

AXCELIS TECHNOLOGIES INC  
Form SC 13G/A  
February 12, 2016

SECURITIES  
AND  
EXCHANGE  
COMMISSION  
Washington,  
D.C. 20549

SCHEDULE  
13G/A

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

Axcelis  
Technologies,  
Inc.  
(Name of  
Issuer)

Common Stock,  
\$0.001 par value  
(Title of Class  
of Securities)

054540109  
(CUSIP  
Number)

December 31,  
2015  
(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)

(Page 1 of 7  
Pages)

---

\*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).

CUSIP No. 054540109 13G/A Page 2 of 7 Pages

	NAME OF REPORTING PERSON
<b>1</b>	
	Senvest Management, LLC
	CHECK THE APPROPRIATE BOX IF A MEMBER (b) " OF A GROUP
<b>2</b>	
<b>3</b>	SEC USE ONLY CITIZENSHIP OR PLACE OF ORGANIZATION
<b>4</b>	
	Delaware
	SOLE VOTING POWER
<b>5</b>	
	0 SHARED VOTING POWER
<b>6</b>	
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7,928,993
	SOLE DISPOSITIVE POWER
<b>7</b>	
	0 SHARED DISPOSITIVE POWER
<b>8</b>	
	7,928,993
<b>9</b>	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,928,993

CHECK BOX

IF THE

AGGREGATE

AMOUNT IN ..

**10**

ROW (9)

EXCLUDES

CERTAIN

SHARES

PERCENT OF

CLASS

REPRESENTED BY

**11**

AMOUNT IN ROW

(9)

6.85%

TYPE OF

REPORTING

**12**

PERSON

OO, IA

CUSIP No. 054540109 13G/A Page 3 of 7 Pages

<b>1</b>	NAME OF REPORTING PERSON
<b>2</b>	Richard Mashaal CHECK THE APPROPRIATE BOX IF A MEMBER (b) " OF A GROUP
<b>3</b>	SEC USE ONLY CITIZENSHIP OR PLACE OF ORGANIZATION
<b>4</b>	Canada
<b>5</b>	SOLE VOTING POWER
<b>6</b>	0 SHARED VOTING POWER
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7,928,993 SOLE DISPOSITIVE POWER
<b>7</b>	0 SHARED DISPOSITIVE POWER
<b>8</b>	0 SHARED DISPOSITIVE POWER
<b>9</b>	7,928,993 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

7,928,993

CHECK BOX

IF THE

AGGREGATE

AMOUNT IN ..

**10**

ROW (9)

EXCLUDES

CERTAIN

SHARES

PERCENT OF

CLASS

REPRESENTED BY

**11**

AMOUNT IN ROW

(9)

6.85%

TYPE OF

REPORTING

**12**

PERSON

IN, HC

CUSIP No. 054540109 13G/A Page 4 of 7 Pages

**Item 1(a). Name of Issuer.**

Axcelis Technologies, Inc. (the "Issuer")

**Item 1(b). Address of Issuer's Principal Executive Offices.**

108 Cherry Hill Drive  
Beverly, Massachusetts 01915

**Item 2(a). Name of Person Filing.**

This statement is filed by Senvest Management, LLC and Richard Mashaal.

The reported securities are held in an account of Senvest Master Fund, L.P. and in a separately managed account (the "Investment Vehicles").

Senvest Management, LLC may be deemed to beneficially own the securities held by the Investment Vehicles by virtue of Senvest Management, LLC's position as investment manager of each of the Investment Vehicles. Mr. Mashaal may be deemed to beneficially own the securities held by the Investment Vehicles by virtue of Mr. Mashaal's status as the managing member of Senvest Management, LLC. None of the foregoing should be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of the securities reported herein.

**Item 2(b). Address of Principal Business Office.**

Senvest Management, LLC  
540 Madison Avenue, 32<sup>nd</sup> Floor  
New York, New York 10022  
Richard Mashaal  
c/o Senvest Management, LLC  
540 Madison Avenue, 32<sup>nd</sup> Floor  
New York, New York 10022

**Item 2(c). Place of Organization.**

Senvest Management, LLC – Delaware  
Richard Mashaal – Canada

**Item 2(d). Title of Class of Securities.**

Common Stock, \$0.001 par value

**Item 2(e). CUSIP Number.**

054540109



CUSIP No. 054540109 13G/A Page 5 of 7 Pages

**Item 3.** If this Statement is Filed Pursuant to §§ 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. 78o);
- (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 of 1940 (15 U.S.C. 80a-8);
- (e) " An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);  
An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
- (f) "   
A parent holding company or control person in accordance with §240.13d-1(b)(1)(ii)(G);
- (g) "   
A savings association as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C.1813);
- (h) "   
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);
- (i) "   
A non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J);
- (j) "   
Group, in accordance with §240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution.
- (k) "   
Group, in accordance with §240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with §240.13d-1(b)(1)(ii)(J), please specify the type of institution.

**Item 4. Ownership.**

The information required by Items 4(a) – (c) is set forth in Rows (5) – (11) of the cover page for each Reporting Person hereto and is incorporated herein by reference for each such Reporting Person. The percentages set forth in this Schedule 13G are calculated based upon an aggregate of 115,712,016 shares of Common Stock outstanding as of October 30, 2015 as reported in the Issuer's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2015 filed on November 5, 2015.

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

Not applicable.

CUSIP No. 054540109 13G/A Page 6 of 7 Pages

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

The Investment Vehicles have the right to receive and the power to direct the receipt of dividends from, and the proceeds from the sale of, the securities reported herein.

**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 each Reporting Person certifies that, to the best of his or its knowledge and belief, the securities referred to above 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.

**CUSIP No. 054540109 13G/A Page 7 of 7 Pages**

**SIGNATURE**

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

Date: February 12, 2016

SENVEST MANAGEMENT, LLC

By: /s/ George Malikotsis

Name: George Malikotsis

Title: Chief Financial Officer

/s/ Richard Mashaal

RICHARD MASHAAL