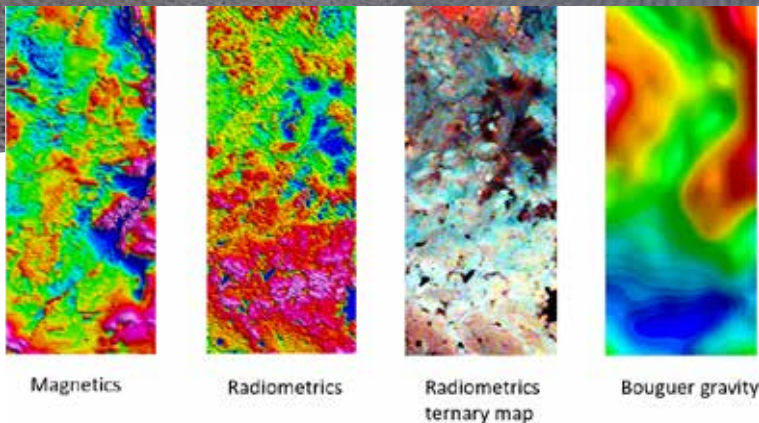


# INTRODUCING THE NxT™ AIRBORNE GRAVIMETER: A REVOLUTION IN AIRBORNE GEOPHYSICS

**AXIOM GROUP** is thrilled to unveil the NxT™ airborne gravimeter, a groundbreaking advancement in airborne geophysics that sets a new standard for precision and reliability. Launched in November 2020 after an exhaustive testing program by New Resolution Geophysics (NRG™), the NxT™ represents a significant leap forward in technology and design.

At the heart of the NxT™ is its state-of-the-art laser ring gyro and strap-down Inertial Measurement Unit (IMU), which eliminates the need for a traditional mechanical orientation platform. This innovative system employs a triad of gyroscopes to mathematically solve for orientation, offering unparalleled stability against turbulence and rapid changes in aircraft attitude. The NxT™'s patented thermally controlled housing minimizes long-term drift, a common challenge with conventional strapdown gravimeters, allowing for unprecedented low-level gravity measurements with sub-milligal accuracy over a 2,800m wavelength.



Beyond its remarkable precision, the NxT™ boasts the capability to co-collect magnetic and radiometric data without compromising the tight flight patterns essential for detailed geophysical surveys. This multifaceted data collection capability ensures that every mission delivers high-resolution, high-quality results.

The NxT™ made its debut in February 2021 with a high-resolution Xplorer magnetic, radiometric, and gravity survey. This inaugural mission provided an in-house dataset for NRG's temperature-stabilized strap-down MEMS-based IMU gravimeter system. The results were nothing short of exceptional, aligning remarkably well with ground gravity data and capturing sharp, defined airborne anomalies even in the most challenging weather conditions.

For those in the field of airborne geophysics, the NxT™ is not just an instrument—it's a game-changer. Discover the future of airborne gravimetry with **AXIOM GROUP**.



## SPECIFICATIONS

### GRAVITY SENSOR

Performance	Value	Remark
Gravity (post-proc.)	<1.0 mGal ~ 2.0 mGal ~ 0.8 -1.0 mGal	nominal, experienced value after line-wise bias removal
Resolution 50...100 s	1.5 km (@ 30 m/s, 50 s)	depending on speed
Operation range	+/- 20 g	very robust also against strong turbulences

### Operational Parameters

Power Supply	16...34 V DC, 250 W • 50 ms hold up time according to DO160G • continuous overvoltage protection up to 60 V for the INS
Performance Temp. Range	+/- 15 K around initial set value
Operational Temperature	-30...+45 °C
Weight, Power Consumption	iCORUS-02 standard version: ~ 18.5 kg / typical < 50 W (initial < 250 W)

