

Moniz James P
 Form 5
 February 12, 2010

FORM 5

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

OMB APPROVAL

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 Form 3 Holdings Reported Form 4 Transactions Reported

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person *
Moniz James P
 (Last) (First) (Middle)

2. Issuer Name and Ticker or Trading Symbol
NANOMETRICS INC [NANO]

5. Relationship of Reporting Person(s) to Issuer
 (Check all applicable)
 ___ Director ___ 10% Owner
 Officer (give title below) ___ Other (specify below)
 Chief Financial Officer

C/O NANOMETRICS INCORPORATED, 1550 BUCKEYE DRIVE
 (Street)

3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year)
12/31/2009

MILPITAS, CA 95035
 (City) (State) (Zip)

4. If Amendment, Date Original Filed (Month/Day/Year)

6. Individual or Joint/Group Reporting
 (check applicable line)

Form Filed by One Reporting Person
 ___ Form Filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)	5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
Common Stock	12/31/2009	^	J	(A) Amount 4,000 (1) A Price \$ 2.29	10,000	D	^

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

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

