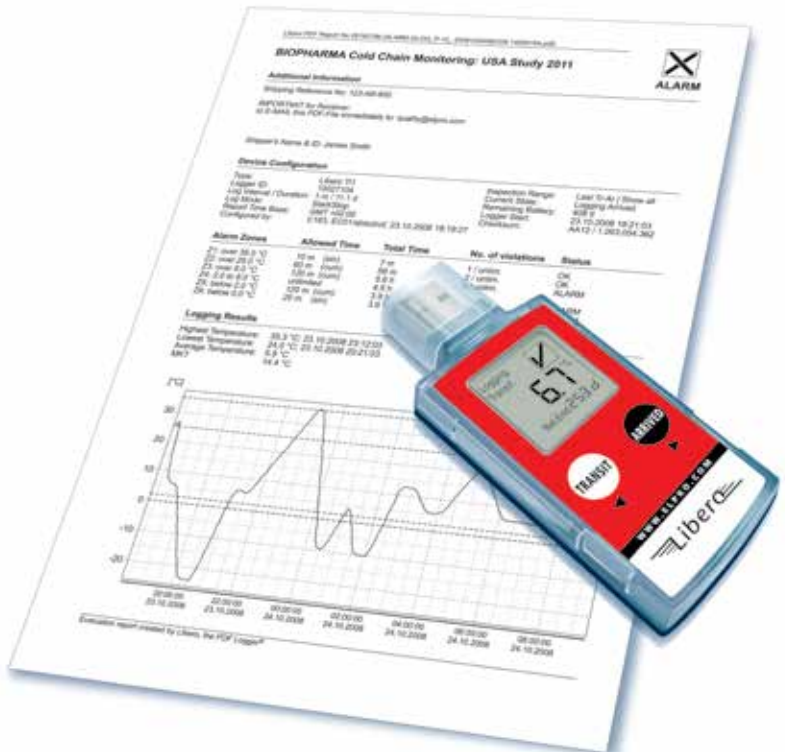




LIBERO: Innovation Leader in Cold Chain Monitoring



we prove it.

Efficient cold chain monitoring

Cold chain monitoring is more than just a monitor logging temperature.
It is about simplifying your entire shipping process.

1 Customize & dispatch

Use SmartStart to safely configure LIBERO and add shipment-specific information.
Or activate pre-configured device by simply pressing the TRANSIT button.



2 Supply chain

Send your goods through the supply chain,
see alarm status at any time:



NO ALARM:
Accept

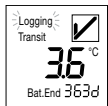


ALARM:
Investigate



3 Release report including raw data

Intuitive display shows status at first sight:



Within seconds, you get the evaluation
report as ISO standardized PDF/A file.

Raw data is embedded in the PDF/A file,
so there is only one file per shipment.



4 Data management

E-mail PDF report to liberoMANAGER
where it is archived and made available
for global access within your organization,
alarm workflow included.



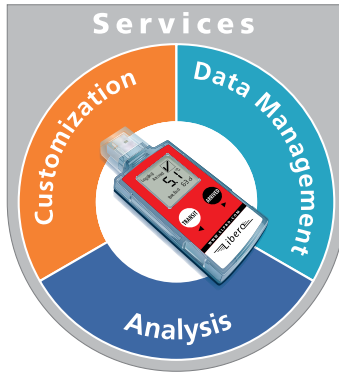
with the ELPRO LIBERO Concept.

SmartStart Pack&Go

Add shipment-specific information to each logger via this safe and fast configuration capability. A history log file is automatically generated that can be handed over to liberoMANAGER. This allows generating an open shipment report.

Pre-configured LIBERO

ELPRO can pre-configure loggers to your requirements. At time of shipment, they can be activated by simply pressing a button.



elproLOG ANALYZE

Detailed analysis of single shipments; study data, create zoom views, calculate MKT/aging (Arrhenius), export data.

elproVIEWER

Visualize and analyze data of multiple shipments, overlay data, reassess PDF files with enhanced QA proficiency, combine data from various sources to establish a life cycle stability report.

elproASSISTANT

This background program acts like a Task Manager. As soon as a LIBERO PDF Logger is detected in the USB port or a LIBERO PDF file is sent in via e-mail, this assistant automatically performs the configured tasks, e.g. forward an alarm e-mail to QA, upload PDF file to liberoMANAGER, save file to a dedicated folder, etc.

liberoMANAGER

A web-based Document Management System. Easily archive LIBERO PDF reports, trigger a workflow for reports in alarm status, track open shipments and analyze shipment performance.

The data belongs at all times to the customer.

Costs are minimal and not transaction-based.

ERP Integration

ELPRO encourages and enables integration of LIBERO into other systems to allow automation of handling processes and data management. We provide standard software components as well as tools to integrate LIBERO into your applications.

