

COGNEX CORP  
Form SC 13G  
February 13, 2007

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934  
(Amendment No. \_\_\_)\*

Cognex Corporation  
(Name of Issuer)

Common Stock  
(Title of Class Securities)

192422103  
(CUSIP Number)

December 31, 2006  
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which  
this Schedule is filed:\*\*

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

\*The remainder of this cover page shall be filled out for a  
reporting person's initial filing on this form with respect to  
the subject class of securities, and for any subsequent amendment  
containing information which would alter the disclosure provided  
in a prior cover page.

The information required in the remainder of this cover page  
shall not be deemed to be "filed" for the purpose of Section 18  
of the Securities Exchange Act of 1934 ("Act") or otherwise  
subject to the liabilities of that section of the Act but shall  
be subject to all other provisions of the Act (however, see the  
Notes).

Persons who respond to the collection of information contained in  
this form are not required to respond unless the form displays a  
currently valid OMB control number.

CUSIP No. 192422103

1  
NAME OF REPORTING PERSONS.  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).  
FIRST PACIFIC ADVISORS, LLC  
20-1362771

2  
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

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(A) [ ]  
(B) [ ]

3  
SEC USE ONLY

4  
CITIZENSHIP OR PLACE OF ORGANIZATION  
DELAWARE

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON WITH

5  
SOLE VOTING POWER

6  
SHARED VOTING POWER  
126,900

7  
SOLE DISPOSITIVE POWER

8  
SHARED DISPOSITIVE POWER  
2,476,900

9  
AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
2,476,900

10  
CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
(SEE INSTRUCTIONS)

11  
PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
5.6

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12  
TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)  
IA

1  
NAME OF REPORTING PERSONS.  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).  
ROBERT L. RODRIGUEZ

2  
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)  
(A)   
(B)

3  
SEC USE ONLY

4  
CITIZENSHIP OR PLACE OF ORGANIZATION  
UNITED STATES

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON WITH

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SOLE VOTING POWER

6  
SHARED VOTING POWER  
126,900

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SOLE DISPOSITIVE POWER

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SHARED DISPOSITIVE POWER  
2,476,900

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AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
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CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
(SEE INSTRUCTIONS)

11  
PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
5.6

12  
TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)  
HC, IN

1  
NAME OF REPORTING PERSONS.  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY).  
J. RICHARD ATWOOD

2  
CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)  
(A)   
(B)

3  
SEC USE ONLY

4  
CITIZENSHIP OR PLACE OF ORGANIZATION  
UNITED STATES

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING

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PERSON WITH

5  
SOLE VOTING POWER

6  
SHARED VOTING POWER  
126,900

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SOLE DISPOSITIVE POWER

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CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES  
(SEE INSTRUCTIONS)

11  
PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
5.6

12  
TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)  
HC, IN

Item 1.

(a) Name of Issuer  
Cognex Corporation

(b) Address of Issuer's Principal Executive Offices  
One Vision Drive, Natick, MA 01760

Item 2.

(a) Name of Person Filing  
This Schedule 13G is being filed on behalf of First Pacific Advisors, LLC, a Delaware limited liability company (?FPA?), Robert L. Rodriguez, Managing Member of FPA, and J. Richard Atwood, Managing Member of FPA (each, a ?Reporting Person?).

(b) Address of Principal Business office or, if None,

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### Residence

The address for each Reporting Person is as follows:  
11400 West Olympic Blvd., Suite 1200, Los Angeles, CA  
90064

### (c) Citizenship

FPA is a Delaware limited liability company  
Robert L. Rodriguez is a United States citizen  
J. Richard Atwood is a United States citizen

### (d) Title of Class Securities

Common Stock

### (e) CUSIP Number

192422103

Item 3. If this statement is filed pursuant to Section 240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:

(a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78c).

(b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).

(c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).

(d)  Investment company registered under section 8 of the Investment Company Act (15 U.S.C. 80a-8).

(e)  An investment adviser in accordance with Section 240.13d-1(b)(1)(ii)(E).\*

(f)  An employee benefit plan or endowment fund in accordance with Section 240.13d-1(b)(ii)(F).

