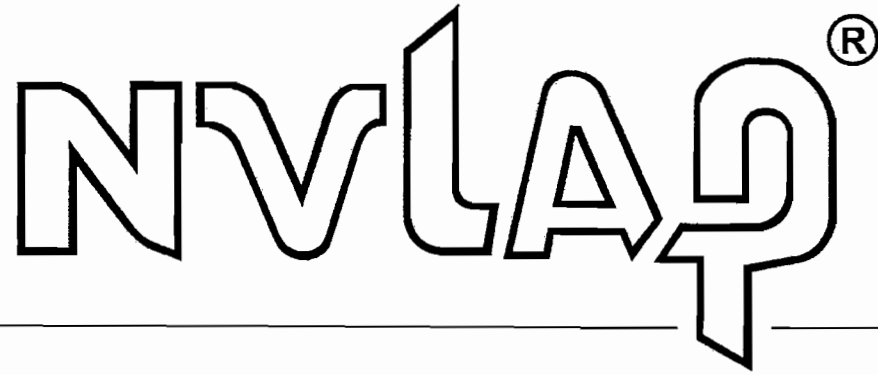


United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 100278-0

Elite Electronic Engineering Inc.
Downers Grove, IL

*is accredited by the National Voluntary Laboratory Accreditation Program for specific services,
listed on the Scope of Accreditation, for:*

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

*This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality
management system (refer to joint ISO-ILAC-IAF Communique dated 18 June 2005).*

2008-10-01 through 2009-09-30

Effective dates



Sally S. Bruce
For the National Institute of Standards and Technology



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

Elite Electronic Engineering Inc.
1516 Centre Circle
Downers Grove, IL 60515-1082
Mr. Raymond Klouda
Phone: 630-495-9770 Fax: 630-495-9785
E-Mail: rjklouda@elitetest.com
URL: http://www.elitetest.com

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

NVLAP LAB CODE 100278-0
Scope Revised: 2008-10-06

NVLAP Code Designation / Description

Emissions Test Methods:

- 12/100063c IEC 61000-6-3 (1996), EN 61000-6-3 (2001), A1 (2004): Electromagnetic Compatibility (EMC) - Part 6: Generic standards - Section 3: Emission standard for residential, commercial, and light-industrial environments.
12/160D21 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 21 - Emission of Radio Frequency Energy
12/160F21 RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 21 - Emissions of Radio Frequency Energy
12/60E213 RTCA DO-160E: Section 21.3, RF Emissions, Conducted
12/60E214 RTCA DO-160E: Section 21.4, RF Emissions, Radiated
12/CIS11 IEC/CISPR 11 + A1 (1997), EN 55011 (1998), AS/NZS CISPR 11 (2002), and CNS 13803 (1997): Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific, and Medical Radio-Frequency Equipment
12/CIS14 CISPR 14-1 (March 30, 2000): Limits and Methods of Measurement of Radio interference Characteristics of Household Electrical Appliances, Portable Tools and Similiar Electrical Apparatus - Part 1: Emissions

2008-10-01 through 2009-09-30

Effective dates

Dally S. Bruce

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

NVLAP Code Designation / Description

- 12/CIS14a EN 55014-1 (1993), A1 (1997), A2 (1999):
- 12/CIS14e EN 55014-1 (2001) and A1 (2001): Electromagnetic Compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
- 12/CIS22 IEC/CISPR 22 (1997) & EN 55022 (1998) + A1(2000): Limits and methods of measurement of radio disturbance characteristics of information technology equipment
- 12/CIS22a IEC/CISPR 22 (1993) and EN 55022 (1994): Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Amendment 1 (1995) and Amendment 2 (1996)
- 12/FCC15b ANSI C63.4 (2003) with FCC Method 47 CFR Part 15, Subpart B: Unintentional Radiators
- 12/T51a AS/NZS CISPR 22 (2004): Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement

Immunity Test Methods:

- 12/160D16 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 16 - Power Input
- 12/160D17 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 17 - Voltage Spike
- 12/160D18 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 18 - Audio Frequency Conducted Susceptibility - Power Inputs
- 12/160D19 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 19 - Induced Signal Susceptibility
- 12/160D20 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 20 - Radio Frequency Susceptibility (Radiated and Conducted)
- 12/160D22 RTCA/DO-160D (1997): Environmental Conditions and Test Procedures for Airborne Equipment - Section 22 - Lightning Induced Transient Susceptibility

