# SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

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## ELECTROMAGNETIC COMPATIBILITY & TELECOMMUNICATIONS

## NVLAP LAB CODE 100278-0

### Emissions

| ***Designation*** | ***Description*** |
|---|---|
| Additional Test Location(s) | Address(es)<br>*West Annex, 1524 Centre Circle, Downers Grove, IL 60515 (Immunity, Conducted Susceptibility, MIL-STD-461E/F/G RS101, MIL-STD-1399 Sec 070)* |
| RTCA/DO-160C (1989) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21: Emission of Radio Frequency |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21: Emission of Radio Frequency Energy |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21: Emissions of Radio Frequency Energy |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.3: RF Emissions, Conducted |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.3: RF Emissions, Conducted |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.4: RF Emissions, Radiated |

*For the National Voluntary Laboratory Accreditation Program*

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|---|---|
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.4: RF Emissions, Conducted |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.4: RF Emissions, Conducted |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.5: RF Emissions, Radiated |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 21.5: RF Emissions, Radiated |

## Immunity

| ***Designation*** | ***Description*** |
|---|---|
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 15: Magnetic Effect |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 15: Magnetic Effect |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 15: Magnetic Effects |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 15: Magnetic Effects |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 16: Power Input |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 16: Power Input |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 16: Power Input |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 16: Power Input |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 17: Voltage Spike |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 17: Voltage Spike |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 17: Voltage Spikes |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 17: Voltage Spikes |

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|---|---|
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 18: Audio Frequency Conducted Susceptibility - Power Inputs |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 18: Audio Frequency Conducted Suspceptibility - Power Inputs |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 18: Audio Frequency Conducted Susceptibility |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 18: Audio Frequency Conducted Suspectibility - Power Inputs |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 19: Induced Signal Susceptibility |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 19: Induced Signal Susceptibility |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 19: Induced Signal Susceptibility |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 19: Induced Signal Susceptibility |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20: Radio Frequency Susceptibility (Radiated and Conducted) |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20: Radio Frequency Susceptibility (Radiated and Conducted) |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.4: RF Susceptibility, Conducted |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.4: RF Susceptibility, Conducted |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.5: RF Susceptibility, Radiated |
| RTCA/D0-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.5: RF Susceptibility, Radiated |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.6: Radio Frequency Susceptibility (Radiated Mode Tuned) |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.6: RF Susceptability (Radiated Mode Tuned) |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 20.6: RF Susceptibility (Mode-Stirred) |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 22: Lightning Induced Transient Susceptibility |

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|---|---|
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 22: Lightning Induced Transient Susceptibility |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 22: Lightning Induced Transient Susceptibility |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 22: Lightning Induced Transient Susceptibility |
| RTCA/DO-160D (1997) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 25: Electrostatic Discharge (ESD) |
| RTCA/DO-160F (2007) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 25: Electrostatic Discharge (ESD) |
| RTCA/DO-160E (2004) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 25: Electrostatic Discharge (ESD) |
| RTCA/DO-160G (2010) | Environmental Conditions and Test Procedures for Airborne Equipment - Section 25: Electrostatic Discharge (ESD) |

## MIL-STD

| ***Designation*** | ***Description*** |
|---|---|
| MIL-STD-1399 Section 070 | Interface standard for shipboard systems, Section 070 - Part 1- DC Magnetic Field Environment |

### MIL-STD: Conducted Emissions

| ***Designation*** | ***Description*** |
|---|---|
| MIL-STD-461G, CE101 | Conducted Emissions, Power Leads, 30 Hz to 10 kHz |
| MIL-STD-461E, CE101 | Conducted Emissions, Power Leads, 30 Hz to 10 kHz |
| MIL-STD-461F, CE101 | Conducted Emissions, Power Leads, 30 Hz to 10 kHz |
| MIL-STD-461G, CE102 | Conducted Emissions, Power Leads, 10 kHz to 10 MHz |
| MIL-STD-461E, CE102 | Conducted Emissions, Power Leads, 10 kHz to 10 MHz |
| MIL-STD-461F, CE102 | Conducted Emissions, Power Leads, 10 kHz to 10 MHz |
| MIL-STD-461E, CE106 | Conducted Emissions, Antenna Terminal, 10 kHz to 40 GHz |
| MIL-STD-461F, CE106 | Conducted Emissions, Antenna Terminal, 10 kHz to 40 GHz |
| MIL-STD-462, CE01 | Conducted Emissions, Power and Interconnecting Leads, Low Frequency (up to 15 kHz) |
| MIL-STD-462, CE02 | Conducted Emission, 30 Hz to 20 kHz, Control and Signal Leads |

