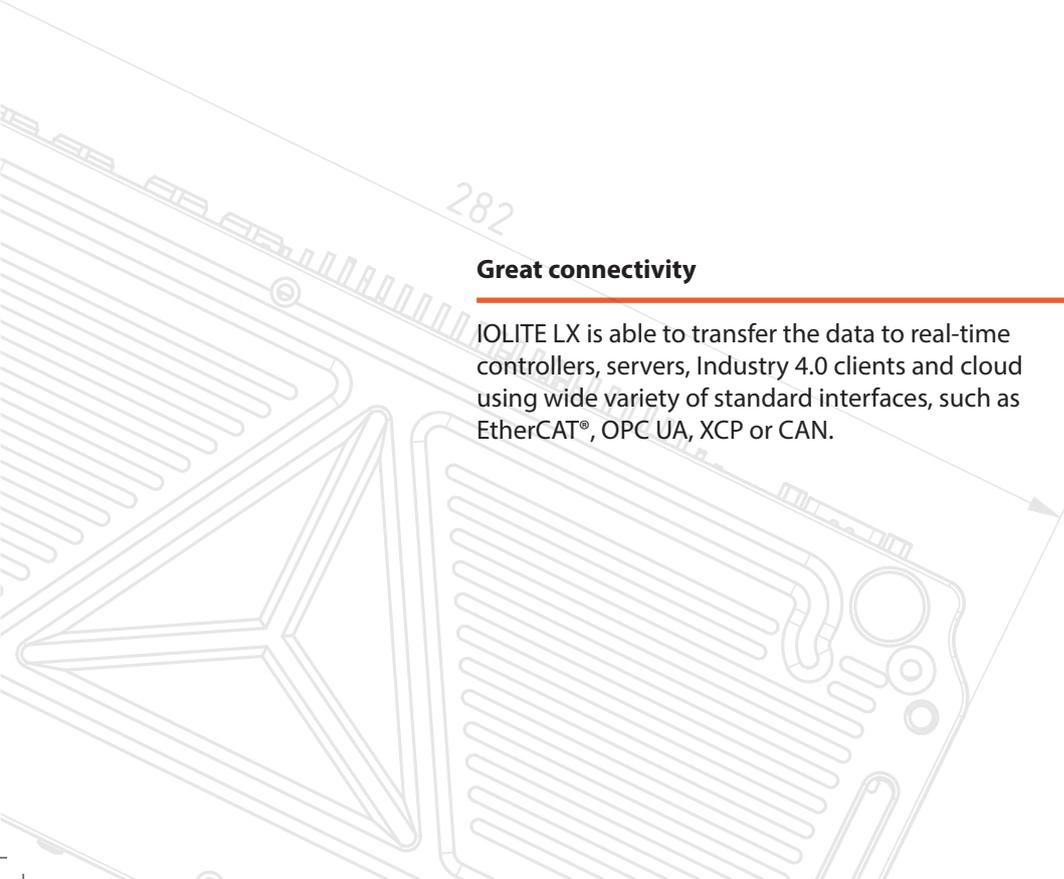


*EMBEDDED DATA LOGGER AND REAL-TIME SYSTEM POWERED BY DEWESoft*



# IOLITE<sup>®</sup> LX PRODUCT HIGHLIGHTS

**The first Dewesoft embedded computing device.**



## Great connectivity

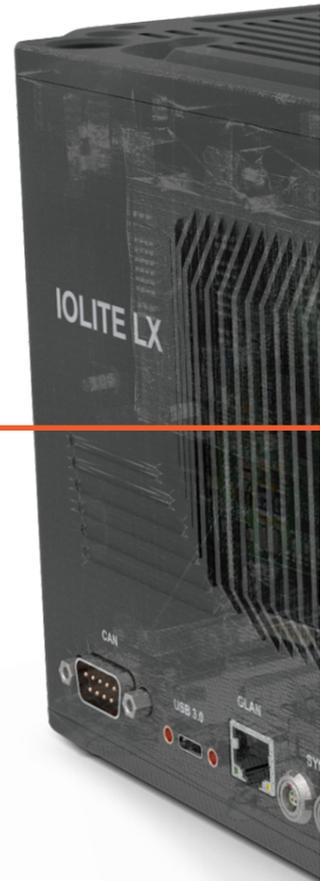
IOLITE LX is able to transfer the data to real-time controllers, servers, Industry 4.0 clients and cloud using wide variety of standard interfaces, such as EtherCAT<sup>®</sup>, OPC UA, XCP or CAN.

