



# iMet-1600

## 1680MHz Tracking Antenna / Receiver

### Drive System

Azimuth rotation	Continuous
Azimuth transfer	Slip rings
Elevation rotation	-5° to +91.5°
Motor drive	DC, harmonic gears
Maximum slew rate	25°/second
Azimuth resolution	0.01°
Elevation resolution	0.01°

### Radiosonde Compatibility

Type	RDF or GPS
Antenna polarization	Vertical
Radiosonde Models	BAT-16, iMet-1, iMet-2, iMet-4, iMet-54

### Operating Parameters

Type	Portable
Environment	All weather
Antenna weight	110 kg
Material	Aluminium
Height (fully extended)	3.0 m
Swing diameter	2.0 m
Power	18 - 32 VDC
Current draw	3 A quiescent, 18 A max (< 4 s)
Operating temperature	-40 to +60 °C
Operating humidity range	0 to 100 %RH
Environment	MIL-STD 810F
EMI	MIL-STD 461E
Data protocol	RS-422

### Antenna

Type	Automatic tracking radiotheodolite
Frequency	1668.4 - 1690 MHz
Dish type	Aluminium parabolic grid
Dish diameter	1.2 m
Tracking beam width	8.4°
Antenna gain	21.6 dBi
Max slant range	> 250 km*
Max altitude	> 40 km*
MTBF	> 2400 hours

### Receiver

Type	Digital, superheterodyne
Bandwidth	Selectable (50 - 1000kHz)
Frequency control	Synthesized with AFC
Demodulation	FM, AM, FSK, GFSK
Sensitivity (12dB SINAD)	-113 dBm

### Scanner

Type	Solid state sequential lobe scan
Polarization	Vertical

### Key Features

- Mil-spec compliance
- Dual tracking mode provides reliability even under conditions of GPS/GNSS jamming and spoofing
- May be dismantled for ease of transport
- Quick deployment
- Resistant to radiosonde signal jamming
- Encrypted radiosonde data transmission
- Extensive Built-in-Test capabilities for fault isolation and maintenance

*With the ability to track radiosondes using both RDF or GPS techniques, this antenna has been designed to provide military users with upper-air met data under all operating conditions. The antenna complies with all mil-spec standards ensuring excellent reliability and trouble-free system integration.*

*Specifications subject to change without notice*  
 \* Subject to balloon dimensions and atmospheric conditions



33 Estmil Road, Diep River, 7800,  
 Cape Town, South Africa  
 Phone: +2721 715 1120  
 email: [info@intermet.co](mailto:info@intermet.co)  
[www.intermet.co](http://www.intermet.co)