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|---|---|
| MIL-STD-462, CE03 | Conducted Emissions, Power and Interconnecting Leads, 0.015 to 50 MHz |
| MIL-STD-462, CE04 | Conducted Emissions, Control and Signal Leads, 20 Hz to 50 kHz |
| MIL-STD-462, CE06 | Conducted Emissions, Antenna Terminals 10 kHz to 26 GHz |
| MIL-STD-462, CE07 | Conducted Emissions, Power Leads, Spikes, Time Domain |
| MIL-STD-462D, CE101 | Conducted Emissions, Power Leads, 30 Hz to 10 kHz |
| MIL-STD-462D, CE102 | Conducted Emissions, Power Leads, 10 kHz to 10 MHz |
| MIL-STD-462D, CE106 | Conducted Emissions, Antenna Terminal, 10 kHz to 40 GHz |

## MIL-STD: Conducted Susceptibility

| ***Designation*** | ***Description*** |
|---|---|
| MIL-STD-461G, CS101 | Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz |
| MIL-STD-461E, CS101 | Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz |
| MIL-STD-461F, CS101 | Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz |
| MIL-STD-461G, CS103 | Conducted Susceptibility, Antenna Port, Intermodulation, 15 kHz to 10 GHz |
| MIL-STD-461E, CS103 | Conducted Susceptibility, Antenna Port, Intermodulation, 15 kHz to 10 GHz |
| MIL-STD-461F, CS103 | Conducted Susceptibility, Antenna Port, Intermodulation, 15 kHz to 10 GHz |
| MIL-STD-461G, CS104 | Conducted Susceptibility, Antenna Port, Rejection of Undesired Signals, 30 Hz to 20 GHz |
| MIL-STD-461E, CS104 | Conducted Susceptibility, Antenna Port, Rejection of Undesired Signals, 30 Hz to 20 GHz |
| MIL-STD-461F, CS104 | Conducted Susceptibility, Antenna Port, Rejection of Undesired Signals, 30 Hz to 20 GHz |
| MIL-STD-461G, CS105 | Conducted Susceptibility, Antenna Port, Cross-Modulation, 30 Hz to 20 GHz |
| MIL-STD-461E, CS105 | Conducted Susceptibility, Antenna Port, Cross-Modulation, 30 Hz to 20 GHz |
| MIL-STD-461F, CS105 | Conducted Susceptibility, Antenna Port, Cross-Modulation, 30 Hz to 20 GHz |
| MIL-STD-461F, CS106 | Conducted Susceptibility, Transients, Power Leads |
| MIL-STD-461E, CS109 | Conducted Susceptibility, Structure Current, 60 Hz to 100 kHz |
| MIL-STD-461F, CS109 | Conducted Susceptibility, Structure Current, 60 Hz to 100 kHz |
| MIL-STD-461G, CS114 | Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz |

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| MIL-STD-461E, CS114 | Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz |
| MIL-STD-461F, CS114 | Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 200 MHz |
| MIL-STD-461G, CS115 | Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation |
| MIL-STD-461E, CS115 | Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation |
| MIL-STD-461F, CS115 | Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation |
| MIL-STD-461G, CS116 | Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz |
| MIL-STD-461E, CS116 | Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz |
| MIL-STD-461F, CS116 | Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz |
| MIL-STD-461G, CS117 | Conducted Susceptibility, Lightning Induced Transients, Cables and Power Leads |
| MIL-STD-461G, CS118 | Personnel Borne Electrostatic Discharge (ESD) |
| MIL-STD-462, CS01 | Conducted Susceptibility, Power Leads, 30 Hz to 50 kHz |
| MIL-STD-462, CS02 | Conducted Susceptibility, Power Leads, 0.05 to 400 MHz |
| MIL-STD-462 Method CS03/CS04/ CS05 | Conducted Susceptibility, Intermodulation, Cross-modulation |
| MIL-STD-462, CS06 | Conducted Susceptibility, Spikes, Power Leads |
| MIL-STD-462, CS09 | Conducted Susceptibility, Structure (Common Mode) Current, 60 Hz to 100 kHz |
| MIL-STD-462, CS10 | Conducted Susceptibility, Damped Sinusoidal Transients, Pins and Terminals, 10 kHz to 100 MHz |
| MIL-STD-462, CS11 | Conducted Susceptibility, Damped, Sinusoidal Transients, Cable, 10 kHz to 100 MHz |
| MIL-STD-462, CS12 | Conducted Susceptibility, Common-mode cable current pulse, interconnecting power |
| MIL-STD-462, CS13 | Conducted Susceptibility, Single Wire coupled pulse |
| MIL-STD-462D, CS101 | Conducted Susceptibility, Power Leads, 30 Hz to 50 kHz |
| MIL-STD-462D, CS103 | Conducted Susceptibility, Antenna Port, Intermodulation, 15 kHz to 10 GHz |
| MIL-STD-462D, CS104 | Conducted Susceptibility, Antenna Port, Rejection of Undesired Signals, 30 Hz to 20 GHz |
| MIL-STD-462D, CS105 | Conducted Susceptibility, Antenna Port, Cross-Modulation, 30 Hz to 20 GHz |