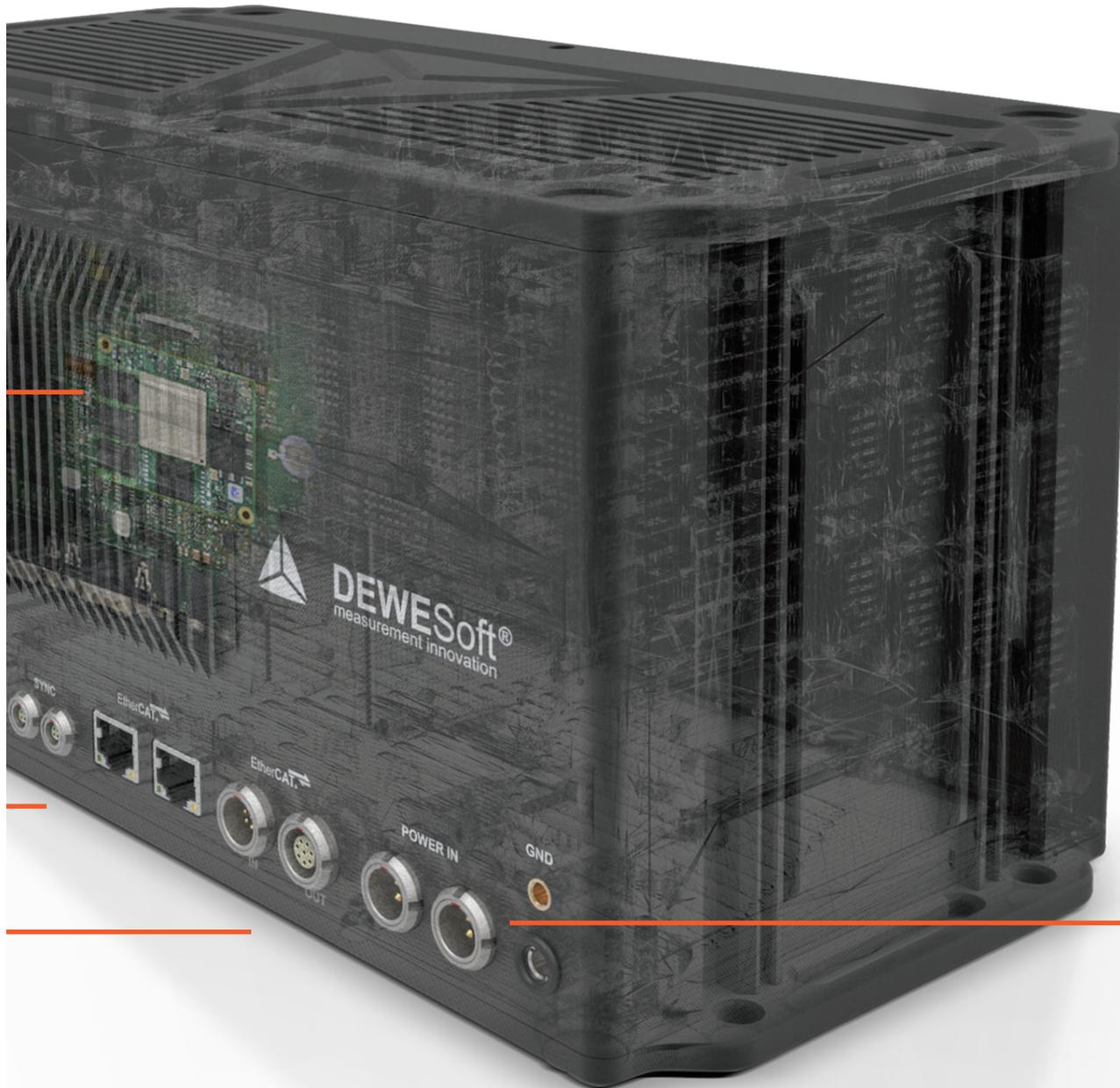
## Embedded processing

Built-in dual core 1.5 GHz ARM processor with Linux OS and DewesoftRT is perfect for embedded applications such as data logging, cloud data collection and real-time control.

