# SCANIR

## ALL-SKY THERMAL SCANNER

## NEXT GEN CLOUD DETECTION

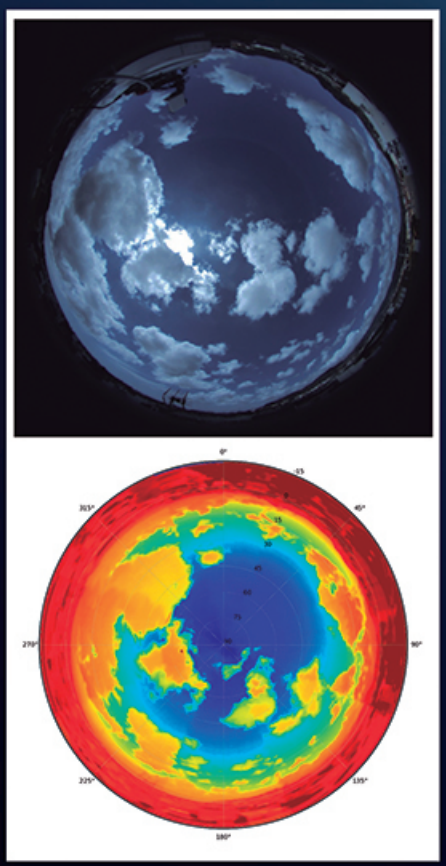
- Impressive coverage: 360° / 210°
- Identification of cloud layers
- Daytime and nighttime cloud detection
- Not affected by haze
- Internal server for data Analysis and GUI
- No external moving parts

Sieltec Canarias S.L.

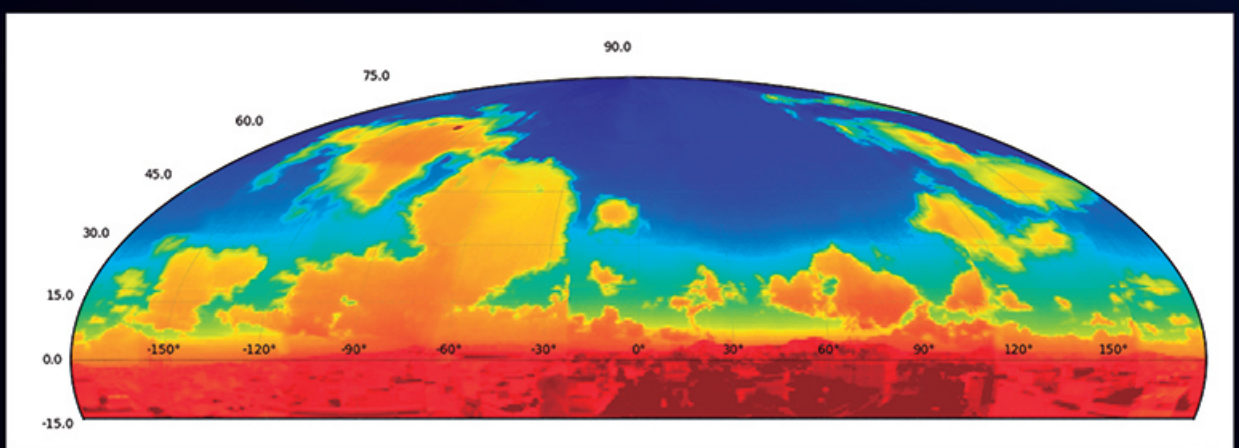
INNOVATION REACHING THE SKY

The SCANIR instrument uses Long Wave Infra Red radiation (LWIR) in order to obtain thermal images of the sky. The system operates at day and night and their images are immune to haze. Its design allows to scan all the sky, giving a impressive coverage of 360/210 degrees, this is very useful to detect and track clouds in the horizon without distortion and at full resolution, where normal systems are not able to capture good images.
When detecting clouds, as it uses thermal data instead of normal cameras, the software is able to make a segmentation of the clouds based in their temperature.
As temperature correlates with their altitude, the SCANIR can differentiate between different layers of clouds.

Also, its impressive vertical field of view can be useful for other applications, like using it in elevated sites without losing the horizon's information, maintenance in large photovoltaic plants or security.



*Top: NEW SCANIR instrument.*
*Left-top: VIS All-sky picture.*
*Left and below:*
*Different views of the thermal data obtanied by the SCANIR.*
*Left: Radial view*
*Below: Mollweide representaion,*



# SCANIR

## SPECIFICATIONS

| | |
|---|---|
| Model | SCANIR |
| Sensors | Longwave Infrared (LWIR) Uncooled VOx microbolometer |
| Image resolution | Original: 1280*345 px (non interpolated)(*) |
| Spectral range | Longwave infrared, 8 µm to 14 µm |
| Pixel size | 12 µm |
| FOV - horizontal | 360° |
| FOV - vertical | 210° |
| Measurement rate | Max rate: 1 picture / 30 sec |
| Thermal range | -20°C to 450°C (**) |
| Thermal sensivity | <50mK |
| Image optimization and correction | Factory configured and fully automated |
| Data output | Original rectangular: 1280*345 px (non interpolated)<br>Radial: 690*690 px (non interpolated)<br>Mollweide: 1280*345 px (non interpolated)<br>% of cloudiness & % of cloudiness by temperatures<br>Temperature of the base of the clouds<br>Cloud segmentation<br>Internal temperature, Internal humidity<br>Sun and Moon position data |
| Software | Capture, Processing, Image preview, Data graphs<br>Database, Export data, VPN access |
| Communications | Gigabit PoE LAN |
| Power supply | Input: 90 – 240V (***)<br>Output: 15V, 25W PoE passive |
| Protection level | >IP67 |
| Window | Top: 75mm diameter Ge (DLC/AR coatings), 4mm thickness<br>Sides: 25mm diameter Ge (DLC/AR), 3mm thickness |
| Case | Top: anodized aluminium<br>Body: powder coated aluminium |
| Internal extra heater | 10W (optional) |
| Operating temperature | -40° to 55° (with internal extra heating) |
| Blower | Optional |
| Dimensions | 210 mm height , 180 mm diameter |
| Weight | 5 kgs (SCANIR), 10.5kgs (total system packed) |

(*) On demand can be applied interpolation
(**) With autocalibration, limits defined by user
(***) Can be powered with solar panel mm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