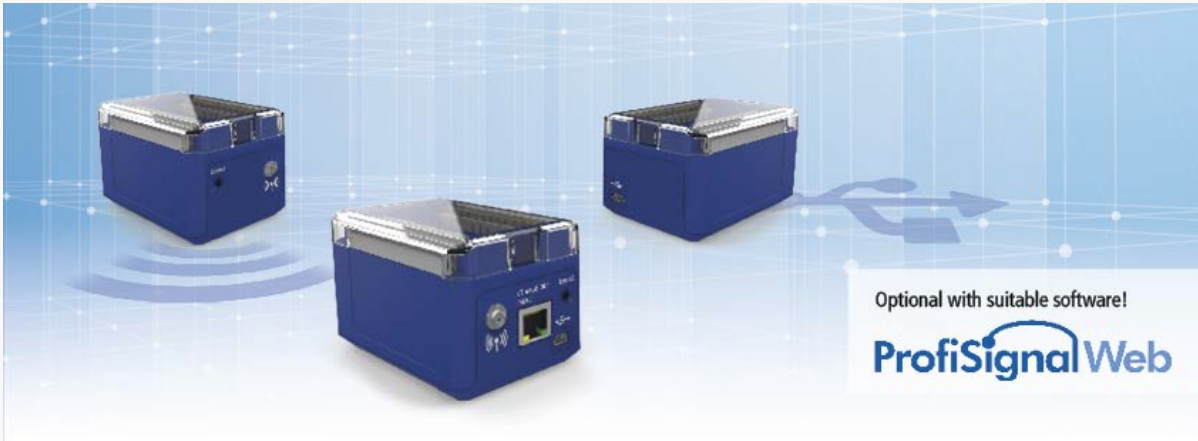# Loggito

The Loggito series is a new compact and flexible measurement system for data acquisition Industry IoT. It enables inexpensive connectivity of decentralised measuring points for both low channel data logging and complex acquisition systems.

Optional with suitable software!
ProfiSignal Web

Continuous data acquisition at decentralised measuring points

Measurement data can now be acquired decentrally, on-site or centrally and viewed from anywhere using any type of user device. Loggito is highly adaptable to decentralised data acquisition and monitoring of dispersed measurement points:

- For the inexpensive establishment of a decentralised measurement network
- For low-channel measurement tasks in laboratories
- For process analysis with flexible numbers of channels
- Uses universal sensor inputs for a range of different sensor types
- Options for scalability and extendibility

Live measurement data on any user device

In combination with ProfiSignal Web software, measurement data can be viewed live anywhere on a desktop, notebook, tablet or smartphone. Vital data can also be summarised in a graphical dashboard view.

Loggito extension modules

Loggito can be connected via LAN, USB, WLAN or remote radio methods. The Loggito Logger is equipped with an internal data storage capability to enable internal processing and the computation of measurement channels. Extension modules:

- The Loggito Wireless module enables decentralised data acquisition from dispersed measurement points.
- The Loggito USB module is scalable to the required number of channels, e.g. in control cabinet applications, for flexible and highly cost-effective measurement solutions via direct PC connections.
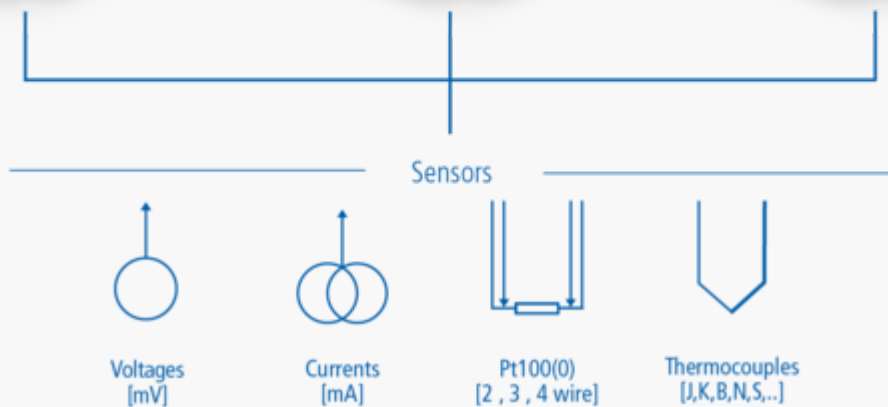