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/160F15	RTCA/DO 160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 15 - Magnetic Effect
12/160F16	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 16 - Power Input
12/160F17	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 17 - Voltage Spike
12/160F18	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 18 - Audio Frequency Conducted Susceptibility - Power Inputs
12/160F19	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 19 - Induced Signal Susceptibility
12/160F20	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 20 - Radio Frequency Susceptibility (Radiated and Conducted)
12/160F22	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 22 - Lightning Induced Transient Susceptibility
12/160F25	RTCA/DO-160F (2007): Environmental Conditions and Test Procedures for Airborne Equipment - Section 25 - Electrostatic Discharge (ESD)
12/60E15	RTCA DO 160E: Section 15, Magnetic Effects
12/60E16	RTCA DO160E: Section 16, Power Input
12/60E17	RTCA DO-160E: Section 17, Voltage Spikes
12/60E18	RTCA DO-160E: Section 18, Audio Frequency Conducted Susceptibility
12/60E19	RTCA DO-160E: Section 19, Induced Signal Susceptibility
12/60E204	RTCA DO-160E: Section 20.4, RF Susceptibility, Conducted
12/60E205	RTCA DO-160E: Section 20.5, RF Susceptibility, Radiated

2008-10-01 through 2009-09-30

Effective dates

Dally S. Bruce
For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/60E22	RTCA DO-160E: Section 22, Lightning Induced Transient Susceptibility
12/60E25	RTCA DO-160E: Section 25, Electrostatic Discharge (ESD)
12/610006i	IEC 61000-6-2, Edition 2.0 (2005-01): Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
12/CIS14i	EN 55014-2 (1997) and IEC/CISPR 14-2 (1997): Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2. Immunity - Product family standard
12/DO160E	RTCA DO-160E (December 9, 2004): Environmental Conditions and Test Procedures for Airborne Equipment
12/I01	IEC 61000-4-2, Ed. 1.2 (2001) + A1, A2; EN 61000-4-2: Electrostatic Discharge Immunity Test
12/I02	IEC 61000-4-3, Ed. 2.0 (2002-03); EN 61000-4-3 (2002): Radiated Radio-Frequency Electromagnetic Field Immunity Test
12/I03	IEC 61000-4-4(1995), A1(2000), A2(2001); EN 61000-4-4: Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical Fast Transient/Burst Immunity Test
12/I04	IEC 61000-4-5, Ed. 1.1 (2001-04); EN 61000-4-5: Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
12/I05	IEC 61000-4-6, Ed. 2.0 (2003-05); EN 61000-4-6: Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields
12/I06	IEC 61000-4-8, Ed. 1.1 (2001); EN 61000-4-8: Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test
12/I07	IEC 61000-4-11, Ed. 1.1 (2001-03); EN 61000-4-11: Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

NVLAP Code Designation / Description

12/I08 IEC/CISPR 24 (1997), Amd1, A1(2001); EN 55024 (1998): Information technology equipment - Immunity characteristics - Limits and methods of measurement

Product Safety Test Methods

12/CSA03 CAN/CSA E60065: Audio, Video and Similar Electronic Apparatus - Safety Requirements

Telecommunications Test Methods:

- 12/T01 Terminal Equipment Network Protection Standards, FCC/ACTA Method - 47 CFR Part 68 - Analog and Digital

- 12/T01a 68.302 (Par. c,d,e,f) Environmental simulation; 68.304 Leakage current limit.; 68.306 Hazardous voltage limit.; 68.308 Signal power limit.; 68.310 Longitudinal balance limit.; 68.312 On-hook impedance limit.; 68.314 Billing protection

- 12/T01b 68.316 and 68.317 Hearing Aid Compatibility: technical standards

- 12/T01c 68.302 Environmental simulation (Par. a,b)

- 12/T1TRQ6 T1.TRQ.6 (2001): Technical Requirements for SHDSL, HDSL2, HDSL4, Digital Subscriber Line Terminal Equipment to Prevent Harm to the Telephone Network

- 12/TIA31B TIA/EIA TSB-31-B (1998): Part 68 Rational and Measurement Guidelines

- 12/TIA968 ANSI/TIA-968-A (2003): Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network

- 12/TIA968a ANSI/TIA-968-A-1 (2003): Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 1

- 12/TIA968b ANSI/TIA-968-A-2 (2004): Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 2

- 12/TIA968c ANSI/TIA-968-A-3 (2005): Telephone Terminal Equipment, Technical Requirements for Connection of Terminal Equipment to the Telephone Network - Addendum 3

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

NVLAP Code Designation / Description

MIL-STD-462 : Conducted Emissions:

