



EMI/EMC & ENVIRONMENTAL TESTING

Element Longmont is a full-service testing laboratory offering EMI / EMC emissions & immunity and environmental testing with capabilities including thermal cycling, acceleration, classical shock and vibration testing.

As an ISO/IEC 17205 accredited organization, our facilities also hold American Association for Laboratory Accreditations — or A2LA — in electrical 0214.43 and mechanical 0214.44 categories. This ensures our tests, equipment calibration, measurement techniques and methods of data collection meet with strict third-party auditor approval. Our environmental and dynamic testing capabilities give you a single source to meet the dynamic and environmental requirements of MIL-STD-810, MIL-STD-461, RTCA DO-160 and others.

FULL-SERVICE EMI/EMC

Find both electromagnetic interference (EMI) and electromagnetic compatibility (EMC) testing at Element Longmont. From telecommunications and medical equipment to military, space and aviation components, we can help you navigate the complex requirements of organizations such as the FCC, FAA, DoD and NASA. Plus, we have the in-house experience and testing chambers to help you obtain certification for your commercial products in North America, the European Union and beyond.

Just a few of the testing services we regularly offer:

- **CBTL Certified Testing** – We are one of the few CB Testing Laboratories (CBTLs) for electromagnetic compatibility in the United States. We can accommodate CB Scheme EMC testing on medical products for worldwide compliance. Our scope includes 2nd, 3rd, and 4th editions of IEC 60601-1-2.
- **Medical EMC Testing** – Test electronic devices used in a hospital environment or other medical applications including ventilators, life support equipment, generators, and x-ray equipment as well as smaller devices such as pulse oximeters.
- **Commercial EMC Testing** – We have the ability to test a wide range of commercial products, from battery-powered, handheld meters to electrosurgical generators. Full compliance emissions and immunity testing is performed under one roof.

DELIVERING INNOVATIVE PRODUCTION TESTING AND CERTIFICATION SOLUTIONS

PRE-SCAN AND MIGRATION HIGHLIGHTS

- Electrostatic Discharge
- Radiated RF immunity
- Electrical Fast Transient/Burst
- Surge
- Conducted RF Immunity
- Power Quality Failure
- AC Power Line Harmonics
- AC Power Line Flicker

EMI/EMC TESTING HIGHLIGHTS

- Servicing the Defense, Aerospace, Space, Consumer Electronics, Medical and Automotive Industries
- CBTL for Medical Devices IEC 60601-1-2
- Radiated Susceptibility - 200 V/m, frequency range 10 kHz to 40 GHz,
- HIRF Testing 100 MHz – to 10 18 GHz up to 7200 V/m pk
- Radiated Emissions - 30 Hz to 40 GHz
- Two 10 meter Semi-anechoic chambers with 10' x 10' doors
- MIL/AERO semi-anechoic chambers
- Extended ground plane test beds
- Indirect Lightning-Single stroke, multiple stroke, multiple burst, Level 5 DO-160
- AC & Telecom port surge, Electrical Fast Transients, Ring-wave, and bust testing
- Electrical power characteristics testing for Aerospace, Defense, and Automotive
- Airborne acoustic noise and structure-borne noise
- Antenna characterization
- Shielding effectiveness, transfer impedance
- Electrostatic discharge up to 30 kV
- Electromagnetic Pulse (EMP) to 50 kV/m
- HERO
- RADHAZ analysis

VIBRATION TESTING CAPABILITIES AT ELEMENT LONGMONT

- Seismic Test
 - Horizontal Seismic: 60" x 48" mounting table
 - horizontal displacement 12"

DELIVERING INNOVATIVE PRODUCTION TESTING AND CERTIFICATION SOLUTIONS

MECHANICAL IMPACT AND SHOCK TESTING SYSTEMS AT ELEMENT LONGMONT

- TITL Tester: Center of gravity and tipping point testing for palletized items and rack equipment
- Horizontal Impact Test System (HITS): 90" x 72" platform produces half sine and square waveforms. Simulates truck docking railcar coupling, pallet marshaling, transportation testing.
- Acceleration – 3 foot radius centrifuge, 100 G's, slip rings, 15 single channels with ground, 2 coaxial and 7 low noise single channels, Crash Safety
- Pyro Shock: MIL-STD-810, Method 517, NASA-STD-7003
- Drop Shock, Package Drop: 4' x 4' platform, programmable shock system for half sine, square wave, trapezoidal shock. Damage boundary assessment, free fall drop of large items.
- High Velocitop: 4are2 (r)-24.5 (a)-8.8 (n)-4.6 (s)-8.7 (g)-16.1 (h V)I 3 (rTm7/MCID 1.5

DELIVERING INNOVATIVE PRODUCTION TESTING AND
CERTIFICATION SOLUTIONS

- Electrodynamic Temperature and Vibration:
 - 71" x 53" x 48" mounting table
 - Temperature Range -70°C to +177°C
 - Shaker displacement 1 inch diameter
 - 36" Head Expander
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