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|---|---|
| MIL-STD-462D, CS109 | Conducted Susceptibility, Structure Current, 60 HZ to 100 kHz |
| MIL-STD-462D, CS114 | Conducted Susceptibility, Bulk Cable Injection, 10 kHz to 400 MHZ |
| MIL-STD-462D, CS115 | Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation |
| MIL-STD-462D, CS116 | Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz |

## MIL-STD: Radiated Emissions

| ***Designation*** | ***Description*** |
|---|---|
| MIL-STD-461G, RE101 | Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-461E, RE101 | Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-461F, RE101 | Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-461G, RE102 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz |
| MIL-STD-461E, RE102 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz |
| MIL-STD-461F, RE102 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz |
| MIL-STD-461G, RE103 | Radiated Emissions, Antenna Spurious and Harmonic Outputs, 10 kHz to 40 GHz |
| MIL-STD-461E, RE103 | Radiated Emissions, Antenna Spurious and Harmonic Outputs, 10 kHz to 40 GHz |
| MIL-STD-461F, RE103 | Radiated Emissions, Antenna Spurious and Harmonic Outputs, 10 kHz to 40 GHz |
| MIL-STD-462, RE01 | Radiated Emissions, Magnetic Field, 0.03 to 50 kHz |
| MIL-STD-462, RE02 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz |
| MIL-STD-462, RE03 | Radiated Emissions, Spurious and Harmonics, Radiated Technique |
| MIL-STD-462D, RE101 | Radiated Emissions, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-462D, RE102 | Radiated Emissions, Electric Field, 10 kHz to 18 GHz |
| MIL-STD-462D, RE103 | Radiated Emissions, Antenna Spurious and Harmonic Outputs, 10 kHz to 40 GHz |

## MIL-STD: Radiated Susceptibility

| ***Designation*** | ***Description*** |
|---|---|
| MIL-STD-461G, RS101 | Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-461E, RS101 | Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz |

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| | |
|---|---|
| MIL-STD-461F, RS101 | Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-461G, RS103 | Radiated Susceptibility, Electric Field, 2 MHz to 40 GHz |
| MIL-STD-461E, RS103 | Radiated Susceptibility, Electric Field, 2 MHz to 40 GHz |
| MIL-STD-461F, RS103 | Radiated Susceptibility, Electric Field, 2 MHz to 40 GHz |
| MIL-STD-461G, RS105 | Radiated Susceptibility, Transient Electromagnetic Field |
| MIL-STD-461E, RS105 | Radiated Susceptibility, Transient Electromagnetic Field |
| MIL-STD-461F, RS105 | Radiated Susceptibility, Transient Electromagnetic Field |
| MIL-STD-462, RS01 | Radiated Susceptibility, Magnetic Field, 0.03 to 50 kHz |
| MIL-STD-462, RS02 | Radiated Susceptibility, Magnetic and Electric Fields, Spikes and Power Frequencies |
| MIL-STD-462, RS03 | Radiated Susceptibility, Electric Field, 14 kHz to 40 GHz (Consult laboratory for field strengths available) |
| MIL-STD-462, RS03 | Radiated Susceptibility, Electric Field, 14 kHz to 40 GHz, employing RADHAZ procedures for high level testing (Consult laboratory for field strengths available) |
| MIL-STD-462 RS06 | Radiated Susceptibility, Electromagnetic Field, Switching Pulses (Chattering Relay) |
| MIL-STD-462D, RS101 | Radiated Susceptibility, Magnetic Field, 30 Hz to 100 kHz |
| MIL-STD-462D, RS103 | Radiated Susceptibility, Electric Field, 10 kHz to 40 GHz |