



# Kaye ValProbe® Freeze Dryer Logger



The X2534 ValProbe surface temperature logger design provides enhanced and precision wireless measurement capability ideal for freeze dryer shelf temperature measurement over an extended temperature range from -85°C to +140°C.

The embedded RTD technology is integrated into a unique compact surface design, delivering unrivaled measurement accuracy, stability, and response time over the full temperature range. In addition, the Freeze Dryer Logger has been designed to minimize power consumption to deliver maximum battery performance in extremely cold environments.

The surface Logger is compatible with the existing ValProbe family of Loggers, Readers and software. It is designed for easy on-site user verification between studies with the traditional IRTD and the low temperature CTR-80 bath. Using the standard Kaye Report Wizard, Validation engineers are guaranteed consistent reports among all Kaye products with the capability to merge study data with a Kaye Validator or the RF ValProbe. The surface Logger and Report Wizard offer added value when performing validation execution, saving time and money.

The ValProbe system satisfies FDA Regulation 21 CFR Part 11 requirements for electronic signatures, and records and complies with DIN ISO 17665 for saturated steam sterilization and is used to fulfill GMP requirements.

## Features of the X2534

- Unique integrated wireless design with embedded RTD technology
- Sensing design maximizes thermal response time
- Self adhering thermal pad insures continuous thermal conductivity during vacuum cycles for ultimate surface measurement performance
- Temperature range for complete logger: -85°C to 140°C
- Battery life performance — Designed for maximum battery life at extremely cold conditions
- Fully compatible with the full family of ValProbe Loggers, Readers and software

## Applications

- Freeze Dryer
- Cryogenic Vessels
- Freezers
- Incubators
- Warehouses
- Sterilizers
- Surface Measurement

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# Data Logger Specifications

Sensing Element	Precision Platinum RTD
Measurement Range and Accuracy	0° to 140°C ±0.1°C -85° to 0°C ±0.25°C
Environmental Temperature	-85° to 140°C
Humidity	0% to 100% humidity, condensing
Pressure	0 to 10 bar absolute (0 to 130 psia)
Logger Material	316L stainless steel
Logger Dimensions	Height 2.28 in x 1.41 in diameter 58 mm x 36 mm
Sensing Area Dimension	1.34 in (34 mm) diameter
Battery	Field-replaceable 3.6 V lithium thionyl chloride 1600 hours at 1 sec at 20°C/180 hours at 1 sec at -85°C
Sampling Rate	1 second to 12 hours
Data Storage	10,000 samples retained in non-volatile EEPROM memory
Calibration	Factory calibrated (NVLAP accredited) with user calibration capability
Real Time Clock Accuracy	15 seconds per 24 hours (0.0174%)
Regulatory Compliance	UL and CE
Thermal Contact Pad	Die cut Thermal pad with natural inherent tack to logger



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