

# Info-Electronics Systems

## Weather & water are our business

IES is proud to bring to Canada the latest technologies in Remote Sensing, Analysis & Weather Forecasting through the representation of state-of-the-art meteorological instrumentation companies.

Not only do we represent these firms, but we act as a prime contractor, customer liaison and provide value-added services, including project management, software development, systems integration, installation, training, testing, support and post-maintenance support as well.



Radiometrics Corp. (RDX) of Frederick, Colorado delivers state-of-the-art **Weather Decision Support Systems**, atmospheric remote sensing instrumentation optimized for mobile and fixed-site applications, and a wide range of technical services including third-party equipment integration, system design, installation, maintenance, and training.



Radiometrics, has developed SkyCast®- an integrated wind and thermodynamic profiling system (WTPS) that includes all needed instrumentation and feature-rich data analysis, display and automated alerts applications. SkyCast systems can be configured for a wide variety of applications including air quality monitoring, emergency management support, mesonet monitoring solutions and space launch support and airport applications.

### Atmospheric Boundary Layer Profiling System

- Profiling Radiometer
- Radar Wind Profiler
- Acoustic Wind Profiler
- Data Integration
- Nowcasting Algorithms
- Display System

## Remote Sensing Instrumentation

The following remote sensing instrumentation are part of the SkyCast system.

# RADIOMETERS

## MP-3000A Microwave Thermodynamic Profiling Radiometer (MPR)



Provides continuous real-time vertical retrievals of temperature, humidity, and liquid water from the surface to 10 km. SkyCast utilizes the full profiles to derive traditional forecast indices, while leveraging the profiler's inherent strength in the low levels for high-resolution boundary layer analyses. Hallmarked by high reliability (MTBF > 40,000 hours) and proven profiling accuracy, there are over 230 MP- 3000A instruments in operation worldwide.

21 Calibrated K-Band Humidity Channels
14 Calibrated V-Band Temperature Channels
An efficient super blower proven to keep the <u>radome</u> dew, rain, snow and ice free
An internally mounted, corrosion-free zenith infrared cloud base temperature sensor ensuring accuracy and <u>long term</u> reliability in harsh environmental conditions
Advanced neural network retrieval methods
Field-replaceable radiometer components <sup>2</sup> for cost-effective maintenance and repair
Powerful browser-based <u>VizMet-B</u> instrument control and display software
Full sky mapping with the provided azimuth drive installed
Small size and weight (less than 50kg for radiometer, super blower and azimuth positioner)
Robust design, with proven reliability in all climates and weather conditions

# WIND PROFILERS

## RAPTOR - Radar Wind Profiler (RWP)



Accurately measures the boundary layer wind speed and direction up to 3 km AGL or higher, depending on atmospheric conditions. For northern latitudes, regions with dry climates, or locations where winds above the PBL are desired. Additional higher-power radar wind profiler options are available for troposphere, and stratosphere research.

## AWP-4000 Sodar Wind Profiler



The sodar utilizes acoustic propagation and Doppler shift principles to retrieve high-resolution vertical wind profiles from near-surface to 200 m AGL. The sodar operates at a pulse frequency near 4500 Hz to derive wind measurements at a height resolution of approximately 5 m for wind speeds up to 45 m s<sup>-1</sup>.

## Weather Stations

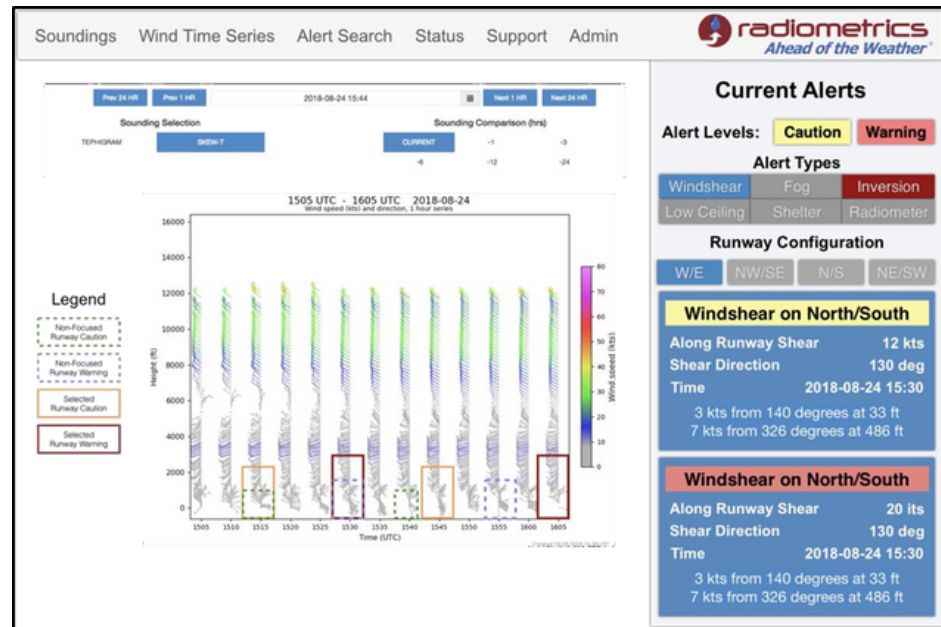
Meteorological sensors are usually installed at airports, but Info-Electronics Systems can provide weather stations from our many partners if needed.