## Dual EtherCAT<sup>®</sup> bus

IOLITE features two parallel EtherCAT<sup>®</sup> buses. The primary bus is used for full speed buffered data acquisition to a computer. The secondary bus is mainly used for real-time data to any 3rd party control system.





### **Internal data storage**

Internal storage up to 1 TB is useful for storing large amount of data.

### **Great signal conditioning**

IOLITE features various amplifier modules with high-end signal quality and up to 20 kHz sampling rate for voltage, strain, temperature, angle, velocity, acceleration, digital in, digital out as well as other physical quantities.

### **Low power**

IOLITE LX is extremely powerful but designed to operate in low power which makes it perfect choice for any measurement application.

### **Redundant power supply**

Redundant power supply is seamlessly switching between available power sources and provides non-stop availability even for the most demanding applications.

# IOLITE® LX KEY FEATURES

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## **Embedded ARM processor**

For the first time in history, Dewesoft device is hosting embedded processor. And what a processor it is... Using the advanced technology of mobile devices, the ARM CPU can go places. Transferring data to standard data services, such as cloud or factory systems, data logging to the hard real-time operations this processor can handle all. Small footprint Linux operating system ensures stable long term operation.

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## **Low power**

Years ago the driving force for development were PC computers. Dewesoft used this technology to the great extent. Today we see the shift - driving force became mobile devices. You carry the greatest improvement of CPU technology in your pocket. Your cell phone processor is designed to have high performance despite of low power consumption making it perfect for any application, including data acquisition and control. IOLITE LX is using such processor in its industrial form.

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## **Integrated data logging**

The internal storage with up to 1 TB of memory is able to store any number of channels of high speeds making it perfect for embedded data acquisition. The data is available in parallel to monitoring systems, such as Dewesoft or SCADA systems or cloud services. Stored files can be reviewed by anyone using included powerful Dewesoft analysis package.

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## **Scaleable**

The system can acquire up to 64 channels, but the user can connect several boxes together with a single EtherCAT® cable and acquire all the channels in one single box. For field use the channels can be expanded with rugged Krypton modules.

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## **Standard interfaces**

The data is available to other systems using standard data protocols.

- 1) **EtherCAT®** is an industry standard for real-time control. IOLITE uses two EtherCAT® buses in parallel. EtherCAT® primary bus is used for full speed buffered data acquisition to a computer. EtherCAT® secondary bus is mainly used for real-time data to any 3rd party control system.
- 2) **OPC UA** is a leading standard for Industry 4.0 applications. The data can be served to SCADA, ERP and MES systems as well as mobile clients in real-time.
- 3) **Dewesoft cloud services** using OPC UA as a backbone provides historical data to all clients using powerful and fast Influx database.
- 4) **CAN bus** and in the future **XCP on Ethernet** interfaces provide the data to ECU calibration software in real-time with minimum latency.

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## **Redundant power supply**

Redundant power supply provides non-stop availability of the data for most demanding applications.

