



AT A GLANCE

-196 °C

PT100 RTD probe reads down to liquid-nitrogen temperatures

0.1 °C

Calibrated accuracy at 0.01 °C resolution across the range

KEY FEATURES

- Enterprise-grade wireless ultra-low-temperature monitoring for ULT freezers, cryogenic freezers, and LN2 tanks
- PT100 RTD probe reads -196 °C to +150 °C — purpose-built for cryogenic cold storage
- Braided stainless-steel sheath probe with a 3 m cable and 4-wire configuration
- WPA2-Enterprise Wi-Fi connectivity — readings stream to the ATEK platform in real time
- Calibrated probe with included calibration certificate and a unique serial number
- Backlit display with min/max reset and power-loss detection
- Mains-powered (5 V, 500 mA) with an internal rechargeable battery for backup operation
- 6 months of on-board data storage at 5-minute intervals for uninterrupted records

Pairs With a Compliance-Ready Platform

Use ATEK-T-WF-RTD with the ATEK platform, which provides 21 CFR Part 11 controls — audit trails, e-signatures, and ALCOA+ data integrity. Validate compliance for your intended use.

CERTIFICATIONS

MEASUREMENT PERFORMANCE

Parameter	PT100 RTD Probe
Sensing	✓
Measurement range	-196 °C to +150 °C
Range (imperial)	-320.8 °F to 302 °F
Resolution	0.01 °C
Accuracy (standard)	0.5 °C
Accuracy (calibrated)	0.1 °C
On-device display	✓

TECHNICAL SPECIFICATIONS

Parameter	Specification
WIRELESS CONNECTIVITY	
Technology	Wi-Fi 2.4 GHz, WPA2-Enterprise
Cloud platform	ATEK platform — real-time readings, trends, and alarms
Transmit interval	30 s on mains power, 15 min on battery
Recording interval	5 min; 6 months on-board storage
TEMPERATURE (PT100 RTD)	
Sensor type	RTD PT100
Range	-196 °C to +150 °C (-320.8 °F to 302 °F)
Resolution	0.01 °C
Accuracy	0.5 °C standard / 0.1 °C calibrated
Units	°C
PROBE	
Construction	Braided stainless-steel sheath
Cable	3 m, 4-wire configuration
PHYSICAL & POWER	
Enclosure	84 × 84 × 32 mm (3.3 × 3.3 × 1.25 in)
Power	5 V / 500 mA mains, internal rechargeable battery backup
Display	Backlit display — temperature, min/max reset, power-loss detection
Calibration	Calibration certificate included; unique serial number

WHERE IT'S USED

- ULT freezer monitoring at -80 °C
- ULT chest freezer monitoring at -150 °C
- Cryogenic freezer monitoring at -180 °C
- LN2 tank monitoring at -196 °C
- Biobank & sample-repository cold storage
- Vaccine and cell-therapy deep-freeze storage

ORDERING INFORMATION

ATEK Part Number	Description
ATEK-T-WF-RTD	WiFi RTD low-temperature transmitter — PT100 probe, -196 to +150 °C, 0.01 °C resolution, 0.1 °C calibrated

Contact ATEK for volume pricing, deployment kits, and calibration certificate options.

ATEK PLATFORM INTEGRATION

- Real-time temperature readings, trends, and alarms within seconds of each Wi-Fi uplink
- Automated compliance reporting — scheduled CSV / PDF / Excel exports with hourly, daily, and monthly aggregations
- Multi-channel alerts — email, SMS, voice call, and webhook on excursion
- Immutable time-series storage with tamper-evident audit logs
- 21 CFR Part 11 controls on the ATEK platform — user-level audit trails, e-signatures, ALCOA+ data integrity (validate for your intended use)
- Calibration tracking — each probe's certificate auto-associates by serial number with expiry alerts and audit trail
- Network-loss resilience — 6 months of on-board storage backfills automatically once Wi-Fi is restored