# DATA VISUALIZATION

**VizAir Launchpad:** Dashboard that displays user alerts and provides easy access to additional applications.

**Integrated Wind Shear Alerting System:** Algorithm and alerting suite that detects shear of the horizontal winds according to FAA or ICAO standards for non-convective wind shear, and provides alerts based on user-defined alerting thresholds.

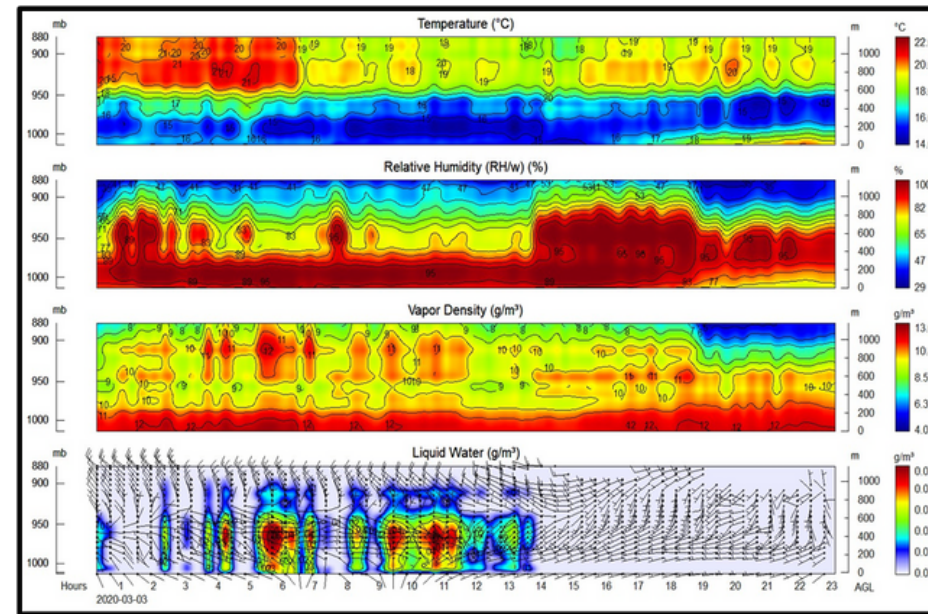


Integrated Wind Shear Alerting System (IWAS) display

**Inversion Detection and Trending System:** Algorithm and alerting suite that detects inversions and analyzes trend information to estimate dissipation times.