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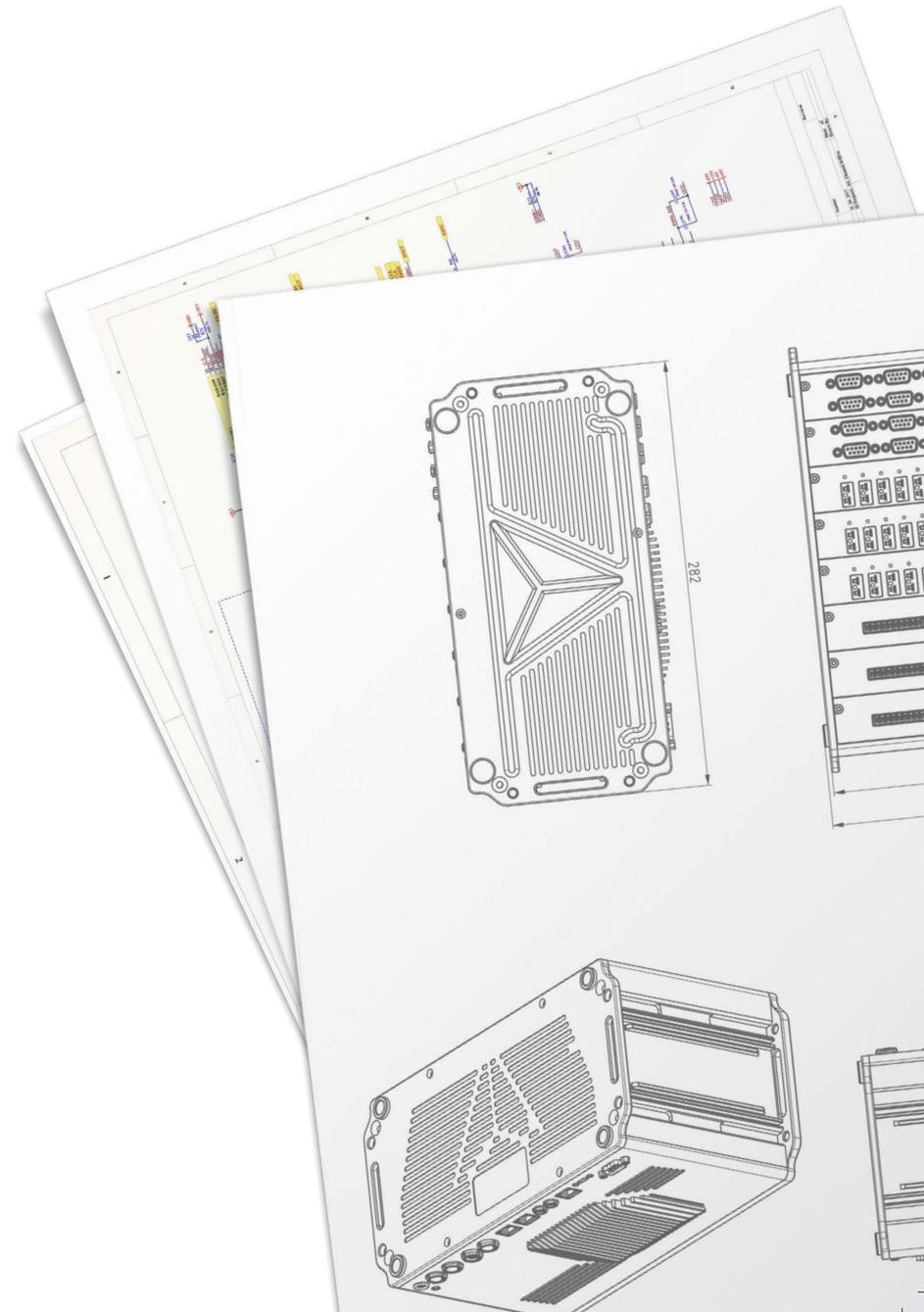
## **Great signal conditioning**

IOLITE features high-quality amplifiers which offer great signal quality and up to 20 kHz sampling rate per channel.

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# IOLITE® LX TECH SPECS

<b>Chassis</b>	8 slot IOLITEs chassis
<b>Processor</b>	ARM Sitara AM5726 processor, 2GB RAM, Linux, DewesoftRT
<b>Storage</b>	Internal 32 GBit, optional SD card up to 1 TB
<b>Network</b>	1x GBit LAN
<b>EtherCAT®</b>	Dual EtherCAT® interface: Primary interface connected to ARM® CPU as master with 2x LEMO 1B 8pin (IN, OUT) Secondary interface 2x RJ45 (IN, OUT)
<b>USB</b>	1x USB 3.0 interface
<b>CAN bus</b>	1x CAN 2.0 interface, DSUB9 connector
<b>Power supply</b>	12-48V
<b>Physical dimensions</b>	282x147x141