### RADIOMETRICS SENSOR

#### Operational Parameters

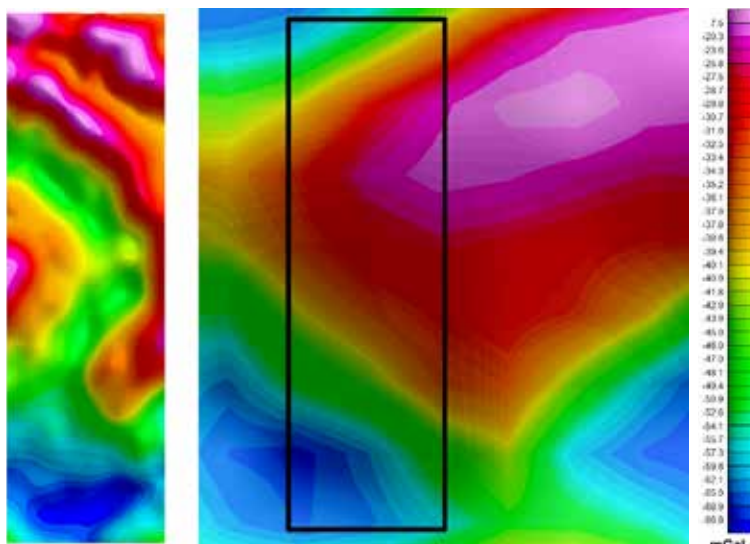
Type	RS-500 RSX-4
Channels	1024
Sample rate	0.1-10 Hz
Weight	91 kg
Operating Temperature	-30°C to +45°C

### MAGNETOMETER SENSOR

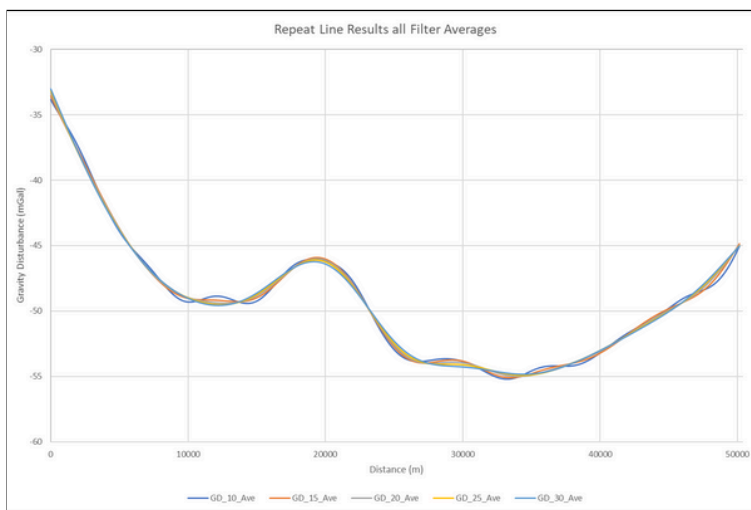
#### Operational Parameters

Type	Scintrex CS3
Measurement Range	15 000 – 105 000 nT
Gradient Tolerance	40 000 nT/m
Recording Rate	20 Hz (capable of >1kHz)
Operating Temperature	-40 to +50 Degrees C

Powered by:



Resolution Comparison of NxT<sup>TM</sup> Survey Data from South Africa with Regional Gravity Data from Northern Saskatchewan: This Image Highlights Enhanced Resolution Compared to Standard Government-Issued Data.



### Standard Deviation

Filter	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	All lines together
1 (60s)	0.8334	1.1853	0.9834	0.6359	0.7497	0.9112	0.9003
2 (80s)	0.7229	0.9639	0.8283	0.4653	0.6727	0.6303	0.7307
3 (100s)	0.7107	0.9117	0.7465	0.4173	0.6200	0.5632	0.6794
4 (120s)	0.6862	0.8961	0.7171	0.3803	0.5780	0.5392	0.6528
5 (150s)	0.6431	0.8719	0.6983	0.3589	0.5348	0.5282	0.6265

Repeat line standard deviations based on filter length.

**AXIOM GROUP** and NRG<sup>TM</sup> are proud to provide this innovative tool to the geoscience mapping and minerals exploration communities, enabling them to **boldly explore** and discover with enhanced precision and reliability.

MKT-GNR-001  
09052024