Analog and digital I/O module and cloud function

The cloud as a measurement hardware component

- Cloud functioning through the installation of ProfiSignal Web software (measurement technology for edge cloud computing)
- Mobile access to live measurement data from any user device
- Dashboard displaying current process parameters, live data and historical data

Modbus and OPC UA

- Modbus interface (optional)
- OPC-UA server/client interface (optional)

Versatile sensor input modules

- High-precision, universal sensor inputs
- Universal analog inputs (mV, mA, thermocouple, RTDs)
- Optional board with internal shunt and feed for passive 4 .. 20 mA sensors
- Modules channel variants: I/O modules with a range of different channel numbers, universal analog and digital inputs and outputs

Channel types	8 AI-R	8 AI	4 AI-R	4 AI	6 DI	6 DO
Analog inputs (mV, mA (passive), thermocouples, RTDs)	8 (max. 4* RTD)	0	4 (max. 2* RTD)	0	0	0
Analog inputs (mV, mA (passive), thermocouples)	0	8	0	4	0	0
Analog outputs	1	1	1	1	0	0
Digital inputs	0	0	0	0	6	2
Digital outputs	0	0	0	0	2	6
Digital inputs / outputs (dual)	2	2	2	2	0	0
Number of terminals	24	24	16	16	20	20

Data storage

- Internal data storage capability: 4/8/16 GB / approx. 30 million measurement values per GB
- Time stamps at msec resolution
- External equipment using USB, NFS, CIFS, (S)FTP
- Network connectivity via LAN, WLAN and remote radio

Other functions

- Integrated software channels for real-time calculation and processing of channel values
- Optional web-based measurement data visualisation
- Optional internal rechargeable power source to enable operation without mains power
- Also available as a PC-supported model without logger functions (USB module)

Multiple connectivity

The Loggito series is comprised of the Loggito Logger (master) and the Wireless and USB extension modules. The Loggito brings flexibility to measurement and control technology and provides data access from the mobile devices of users.

Loggito Logger

The Loggito Logger is equipped with an internal data storage capability to enable internal processing and the computation of measurement channels. When combined with the Wireless and USB extension modules, the Loggito Logger acts as a coordinator for establishing decentralised measurement networks via USB or remote radio.