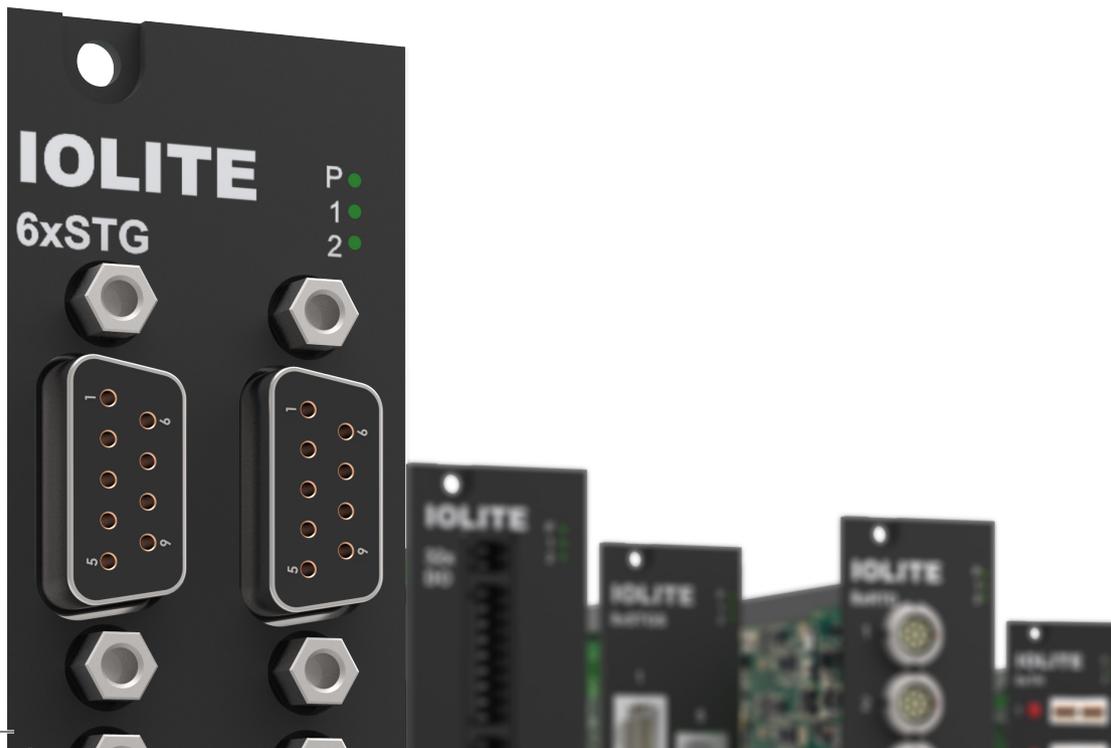


# IOLITE<sup>®</sup> MODULES

<b>IOLITE 6xSTG</b>	Universal 6 channel differential voltage and Full/ Half/Quarter bridge input with DSUB9 connector. Compatible with DSI adapters for IEPE, CHG, 200V, RTD, TH measurements.
<b>IOLITEi 8xTH</b>	8 channel-channel isolated universal thermocouple input module with miniTC connector. Accepts K, J, T, R, S, N, E, C, B thermocouple types.
<b>IOLITEi 8xRTD</b>	8 channel-channel isolated PTx temperature, resistance and voltage with Lemo 00B connector. Available in 8 and 16 channel configurations.
<b>IOLITE 32xDI</b>	32 channel isolated digital input module with screw terminal connection.
<b>IOLITE 32xDO</b>	32 channel digital output module with screw terminal connections and integrated watchdog function.

