

Panther

SPECTRAL  DYNAMICS

COMPLETE MISO SOFTWARE SUITE™

Spectral Dynamics invented closed-loop digital vibration control and continues to lead the field with Panther — the next-generation vibration control and analysis system that combines advanced capability, intuitive operation, and intelligent safety. Built on decades of experience, Panther represents the culmination of Spectral Dynamics' expertise in control algorithms, adaptive equalization, and precision hardware design.

Comprehensive Capability

Panther delivers a complete range of vibration control and analysis applications within a single integrated platform. Whether performing Sine, Random, Shock, Sine-on-Random, Random-on-Random, RMA, or Replication tests, engineers can rely on Panther for accuracy and repeatability. Its architecture supports up to 32 input channels, all phase-synchronized to within $\pm 1^\circ$ at 100 kHz, with a dynamic range exceeding 110 dB.



Applications

- Multi-Sine
- Swept Sine & Sine Analysis
- Shock (classic and SRS)
- Random on Random
- Replication
- Transient Analysis
- Random
- Sine on Random
- RMA (Rotating Machinery Analysis)



Ease of Use

Panther's modern GTX interface simplifies setup, operation, and data review. Through the Library feature, users can access test setups, data files, and analysis results instantly — eliminating the need to navigate Windows folders. Touch-screen compatibility across Windows PCs and Microsoft Surface devices ensures seamless interaction during setup and monitoring.

Built-In Safety

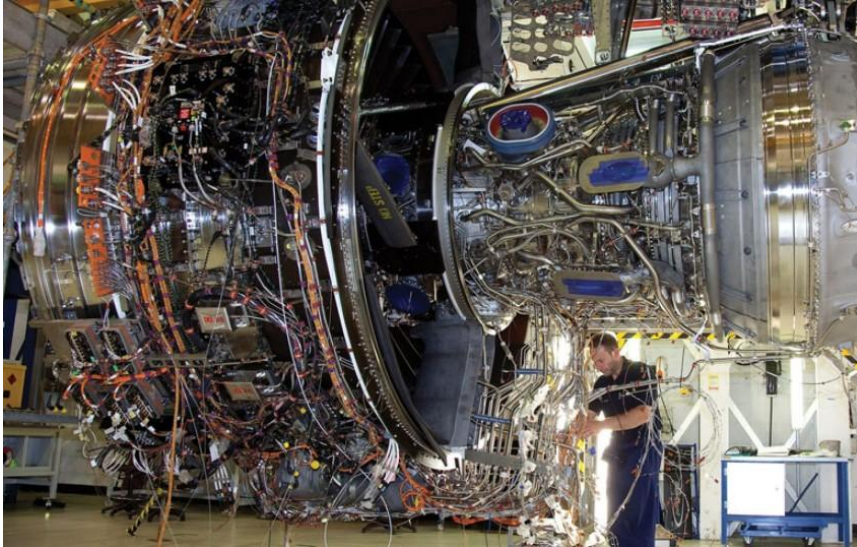
Panther continuously monitors more than a dozen system parameters up to 25 times per second to ensure protection of both operators and equipment. Intelligent interlocks, adaptive limits, and watchdog diagnostics make Panther the safest vibration control platform in its class.

Trusted Heritage

Spectral Dynamics pioneered digital vibration control technology and remains a benchmark for reliability and innovation. Panther embodies this legacy — uniting advanced digital processing with a focus on usability and system integrity.

Key Differentiators

- **Comprehensive Capability:** Supports Sine, Random, Shock, Sine-on-Random, Random-on-Random, RMA, Multi-Sine, and Transient Analysis applications from one interface.
- **Built-In Safety:** Over a dozen system parameters are monitored continuously, up to 25 times per second, ensuring complete protection for operators and equipment.
- **Touch-Screen Ready:** Optimized for Windows touch operation, including Microsoft Surface devices.
- **Data Integrity:** Real-time, gap-free data streaming and synchronized multi-rate acquisition guarantee accurate analysis and traceability.



Comprehensive Capability

Panther integrates both hardware and software into a single synchronized architecture. The system's modular design supports up to 32 fully phase-aligned input channels using 24-bit ADCs and 20-bit DACs for exceptional resolution. Sampling rates up to 262,144 samples per second ensure precise time and frequency domain measurements.

Digital calibration, automatic gain ranging, and IEEE 1451.4 TEDS compliance ensure accuracy and repeatability across every test configuration.

Panther defines the modern standard in vibration control and analysis — a system engineered for accuracy, reliability, and ease of use. From setup through report generation, Spectral Dynamics ensures that every test runs with confidence, precision, and safety.

Contact Information

Spectral Dynamics Inc.
2199 Zanker Road, San Jose, CA 95131 USA
Phone: 800.778.8755
Website: www.spectraldynamics.com
Email: salesna@spectraldynamics.com