Measurement technology – Cloud at the edge
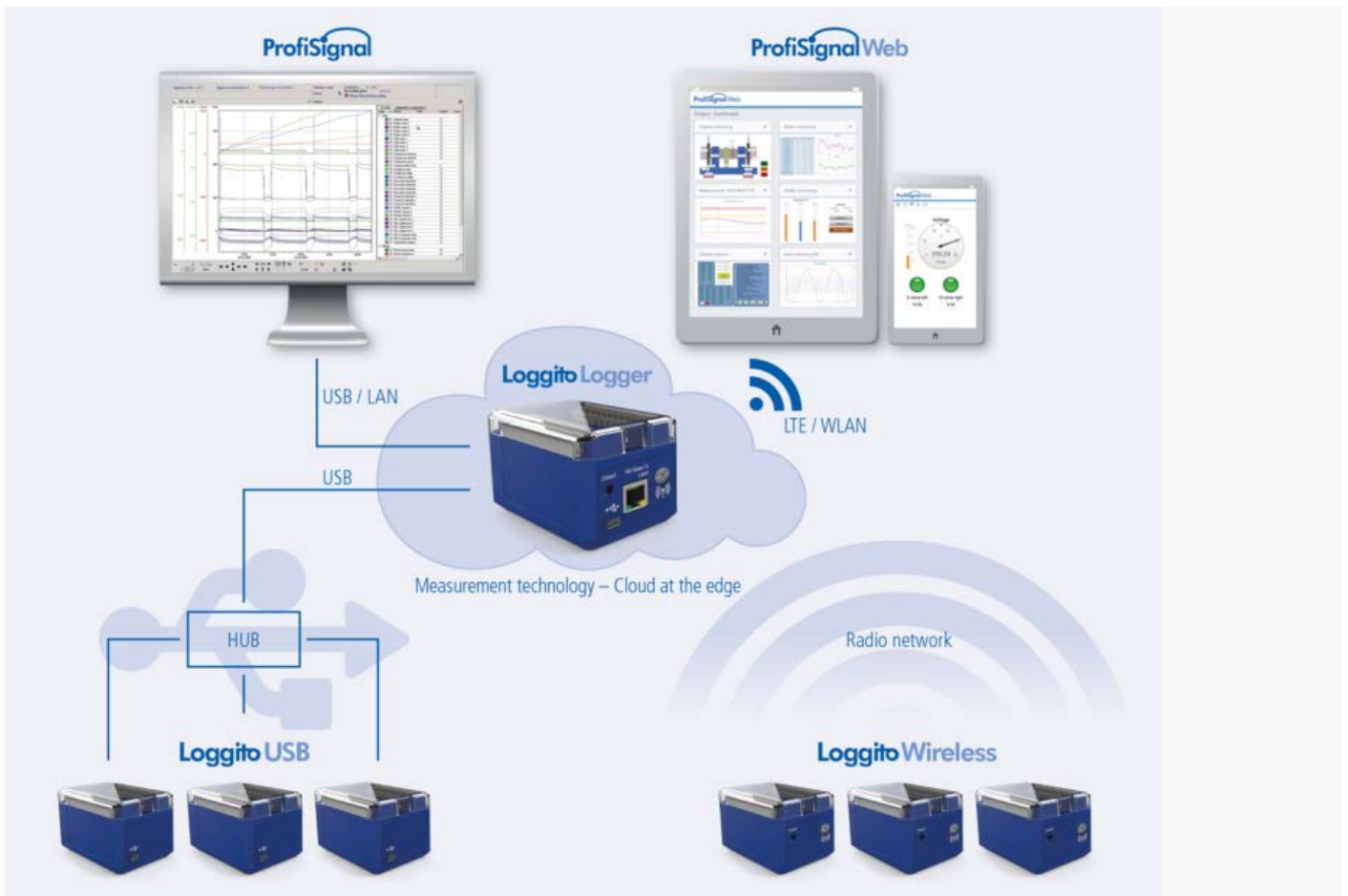
USB extension module

The Loggito USB module fulfils two functions:

- USB modules enable the required number of channels to be provided, e.g. in control cabinet applications. Power is provided directly via the USB without the need for an internal power supply unit. The USB module does not require an internal storage capability because data logging is undertaken by a main Loggito Logger.
- The USB module can also be connected directly to a computer. This gives you a highly inexpensive and flexible measurement system, e.g. for measurement stations in a laboratory.

Wireless extension module

The Loggito Wireless module, in combination with the Loggito Logger, provides data acquisition at measuring points where cabling is undesirable or not possible. An extremely low power input enables rechargeable-battery operation with extended standby times. The Wireless modules can communicate with each other in a mesh network to enable extended range.

Online analysis, monitoring and automation

The Loggito Logger is equipped with integrated software channels for online analysis, monitoring and automation functions. By using the ProfiSignal Web software, a multitude of web functions can be realised. The ProfiSignal software provides users with a powerful PC-based tool for measurement technology.

Software channels in the Loggito Logger

- Online processing during acquisition using internal software channels
- Calculation and statistical channels compute, monitor, count and integrate measurement data
- Limit detector to monitor limit and limit values
- Status detector to evaluate status information and to issue alerts in the event of an mA-signal failure
- A trigger automatically performs setpoint curves with reset, stop/start triggers
- Timer channels provide, for example, time delayed starts for experiment procedures

ProfiSignal Web: Live measurement data on any user device

- Mobile access to live measurement data from any user device
- Live data, historical data, process parameters in an individually adjustable dashboard
- Data storage capacity with cloud functions within the Loggito Logger (measurement technology for edge cloud computing)

ProfiSignal: PC-based measurement technology

- Online and off-line analysis and visualisation of measurement data
- Creation of automated testing procedures

