

NETWORK-1 SECURITY SOLUTIONS, INC.

Filed Pursuant to Rule 424(b)(3)
Registration No. 333-143710

PROSPECTUS SUPPLEMENT NO. 5 (To Prospectus dated June 24, 2011)

This is a prospectus supplement to our prospectus dated June 24, 2011 (the "Prospectus") relating to the resale from time to time by selling stockholders of up to 8,373,246 shares of our common stock, including shares issuable upon exercise of outstanding warrants and options. On February 2, 2012 we filed with the Securities and Exchange Commission a Current Report on Form 8-K. The text of the Current Report on Form 8-K is attached to and a part of this supplement.

This prospectus supplement should be read in conjunction with the Prospectus and may not be delivered or utilized without the Prospectus. This prospectus supplement is qualified by reference to the Prospectus, except to the extent that the information provided by this prospectus supplement supersedes the information contained in the Prospectus.

The securities offered by the Prospectus involve a high degree of risk. You should carefully consider the "Risk Factors" referenced on pages 6-13 of the Prospectus in determining whether to purchase the common stock.

The date of this prospectus supplement is February 2, 2012.

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Form 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 27, 2012

Network-1 Security Solutions, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-15288
(Commission
File Number)

11-3027591
(IRS Employer
Identification No.)

445 Park Avenue, Suite 1018, New York, New York 10022

(Address of principal executive offices)

Registrant's telephone number, including area code: **(212) 829-5770**

NA

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(d) On January 27, 2012, the Board of Directors of Network-1 Security Solutions, Inc. (the "Company") elected Emanuel R. Pearlman as a director. Mr. Pearlman will serve as a director until his successor shall have been elected and qualified or until his earlier resignation or removal.

Mr. Pearlman, age 51, has served as Chairman and CEO of Liberation Investment Group, LLC, a New York based investment management and financial consulting firm, since 2003. From 2009 to the present Mr. Pearlman has served on the board of Fontainebleau Miami JV, LLC as Chairman of the Audit and Compensation Committee, from 2010 to the present he served as Chairman of the Board of Empire Resorts, Inc. (NASDAQ:NYNY), and since January of 2012 he has served on the board of Dune Energy, Inc. (NASDAQ: DUNR) where he is Chairman of the Nominating & Governance Committee. From 2006-2010, Mr. Pearlman served on the board of Multimedia Games, Inc. (NASDAQ: MGAM). Mr. Pearlman received an A.B. in Economics from Duke University and an MBA from Harvard Graduate School of Business. Mr. Pearlman was previously a director of the Company from December 1999 to December 2002.

There are no arrangements or understandings between Mr. Pearlman and any other persons pursuant to which he was elected as a director. Additionally, there are no transactions involving the Company and Mr. Pearlman that the Company would be required to report pursuant to Item 404(a) of Regulation S-K.

In connection with his election to the Board of Directors, the Company granted Mr. Pearlman a five year option to purchase 50,000 shares of the Company's common stock at an exercise price of \$1.21 per share. The option shall vest quarterly over one year beginning on April 26, 2012, in equal installments of 12,500 per quarter, subject to Mr. Pearlman's continuing to serve on the Board of Directors of the Registrant.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

NETWORK-1 SECURITY SOLUTIONS, INC.

Dated: February 2, 2012

By: /s/ Corey M. Horowitz

Name: Corey M. Horowitz

Title: Chairman & Chief Executive Officer