(g)  A parent holding company or control person in accordance with Section 240.13d-1(b)(1)(ii)(G).\*\*

(h)  A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813).

(i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3).

(j)  Group in accordance with Section 240.13d-1(b)(ii)(J).

\*FPA is an investment adviser in accordance with Section 240.13d-1(b)(1)(ii)(E).

\*\*Robert L. Rodriguez and J. Richard Atwood are control person(s) in accordance with Section 240.13d-1(b)(1)(ii)(G).

### Item 4. Ownership

#### FPA

(a) Amount beneficially owned: 2,476,900

(b) Percent of class: 5.6

(c) Number of shares to which the person has:

(i) Sole power to vote or to direct the vote: None

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- (ii) Shared power to direct the vote: 126,900
- (iii) Sole power to dispose or to direct the disposition of: None
- (iv) Shared power to dispose or to direct the disposition of: 2,476,900

Robert L. Rodriguez

- (a) Amount beneficially owned: 2,476,900
- (b) Percent of class: 5.6
- (c) Number of shares to which the person has:
  - (i) Sole power to vote or to direct the vote: None
  - (ii) Shared power to direct the vote: 126,900
  - (iii) Sole power to dispose or to direct the disposition of: None
  - (iv) Shared power to dispose or to direct the disposition of: 2,476,900

J. Richard Atwood

- (a) Amount beneficially owned: 2,476,900
- (b) Percent of class: 5.6
- (c) Number of shares to which the person has:
  - (i) Sole power to vote or to direct the vote: None
  - (ii) Shared power to direct the vote: 126,900
  - (iii) Sole power to dispose or to direct the disposition of: None
  - (iv) Shared power to dispose or to direct the disposition of: 2,476,900

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class securities, check the following [ ]

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

FPA, in its capacity as investment adviser to its various clients, may be deemed to be the beneficial owner of 2,476,900 shares owned by such clients, as in its capacity as investment adviser it has the power to dispose, direct the disposition of, and vote the shares of the issuer owned by its clients.

Robert L. Rodriguez is a part-owner of FPA and a Managing Member. As a controlling person of FPA, he may be deemed to beneficially own 2,476,900 shares of the issuer owned by FPA's clients.

J. Richard Atwood is a part-owner of FPA and a Managing Member. As a controlling person of FPA, he may be deemed to beneficially own 2,476,900 shares of the issuer owned by FPA's clients.

Pursuant to Rule 13d-4, Robert L. Rodriguez and J. Richard Atwood disclaim beneficial ownership of the securities owned by FPA's clients.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

N/A

Item 8. Identification and Classification of Members of the Group.

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N/A

Item 9. Notice of Dissolution of Group.

N/A

Item 10. Certification:

By signing below, I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose or with the effect of changing or influencing the control of the issuer and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

Date: February 12, 2007

FIRST PACIFIC ADVISORS, LLC

By: /s/ J. Richard Atwood  
Name: J. Richard Atwood  
Its: Chief Operating Officer

\_/s/ Robert L. Rodriguez

—

Robert L. Rodriguez

\_/s/ J. Richard Atwood

—

J. Richard Atwood

Exhibit A

Joint Filing Agreement Pursuant to Rule 13d-1

[This agreement is made pursuant to Rule 13d-1(k)(1) under the Securities and Exchange Act of 1934, as amended (the "Act") by and among the parties listed below, each referenced to herein as a "Joint Filer." The Joint Filers agree that a statement of beneficial ownership as required by Sections 13(g) or 13(d) of the Act and the Rules thereunder may be filed on each of their behalf on Schedule 13G or Schedule 13D, as appropriate, and that said joint filing may thereafter be amended by further joint filings. The Joint Filers state that they each satisfy the requirements for making a joint filing under Rule 13d-1.

Date: February 12, 2007

FIRST PACIFIC ADVISORS, LLC

By: /s/ J. Richard Atwood  
Name: J. Richard Atwood  
Its: Chief Operating Officer

\_/s/ Robert L. Rodriguez

—

Robert L. Rodriguez

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\_/s/ J. Richard Atwood

—  
J. Richard Atwood

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