FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| wasnington, D.C. 20549                       | OMB APPROVAL |      |  |  |
|--|--------------|------|--|--|
| STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP | OMB Number:  | 3235 |  |  |

| 1 | OND APPRO                | JVAL      |  |  |  |  |  |  |  |
|---|--------------------------|-----------|--|--|--|--|--|--|--|
|   | OMB Number:              | 3235-0287 |  |  |  |  |  |  |  |
|   | Estimated average burden |           |  |  |  |  |  |  |  |
| 1 | hours per response:      | 0.5       |  |  |  |  |  |  |  |

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

|   |  |      |  |         |   |                            | 011 00(11) | 00       |                                      |  | iipaiiy Act                                 |   |   |   |   |                                      |   |  |  |
|---|--|------|--|---------|---|----------------------------|------------|----------|--------------------------------------|--|---|---|---|---|---|--------------------------------------|---|--|--|
| Name and Address of Reporting Person*     Privitera Salvatore |  |      |  |         | 2. Issuer Name and Ticker or Trading Symbol AtriCure, Inc. [ ATRC ] |                            |            |          |                                      |  |   |   |   | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) |   |                                      |   |  |  |
| Privitera Salvatore   |  |      |  |         |   |                            |            | -        |                                      |  |   |   |   | _   | rector  |                                      | 10% C   |  |  |
| (Last) (First) (Middle)                                       |  |      |  | 3. D    | Date of Earliest Transaction (Month/Day/Year)                       |                            |            |          |                                      |  |   |   | $\dashv$  |   | fficer (give title<br>elow)                       | 9                                    | Other below)  | (specify   |  |
| (Last)  | •  | *    | (iviluale)                                       |         |   | 06/14/2010                 |            |          |                                      |  |   |   |   |   | V   | P Engineeri                          | ng &  | Product D  | <b>)</b> ev  |
| 6217 CENTRE PARK DRIVE  |  |      |  |         |   |                            |            |          |                                      |  |   |   |   |   |   |                                      |   |  |  |
| (Street)  |  |      |  |         | 4. If   | Ame                        | endment    | , Date o | of Origina                           | l Filed  | (Month/Da                                   | ay/Ye                                   | ar)   |   |   | d or Joint/Gro                       | up Filir  | ing (Check A   | pplicable  |
| WEST  | OI   | т    | 45000  |         |   |                            |            |          |                                      |  |   |   |   |   | ine)  | orm filed by O                       | D   | norting Dara   |  |
| CHESTE  | R OF   | 1    | 45069  |         |   |                            |            |          |                                      |  |   |   |   |   |   | •                                    |   |  |  |
|   |  |      |  |         |   |                            |            |          |                                      |  |   |   |   |   |   | orm filed by M<br>erson              | ore tha   | an One Rep   | orting   |
| (City)  | (St  | ate) | (Zip)  |         |   |                            |            |          |                                      |  |   |   |   |   |   |                                      |   |  |  |
|   |  | Tab  | le I - Nor                                       | n-Deriv | ative   | Se                         | curitie    | es Ac    | quired,                              | Dis  | posed o                                     | f, o                                    | r Ben   | efici   | ally Ov   | ned                                  |   |  |  |
| 1. Title of Security (Instr. 3)  2. Transa Date (Month/D      |  |      |  |         | Execution   |                            |            | Code     | Transaction Disposed Code (Instr. 5) |  | ities Acquired (A)<br>d Of (D) (Instr. 3, 4 |   |   | nd See<br>Bei<br>Ow   | mount of<br>urities<br>eficially<br>ned Following | For<br>(D)                           | 6. Ownership<br>Form: Direct<br>(D) or Indirect<br>(I) (Instr. 4) | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership                      |  |
|   |  |      |  |         |   |                            |            |          | Code                                 | v  | Amount                                      |   | (A) or<br>(D)   | Price   | Tra   | orted<br>nsaction(s)<br>tr. 3 and 4) |   |  | (Instr. 4)   |
| Common Stock 06   |  |      |  | 06/14   | 4/2010  |                            |            |          | S                                    |  | 1,700                                       | )                                       | D   | \$5.  | 25  | 70,326                               |   | D  |  |
| Common Stock 06   |  |      | 06/14  | 4/2010  |   |                            |            | S        |                                      | 3,300 D S  |   | \$5.                                    | 25  | 5 67,026  |   | D                                    |   |  |  |
|   | Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) |      |  |         |   |                            |            |          |                                      |  |   |   |   |   |   |                                      |   |  |  |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)           | 2.<br>Conversion<br>or Exercise<br>Price of<br>Derivative<br>Security  |      | 3A. Deeme<br>Execution I<br>if any<br>(Month/Day | Date,   |   | ransaction<br>Code (Instr. |            | ı of l   |                                      | 6. Date Exercisable and<br>Expiration Date<br>(Month/Day/Year) |   |   | 7. Title and<br>Amount of<br>Securities<br>Underlying<br>Derivative<br>Security (Instr.<br>and 4) |   | 8. Price<br>Derivati<br>Security<br>(Instr. 5)    |                                      | ly  | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr. 4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
|   |  |      |  |         | Code  | v                          | (A)        | (A) (D)  |                                      |  | Expiration<br>Date                          | Amou<br>or<br>Numb<br>of<br>Title Share |   | nber  | r   |                                      |   |  |  |

**Explanation of Responses:** 

/s/ Salvatore Privitera

06/15/2010

\*\* Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

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 Number.

 $<sup>^{\</sup>star}$  If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

<sup>\*\*</sup> Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).