LIBERO Ti1-S, Ti1, Ti1-L

**Internal temperature probe (-35°C..+70°C)
for monitoring of temperature-sensitive shipments**

- Ti1-S single use, 100 days
- Ti1 multiple use, 400 days
- Ti1-L multiple use, 3 years

Additional technical data (all types):

- Memory capacity 16'000 datapoints
- Programmable measuring interval
- Temperature accuracy of $\pm 0.2^{\circ}\text{C}$ between $-10^{\circ}\text{C}..+25^{\circ}\text{C}$
- 5 alarm / time zones

LIBERO Te1-N, Te1-P (External Probe)

**External temperature probe for cabinet,
freezer & cryo applications**

- Te1-N with NTC probe for $-90^{\circ}\text{C}..+85^{\circ}\text{C}$
- Te1-P with Pt100 probe for $-200^{\circ}\text{C}..+200^{\circ}\text{C}$
- Life time: 3 years, 400 or 100 days (single use)

LIBERO Ti1-D (Dry Ice)

**Internal temperature probe (-80°C..+70°C)
for monitoring of dry ice shipments**

- Single use, 100 days
- No down time at data evaluation: Just plug Ti1-D into USB port and see the monitoring results

LIBERO THi1 (Temperature & Humidity)

**Internal temperature and humidity probe
for shipment and room climate monitoring**

- Temperature range $-25^{\circ}\text{C}..+70^{\circ}\text{C}$
- Humidity range 0%..100%
- Life time: 3 years, 400 or 100 days (single use)

Accessories

- Simple Bracket
- Alarm Bracket
- Connectors for external probes



A solution for any application.

LOGISTICS



CARGO

ACTIVE CONTAINER

INSULATED BOX



CRYO SHIPPER



DRY ICE SHIPPER



SHIPPING BOX

LABORATORY



INCUBATOR



REFRIGERATOR & ULTRA LOW FREEZER (-80°C)

CLIMATE IN LABORATORIES



STORAGE



MEDICINAL REFRIGERATOR



MONITORING IN COOLING CHAMBERS & CABINETS

MONITORING & MAPPING IN WAREHOUSES




LIBERO PDF Logger®

A most cost efficient solution!

DIRECT COST – visible

- Monitoring device / Data logger
- Software
- Interface and data cable

INDIRECT COST – hidden

- Software installation, support, IQ/OQ, user training
- Keeping stock of various logger types
- Time lost until monitoring device is back for evaluation
- Read-out and creation of evaluation report and readable back-up standard
- Exception handling & approval process

CONCLUSION

Above items are true for any kind of data logger.
With LIBERO you can save up to 50% of the hidden costs. Please ask for your individual TCO Analysis.

Benefits

User:

Ease of use and productivity

«LIBERO is easy to use – to us it means a change from personnel-dependent daily process to an automated monthly process.»

- Easy handling, no specific procedures needed, wrong manipulations excluded
- Clearly structured display for immediate visibility of any temperature deviations during transportation
- Shortened workflow thanks to the unique feature of the automatically generated analysis and compound report

Supply Chain Manager:

Productivity and Flexibility

«LIBERO gives us the functionality we need. By using the multiple use device, our costs for temperature monitoring are lower than 10 EUR per shipment.»

- Quick and easy availability of supply chain history
- Straightforward transmission of complete reports (data and graphics) thanks to PDF/A format
- Detailed evaluation of raw data possible with elproLOG ANALYZE Software
- Full control thanks to worldwide standardized reports (PDF/A file format)

Purchase Manager:

Cost efficiency

- Excellent price/performance ratio
- No cost for worldwide software training, SW validation, SW support, software upgrading activities or user training
- Swiss quality product

Quality Manager:

Assured quality

- PDF/A file format is an ISO standard: ISO 19005-1 Document Management
- Helps to be compliant with the provision of GMP/GLP/FDA (21 CFR 11), USP 1079
- 5 programmable alarm ranges according to PDA Technical Report No 39
- Validation certificate
- IQ/OQ documentation is made available

IT Manager:

Reliability and seamless integration

- No specific evaluation software necessary (Adobe®Reader®)
- No additional hardware required (USB port/PC)
- No additional infrastructure cost for software validation, upgrade policy and end user support
- No user training necessary

Financial Director:

Cost savings

«In only four months since we used LIBERO we have reduced false return by 90% and have saved 1 million USD.»

- Cost effective solution for total cold chain monitoring
- Safe investment thanks to proven technology, ELPRO's compatibility strategy and the long-term experience of ELPRO in providing professional data logging solutions



Cold chain management solutions at the lowest cost.

Are you looking for a new solution and would like to:

- Automate manual work?
- Prevent false alarming?
- Work with special temperature profiles for different products?
- Keep only one type of logger in stock?
- Add shipment data to a PDF report?
- Aggregate data and run detailed analysis over multiple shipments?
- Set up simple alarm handling routines?
- Establish a data management solution for your shipment reports?
- Be able to access data worldwide?
- Integrate shipment data in your ERP system?

With the ELPRO LIBERO Concept you get the answer to all of the above requirements.

ELPRO has profound knowledge and experience in the field of cold chain temperature monitoring. As the inventor of the LIBERO PDF Logger® we have helped healthcare companies around the world to simplify their cold chains resulting in less manual work, quicker release times and savings massively outweighing the initial time and process investments.

Let us help you optimize your supply chain, with proven products, innovative technology and a complete system approach. Cold chain temperature monitoring – it is more than just a data logger!

Swiss Head Office:	USA	ELPRO Services Inc.	+1 740 568 9900
ELPRO-BUCHS AG	UK	ELPRO UK Ltd.	+44 1903 883 132
9470 Buchs SG	DE	ELPRO Messtechnik GmbH	+49 7181 48 20 60
Switzerland	NORDIC	ELPRO NORDIC ApS	+45 5338 2112
+41 81 552 08 08	BENELUX	ELPRO Benelux B.V.	+31 252 830 209