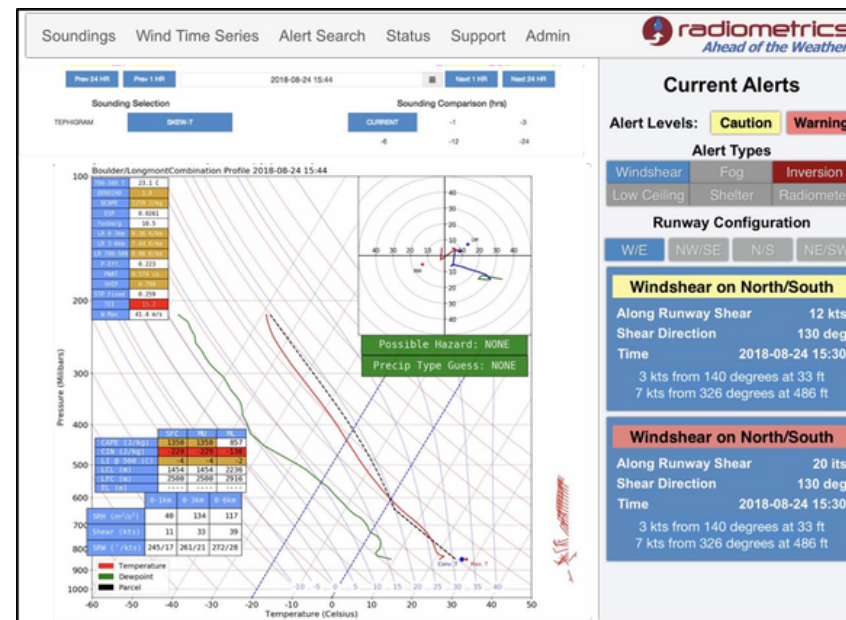
**Nowcast Product Generator:** Software package which is responsible for data integration, database generation, algorithmic processing, data archiving, and playback.

**Fog Detection and Trending System:** Algorithm and alerting suite that detects fog and analyzes trend information to estimate burn off rates.



Temp., relative humidity, vapor density, liquid water (fog) and winds

**VizAir Display:** Primary visualization software for examining integrated data and evaluating alerts.



Thermodynamic and wind profiles with current alerts

**Sounding Toolkit:** Software allows for the visualization and comprehensive interrogation of sounding data using the Universal Rawinsonde Observation (RAOB) program.

**VizMet-B:** Interface for the MPR and provides basic visualization displays.

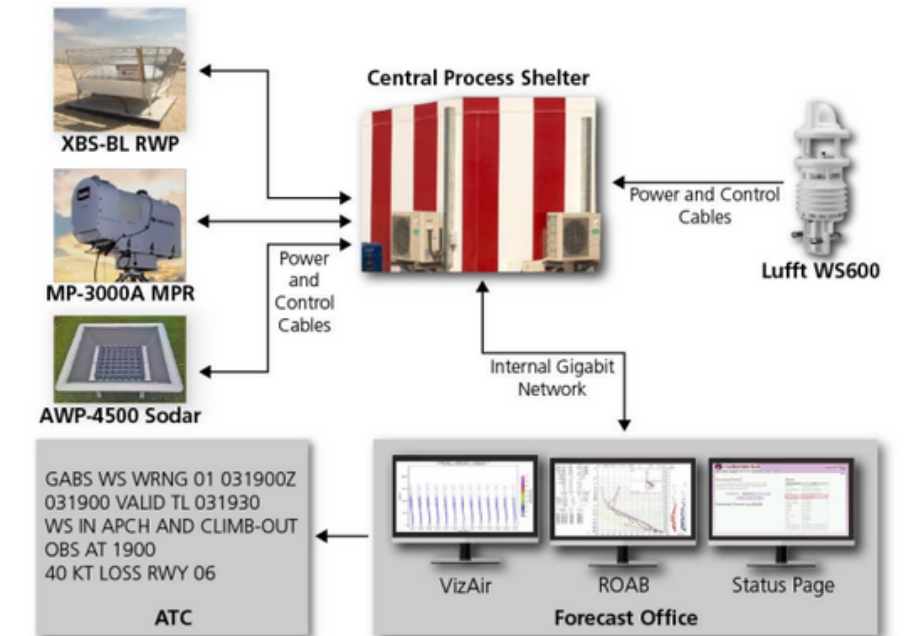
**VizMet-Pro:** With ACal software for the MP-3000A

**BIRCH™:** Control interface providing RWP health and status monitoring.

**ASPEN™:** Signal processing and data display system for the RWP.

**SoDARView™:** Signal processing and data display system for the AWP.

**SkyCast Status Page:** Provides a quick-look overview of the status of various hardware and processing components, shelter environmental conditions, and file latency information.



Skycast aviation application network diagram shown above

# CONTACT US

Contact IES to discuss how these products can meet your critical forecasting and warning needs;

Cell: (438) 826-1892

Email: kevin@info-electronics.com



**INFO-ELECTRONICS H P SYSTEMS INC.**

6600 Trans Canada Hwy, Suite #400,  
Pointe-Claire, (Montréal), Québec,  
Canada, H9R 4S2

Tel: (514) 505-1996

www.info-electronics.com

Email: contact@info-electronics.com