

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No.)¹

AtriCure, Inc.

(Name of Issuer)

Common Stock, \$.001 par value

(Title of Class of Securities)

04963C209

(CUSIP Number)

December 31, 2005

(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)

¹ 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 disclosures 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).

1) Names of Reporting Persons

I.R.S. Identification Nos. of Above Persons (Entities Only)

TimesSquare Capital Management, LLC
20-1665304

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

Delaware

(5) Sole Voting Power

599,700

Number of
Shares

(6) Shared Voting Power

0

Beneficially
Owned By
Each
Reporting
Person
With

(7) Sole Dispositive Power

778,400

(8) Shared Dispositive Power

0

9) Aggregate Amount Beneficially Owned by Each Reporting Person

778,400

10) Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11) Percent of Class Represented by Amount in Row 9

6.5%

12) Type of Reporting Person (See Instructions)

IA

-
- Item 1 (a)** Name of Issuer:
AtriCure, Inc
- Item 1 (b)** Address of Issuer's Principal Executive Offices:
6033 Schumacher Park Drive
West Chester, OH 45069
- Item 2 (a)** Name of Persons Filing:
TimesSquare Capital Management, LLC ("TimesSquare")
- Item 2 (b)** Address of Principal Business Office or, if none, Residence:
TimesSquare: Four Times Square, 25th Floor
New York, NY 10036
- Item 2 (c)** Citizenship:
TimesSquare is a Delaware limited liability company.
- Item 2 (d)** Title of Class of Securities:
Common Stock, \$0.001 par value
- Item 2 (e)** CUSIP Number: 04963C209
- Item 3** This statement is filed by TimesSquare pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), on the basis that TimesSquare is an investment adviser in accordance with §240.13d-1(b)(1)(ii)(E).

Item 4 Ownership.

The following ownership information is as of December 31, 2005.

(a) Amount Beneficially Owned: 778,400

(b) Percent of Class: 6.5%

Percent of class is based on 12,066,000 shares of Common Stock outstanding as of December 31, 2005 as reported to us by FT Interactive Data Corporation.

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

(i) sole power to vote or to direct the vote 599,700*

(ii) shared power to vote or to direct the vote 0

(iii) sole power to dispose or to direct the disposition of 778,400*

(iv) shared power to dispose or to direct the disposition of 0

* All of the shares reported in this statement are owned by investment advisory clients of TimesSquare. In its role as investment adviser, TimesSquare has voting and dispositive power with respect to these shares as indicated above.

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 of securities, check the following .

Not applicable

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

The shares of Common Stock reported on in this statement are owned by investment advisory clients of TimesSquare, and such clients have the right to receive dividends from and proceeds from the sale of such shares. To TimesSquare's knowledge, the interest of no one of these clients relates to more than 5% of the class.

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

Not applicable.

Item 8 Identification and Classification of Members of the Group.

Not applicable.

Item 9 Notice of Dissolution of Group.

Not applicable.

Item 10 Certification.

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

Signature.

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: February 10, 2006

TIMESQUARE CAPITAL MANAGEMENT, LLC

Signature: /s/ Mark J. Aaron

Name/Title: Mark J. Aaron
Chief Operating Officer and
Chief Compliance Officer