## UPCOMING MODULES:

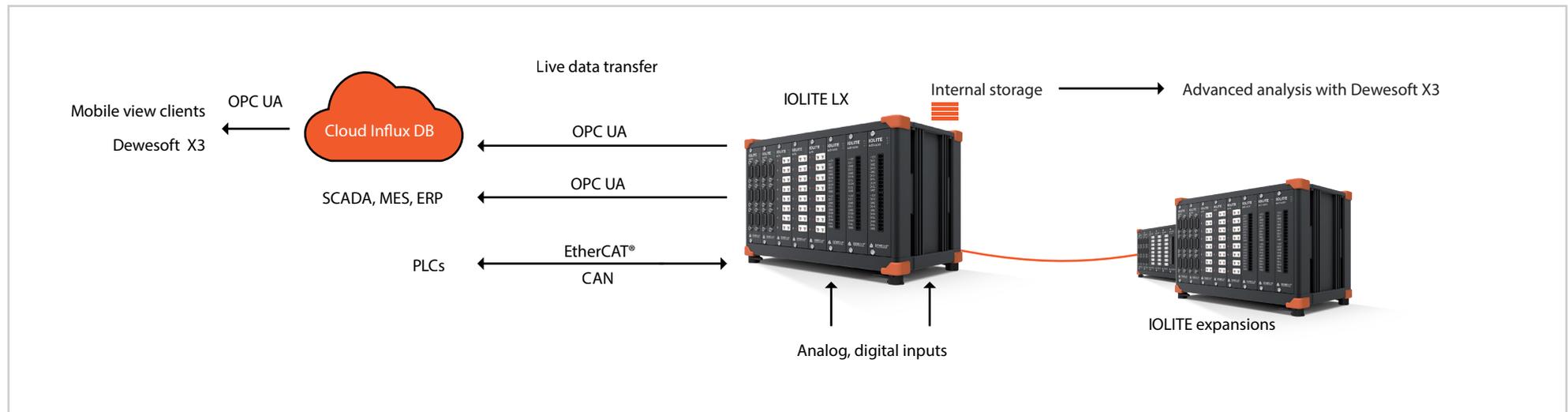
<b>IOLITE 16xLV</b>	16 channel-ground isolated $\pm 10$ V analog input module with screw terminal connector.
<b>IOLITE 8xDI 4xDO</b>	8 channel isolated digital input and 4 channel analog output module with integrated power supply and screw terminal connector. Everything needed to directly connect pneumatic cylinders.
<b>IOLITE 8xSTGS</b>	8 channel-ground isolated cost effective strain gage amplifier with RJ45 connector.
<b>IOLITE 4xCNT</b>	4 channel supercounter module for angle measurement for tacho, gear tooth, flywheel and encoder sensors with Lemo 1B connector.
<b>IOLITE 8xLV</b>	8 channel isolated voltage input with $\pm 50$ V input range and BNC connector.
<b>IOLITEi 4xHV</b>	4 channel-channel isolated high voltage input able to measure $\pm 1000$ V with banana plugs.
<b>IOLITE 4xTH HV</b>	4 channel thermocouple module with high isolation. Perfect for measurement of modern battery packs.
<b>IOLITE 8xAO</b>	8 channel differential analog output module.



# IOLITE<sup>®</sup> LX TYPICAL CONFIGURATIONS

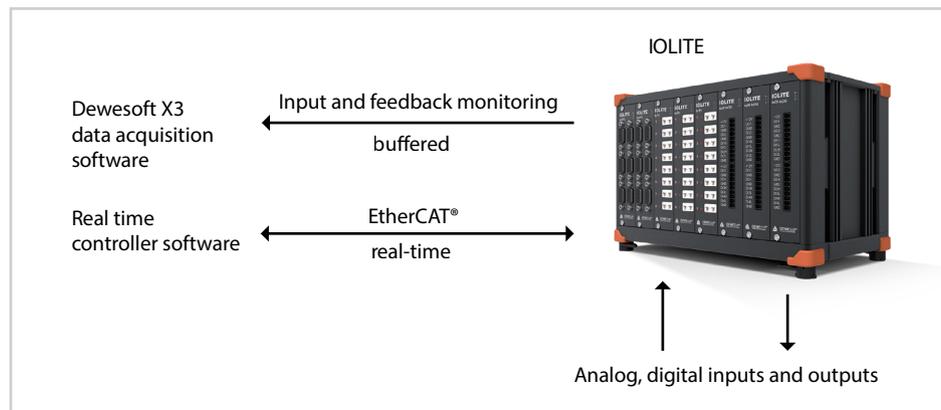
## DATA LOGGER AND CLOUD DATA PROVIDER

IOLITE LX is able to log the data to internal memory card and at the same time provide the data through modern data interfaces such as OPC UA to cloud.