All data overview

Modul type	**Loggito series**
Analog inputs	

Sensors	mV, mA, thermocouples, RTDs (no RTDs with channel types 8 AI and 4 AI)
Sum sampling rate	1/3 Hz .. 1 kHz
Voltage measurement range	$\pm$78 mV .. $\pm$10 V
Current measuring range	0 .. 20 mA / 4 .. 20 mA / $\pm$20 mA / any (with freely selectable external shunts)
Optional additional boards (only with 24 V supply)	Software switchable internal shunt for active and passive 4 .. 20 mA sensors Software switchable feed for passive 4 .. 20 mA sensors
Resistance measurement range	0 .. 60 kΩ
Resolution	24 Bit
Input impedance	> 5GΩ
Dielectric withstand voltage (tolerable overvoltage)	$\pm$24 VDC
Max. differential voltage channel to channel	$\pm$24 VDC
Galvanic isolation against FE	$\pm$400 VDC
Precision of current and voltage measurement	0.01% from measurement range end value
RTD precision	0,1 K
Thermocouples precision	0.3 K (external thermoblock), < 1.0 K (internal reference junction)
Analog outputs	
Resolution	12 bit
Max. output rate	1 Hz

Output range	4 .. 20 mA
Max. load	550 Ω
Galvanic isolation output to analog inputs	none
Galvanic isolation to system / FE	±400 VDC

Digital / frequency inputs

Input signal low	low: 0 .. 1 V / high: 3,6 .. 100 VDC@3,5 mA
Frequency input measuring range (combined DIOs)	0.2 Hz .. 500 Hz
Frequency input measuring range (pure DIs)	0.2 Hz .. 30 kHz
Counter width	64 bit
Galvanic isolation	±400 VDC against FE / other channels (DIOs in groups of 2 channels)

Digital / PWM outputs

Grouping	2 per group
Max. switching voltage / current	50 V / 2.5 A
PWM basic frequency / duty cycle	20 Hz .. 10 kHz / 1:100
Galvanic isolation	±400 VDC against FE / channels of other groups

Modul type	Loggito Logger		Loggito Wireless	Loggi

Interfaces

LAN	10 x Base-T / 100 Base-Tx	-	
WLAN	802.11b/g/n, max. 72 MBit/s (optional, alternative to radio network interface)	-	
Radio network interface	IEEE802.15.4, max. 256 kBit/s (optional, alternative to WLAN)	IEEE802.15.4, max. 256 kBit/s	
USB device – mini socket	2.0 low/full/high speed	-	2.0 lo
USB host – type A socket	2.0 low/full speed	-	

Protocols

RS 232/485 (via USB extension)	Modbus RTU Master, Modbus RTU slave, SCPI, ASCII	-	
TCP/IP	Modbus TCP, OPC UA (DA) client server	-	

Data storage

Internal	4 / 8 / 16 GB / approx. 30 million measurement values per GB	-	
External	USB, NFS, CIFS, (S)FTP	-	

General technical information

Dimensions	L x W x H approx. 96 mm x 68 mm x 65 mm
Weight	without battery approx. 250 g, with battery approx. 300 g
Fixing	mounting rail DIN EN 60715 or screw mounting horizontally / vertically or upwards
Connecting terminals	plug-in spring terminals, max. 24 terminals in 2 rows, conductor cross-section (rigid / flexible) 0.2 .. 2.5 mm², ferrule 0.25 .. 1.5 mm²

Temperature range	-20 .. 60° C		
Humidity	max. 90 % relative humidity, non-condensing		
Supply voltage	alternatively 12 .. 24 VDC / ±20 % or 5 VDC (via mini USB connector) or integrated accumulator 3.7 V, 2050 mAh (optional)	12 .. 24 VDC / ±20 % or integrated accumulator 3.7 V, 2050 mAh (optional)	5 VD (via n conne
Power input	max. 3 watts plus power consumption of current loop for passive 4 .. 20 mA sensors, sleep mode max. 50 mW, hibernation mode max. 1 mW	max. 1 watt	max.