- 12/A01 MIL-STD-462 Method CE01
- 12/A04 MIL-STD-462 Method CE02
- 12/A06 MIL-STD-462 Method CE03
- 12/A08 MIL-STD-462 Method CE04
- 12/A10 MIL-STD-462 Method CE06
- 12/A12 MIL-STD-462 Method CE07
- 12/A13 MIL-STD-462 Version D Method CE101
- 12/A14 MIL-STD-462 Version D Method CE102
- 12/A15 MIL-STD-462 Version D Method CE106
- 12/A16 MIL-STD-461 Version E Method CE101
- 12/A17 MIL-STD-461 Version E Method CE102
- 12/A18 MIL-STD-461 Version E Method CE106
- 12/A19 MIL-STD-461 Version F Method CE101
- 12/A20 MIL-STD-461 Version F Method CE102
- 12/A21 MIL-STD-461 Version F Method CE106

MIL-STD-462 : Conducted Susceptibility:

- 12/B01 MIL-STD-462 Method CS01
- 12/B02 MIL-STD-462 Method CS02
- 12/B04 MIL-STD-462 Method CS03/CS04/CS05/CS08

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/B05	MIL-STD-462 Method CS06
12/B06	MIL-STD-462 Method CS07
12/B07	MIL-STD-462 Method CS09
12/B08	MIL-STD-462 Method CS10
12/B09	MIL-STD-462 Method CS11
12/B10	MIL-STD-462 Method CS12
12/B11	MIL-STD-462 Method CS13
12/B12	MIL-STD-462 Version D Method CS101
12/B13	MIL-STD-462 Version D Method CS103
12/B14	MIL-STD-462 Version D Method CS104
12/B15	MIL-STD-462 Version D Method CS105
12/B16	MIL-STD-462 Version D Method CS109
12/B17	MIL-STD-462 Version D Method CS114
12/B18	MIL-STD-462 Version D Method CS115
12/B19	MIL-STD-462 Version D Method CS116
12/B20	MIL-STD-461 Version E Method CS101
12/B21	MIL-STD-461 Version E Method CS103
12/B22	MIL-STD-461 Version E Method CS104
12/B23	MIL-STD-461 Version E Method CS105
12/B24	MIL-STD-461 Version E Method CS109

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/B25	MIL-STD-461 Version E Method CS114
12/B26	MIL-STD-461 Version E Method CS115
12/B27	MIL-STD-461 Version E Method CS116
12/B28	MIL-STD-461 Version F Method CS101
12/B29	MIL-STD-461 Version F Method CS103
12/B30	MIL-STD-461 Version F Method CS104
12/B31	MIL-STD-461 Version F Method CS105
12/B32	MIL-STD-461 Version F Method CS106
12/B33	MIL-STD-461 Version F Method CS109
12/B34	MIL-STD-461 Version F Method CS114
12/B35	MIL-STD-461 Version F Method CS115
12/B36	MIL-STD-461 Version F Method CS116

MIL-STD-462 : Radiated Emissions:

12/D01	MIL-STD-462 Method RE01
12/D02	MIL-STD-462 Method RE02
12/D03	MIL-STD-462 Method RE03
12/D04	MIL-STD-462 Version D Method RE101
12/D05	MIL-STD-462 Version D Method RE102
12/D06	MIL-STD-462 Version D Method RE103
12/D07	MIL-STD-461 Version E Method RE101

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology



**ELECTROMAGNETIC COMPATIBILITY
AND TELECOMMUNICATIONS**

NVLAP LAB CODE 100278-0

Scope Revised: 2008-10-06

<i>NVLAP Code</i>	<i>Designation / Description</i>
12/D08	MIL-STD-461 Version E Method RE102
12/D09	MIL-STD-461 Version E Method RE103
12/D10	MIL-STD-461 Version F Method RE101
12/D11	MIL-STD-461 Version F Method RE102
12/D12	MIL-STD-461 Version F Method RE103

MIL-STD-462 : Radiated Susceptibility:

12/E01	MIL-STD-462 Method RS01
12/E02	MIL-STD-462 Method RS02
12/E04	MIL-STD-462 Method RS03 employing RADHAZ procedures for high level testing (Consult laboratory for field strengths available)
12/E05	MIL-STD-462 Method RS05
12/E07	MIL-STD-462 Method RS06
12/E08	MIL-STD-462 Version D Method RS101
12/E09	MIL-STD-462 Version D Method RS103
12/E10	MIL-STD-462 Version D Method RS105
12/E11	MIL-STD-461 Version E Method RS101
12/E12	MIL-STD-461 Version E Method RS103
12/E13	MIL-STD-461 Version E Method RS105
12/E15	MIL-STD-461 Version F Method RS101
12/E16	MIL-STD-461 Version F Method RS103

2008-10-01 through 2009-09-30

Effective dates

For the National Institute of Standards and Technology