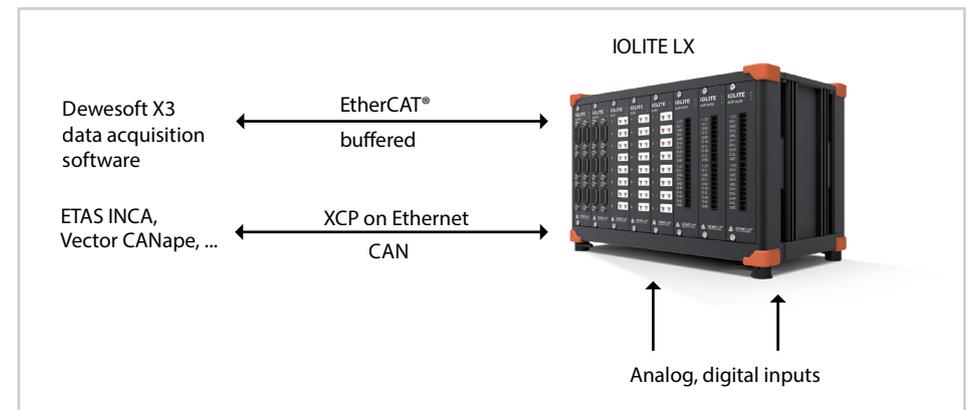
## DATA ACQUISITION AND REAL-TIME CONTROL

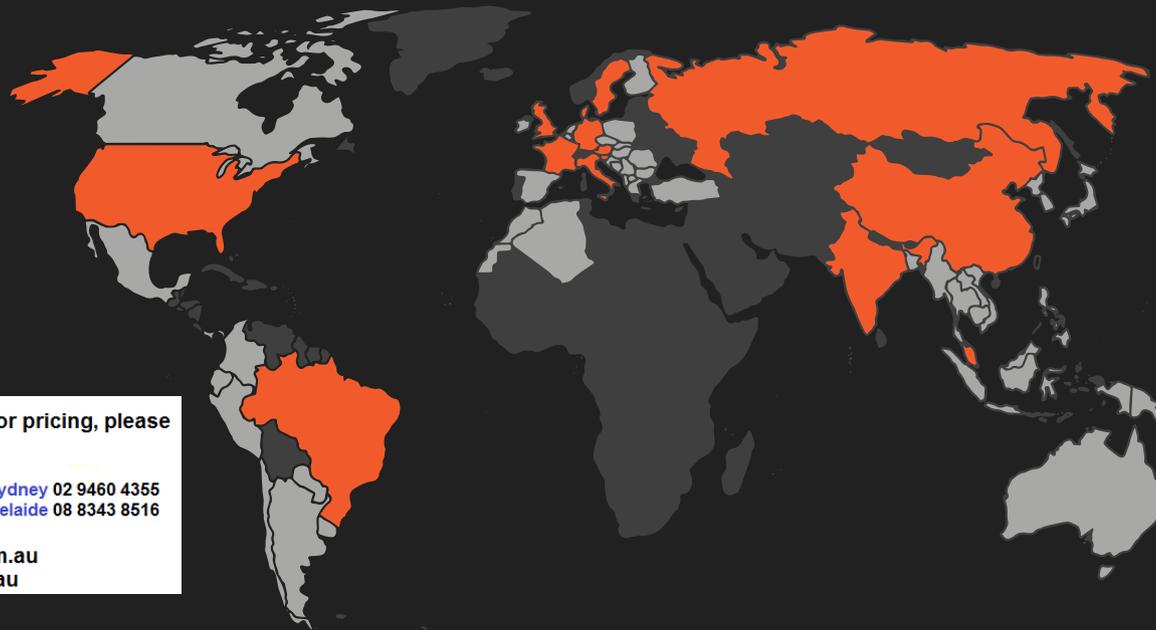
IOLITE is able to serve data to real-time controllers and output feedback through its interfaces as well as be a perfect frontend for DAQ software - all at the same time.



## ECU CALIBRATION SOFTWARE FRONTEND

The system can serve the data to ECU calibration software through various interfaces such as XCP on Ethernet or CAN bus.





For further information or pricing, please contact us:

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