

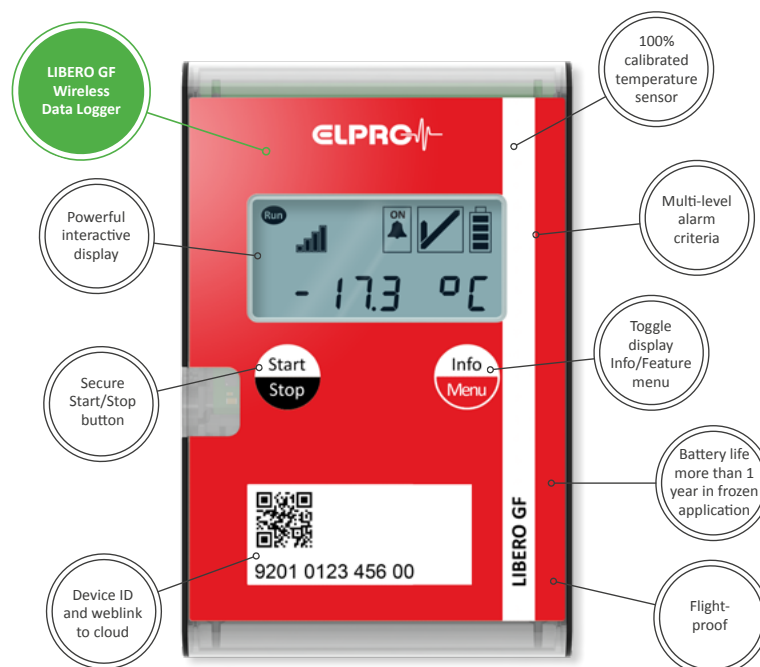


## TECHNICAL SPECIFICATIONS

# LIBERO GF

## Multi Use Real-Time Temperature Data Logger

LIBERO GF is the real-time logger for the temperature monitoring of frozen shipments. The internal temperature sensor is highly accurate and comes with a 100% sensor calibration. With an ensured runtime of more than a year up to -40 °Celsius, LIBERO GF is ideal for the monitoring of your frozen temperature sensitive products. Allowing to set alarm criteria, but also does LIBERO GF monitor the location of the shipment. LIBERO GF features a powerful, interactive display to facilitate your shipment process. LIBERO GF uploads all measured data automatically to a safe cloud environment where all shipments are monitored. LIBERO GF ideally complements the existing (USB) data logger portfolio. Up to 31.000 temperature values can be stored on the data logger to temporarily buffer measurement data. At the end of the shipment, release products directly based on the OK or ALARM status on the display and download the PDF report from the monitoring software (elproCLOUD / liberoMANAGER).



we prove it.

SWISS QUALITY



- > Real-time insights into your valuable shipments on road, air and sea
- > Highly accurate and 100% calibrated temperature sensor
- > Simple and safe in use and application
- > Fully compliant with industry guidelines

## Technical Specifications LIBERO GF

<b>Type</b>	Wireless Data logger with internal temperature sensor
<b>Application area</b>	Transport Monitoring: Global distribution of temperature sensitive products, frozen applications
<b>Recording options and mode</b>	Multiple use: start/stop, Loop mode
<b>Sensors</b>	High accuracy digital temperature sensor   Geographical location   Light   Tilt
<b>Measurement range</b>	Measurement range of internal sensor: -40 °C..+70 °C
<b>Application range</b>	-35 °C.. +55 °C
<b>Measurement accuracy</b>	<b>Internal Sensor</b> ±1.0 °C for -40.0 °C..-20.1 °C ±0.5 °C for -20.0 °C..-0.1 °C ±0.4 °C for 0.0 °C..+65.0 °C ±0.5 °C for +65.1 °C..+70 °C
<b>Resolution</b>	0.1 °
<b>Measurement interval</b>	5 to 60 minutes, configurable via elproCLOUD / liberoMANAGER
<b>Cellular network</b>	LTE-M and NB-IoT
<b>Communication interval</b>	30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD / liberoMANAGER, event-driven immediate communication (e.g. temperature excursion).
<b>Measurement capacity</b>	31.000 measurement values (equals 322 days with 15 min measurement interval)
<b>Expiry date and battery life</b>	Data logger can be started any time during shelf life (auto expiry data management). Started data logger runs up to 14 months. 12 months continuous operation with 15 min measurement interval and 120 min communication interval. Intensified communication behavior (e.g. bad connection or local provider settings) and application below -35 °C and above +55 °C will shorten battery life.
<b>Battery type</b>	AA-Lithium-Metal batteries (non-replaceable), UN3091 (contained in equipment)
<b>Configurable alarms</b>	7 temperature thresholds with alarm delay (4 upper limits, 3 lower limits)
<b>Start-up delay</b>	Configurable based on time, temperature or button
<b>Display</b>	Multifunction LCD, size: 42 × 20 mm
<b>Certificate</b>	Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance.elpro.com, additional customer-specific calibration points optionally available.
<b>Traceability</b>	Unique ID number (traceable to component level)
<b>Reporting</b>	Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD / liberoMANAGER
<b>Case   dimension   weight   IP code</b>	ABS plastic material   100 × 65 × 19 mm (3.9 × 2.5 × 0.7 in)   109 g (3.8 oz)   IP54
<b>Conformity</b>	CE   FCC   UKCA   ICES   RoHS   UN38.3   WEEE   NCC   RSM   TDRA   ENACOM   IMDA   MIC   ACMA/RCM
<b>Standards</b>	EN 12830   RTCA DO-160 (EMC)   GAMP5