

MERCURY COMPUTER SYSTEMS INC  
Form SC 13G  
February 02, 2006

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

SCHEDULE 13G

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

Mercury Computer Systems Inc

---

(Name of Issuer)

Common Stock

---

(Title of Class of Securities)

589378108

---

(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)

\* 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 on 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).

---

SCHEDULE 13G  
CUSIP No. 589378108

1.	Names of Reporting Persons. Kayne Anderson Rudnick Investment Management, LLC I.R.S. Identification Nos. of above persons (entities only). 95-4575414	
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3.	SEC USE ONLY	
4.	Citizenship or Place of Organization  Is A California Limited Liability Company	
Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 1,403,853
	6.	Shared Voting Power
	7.	Sole Dispositive Power 1,403,853
	8.	Shared Dispositive Power
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,403,853	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row (9)  6.61%	
12.	Type of Reporting Person	

IA



**Item 1.**

- (a) Name of Issuer  
Mercury Computer Systems Inc
- (b) Address of Issuer's Principal Executive Offices  
199 Riverneck Rd  
Chelmsford, MA 01824

**Item 2.**

- (a) Name of Person Filing  
Kayne Anderson Rudnick Investment Management, LLC
- (b) Address of Principal Business Office or, if none, Residence  
1800 Avenue of the Stars, Second Floor  
Los Angeles, CA 90067
- (c) Citizenship  
is a California limited liability company
- (d) Title of Class of Securities  
Common Stock
- (e) CUSIP Number  
589378108

**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);
- (f)  An employee benefit plan or endowment fund in accordance with §240.13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h)  A savings associations 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 §240.13d-1(b)(1)(ii)(J).

**Item 4. Ownership.**

- (a) Amount beneficially owned:  
1,403,853
- (b) Percent of class:  
6.61%
- (c) Number of shares as to which the person has:
- (i) Sole power to vote or to direct the vote  
1,403,853
- (ii) Shared power to vote or to direct the vote  
0
- (iii) Sole power to dispose or to direct the disposition of  
1,403,853
- (iv) Shared power to dispose or to direct the disposition of  
0

**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 [ ].

*Instruction:* Dissolution of a group requires a response to this item.

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

Not Applicable

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

Not Applicable

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

Not Applicable

**Item 9. Notice of Dissolution of Group**

**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 02, 2006

By: /s/ Jeannine Vanian

---

Jeannine Vanian

Title: Management Committee Member, COO