

# RAE2

## RASS Temperature Profiler



The Scintec RAE2 RASS Extension upgrades any Scintec Sodar SFAS, MFAS or XFAS to allow precise measurements of temperature profiles in the atmospheric boundary layer. Temperature is retrieved by remotely measuring the speed of sound which depends on the temperature. This is done by Doppler analysis of the frequency of radiowaves which have

been reflected at acoustic waves emitted by the Sodar.

RASS can replace towers, tethered balloons or radiosondes at a fraction of the operational costs. Compared to passive, thermal microwave techniques, RASS can precisely detect and locate even multiple inversions and has higher accuracy.

The Extended-Sweep Inversion

technique (ESI) significantly increases the signal-to-noise ratio and allows for measurement ranges far wider than those of traditional systems.

The RAE2 is operated using the versatile software APRun with flexible configurability, extensive graphical display and output options, quality control features, statistical analysis tools and remote access support.

### Features

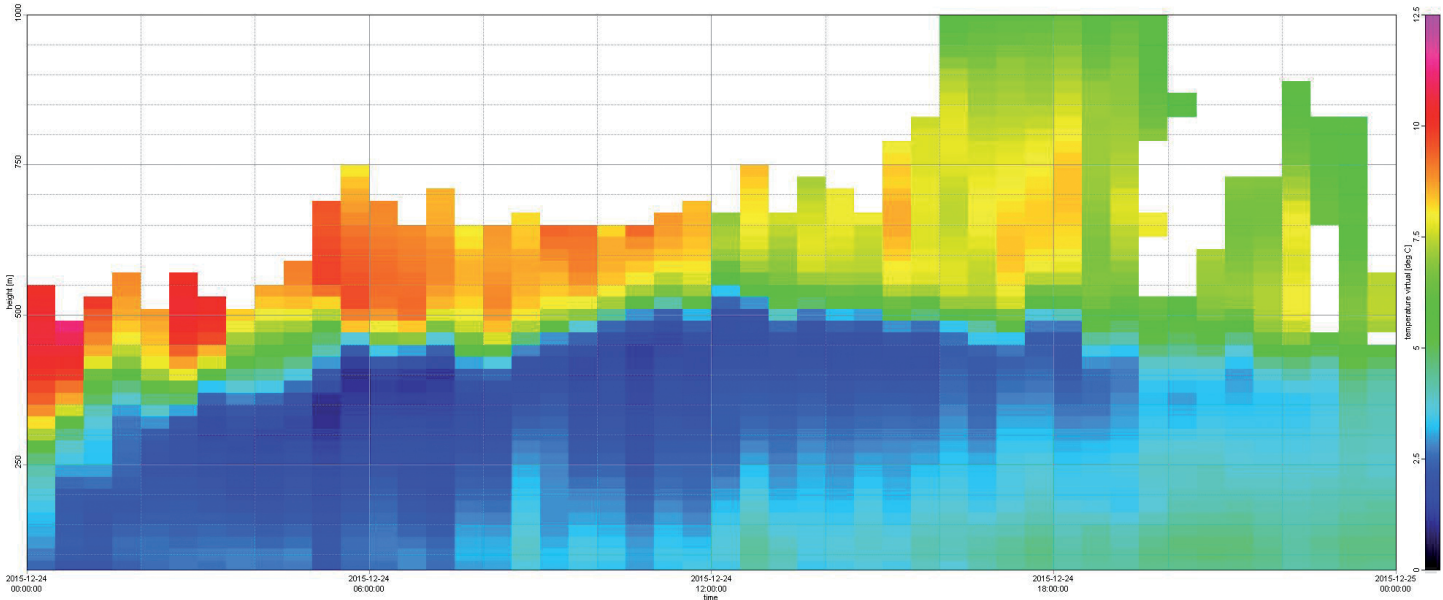
- maximum range up to 600 / 800 / 1000 m with Sodar SFAS/ MFAS / XFAS
- monitors inversion heights with 5 / 10 / 20 m precision with Sodar SFAS / MFAS / XFAS
- ESI technology increases data availability
- easy installation
- fully-automated self-test
- remote access

### Applications

- agrometeorology, forestry
- air quality
- airport safety
- atmospheric dispersion
- climate change studies
- defence weather
- fog forecasting
- micrometeorology
- urban climate

### Data output (in addition to Sodar output)

- Temperature and virtual temperature
- Inversion identifier
- Data quality



### Basic Specifications

Description	Specifacaton	Remarks
Radio antenna	8-bar slot antenna	
Radio frequency	1290 MHz, 915 MHz	standard frequency – hardware can be equipped for a customer-specific frequency
Vertical resolution	5 / 10 / 20 m with SFAS / MFAS / XFAS	depending on Sodar model
Minimum range	40 m	depending on settings, environment and atmosphere
Maximum range	600 / 800 / 1000 m with SFAS / MFAS / XFAS	depending on settings, environment and atmosphere
Averaging time	1 – 60 min	user-defined
Accuracy	0.2 °C	virtual temperature
Measurement range	-50 °C to +60 °C	
Operating temperature	-35 to +55 °C (-30 to +130 °F)	
Power requirement DC operation	+14 VDC, 7A, 98 W	depending on mode
Power requirement AC line operation	104 to 132 VAC, 160 W 207 to 264 VAC, 160 W	120V model 230V model

Specifications are subject to change without notice.

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