

MERCURY COMPUTER SYSTEMS INC  
Form SC 13G  
February 17, 2004

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

Schedule 13G

Under the Securities Exchange Act of 1934

MERCURY COMPUTER SYSTEMS INC  
(Name of Issuer)

Common Stock  
(Title of Class of Securities)

589378108  
(CUSIP Number)

December 31, 2003  
(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)

\*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 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. 589378108  
-----

-----  
(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS GLOBAL INVESTORS, NA., 943112180  
-----

(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/

-----  
(3) SEC Use Only

-----  
(4) Citizenship or Place of Organization  
U.S.A.

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-----  
Number of Shares (5) Sole Voting Power  
Beneficially Owned 1,966,625  
by Each Reporting -----  
Person With (6) Shared Voting Power  
-----  
-----  
(7) Sole Dispositive Power  
1,966,625  
-----  
(8) Shared Dispositive Power  
-----

-----  
(9) Aggregate Amount Beneficially Owned by Each Reporting Person  
2,158,754  
-----

-----  
(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*  
-----

-----  
(11) Percent of Class Represented by Amount in Row (9)  
10.26%  
-----

-----  
(12) Type of Reporting Person\*  
BK  
-----

CUSIP No. 589378108  
-----

-----  
(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
-----

BARCLAYS GLOBAL FUND ADVISORS  
-----

(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/  
-----

(3) SEC Use Only  
-----

(4) Citizenship or Place of Organization  
U.S.A.  
-----

-----  
Number of Shares (5) Sole Voting Power  
Beneficially Owned 356,091  
by Each Reporting -----  
Person With (6) Shared Voting Power  
-----  
-----  
(7) Sole Dispositive Power  
356,091  
-----  
(8) Shared Dispositive Power  
-----

-----  
(9) Aggregate Amount Beneficially Owned by Each Reporting Person  
356,091  
-----

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(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)  
1.69%

(12) Type of Reporting Person\*  
IA

CUSIP No. 589378108

(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS GLOBAL INVESTORS, LTD

(2) Check the appropriate box if a member of a Group\*

(a) / /  
(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization  
England

Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-

(6) Shared Voting Power

-

(7) Sole Dispositive Power

-

(8) Shared Dispositive Power

-

(9) Aggregate

-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)  
0.00%

(12) Type of Reporting Person\*  
BK

CUSIP No. 589378108

(1) Names of Reporting Persons.

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I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS GLOBAL INVESTORS JAPAN TRUST AND BANKING COMPANY LIMITED

(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization

Japan

Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-

(6) Shared Voting Power

-

(7) Sole Dispositive Power

-

(8) Shared Dispositive Power

-

(9) Aggregate

-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)

0.00%

(12) Type of Reporting Person\*

BK

CUSIP No. 589378108

(1) Names of Reporting Persons.

I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS LIFE ASSURANCE COMPANY LIMITED

(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization

England

Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-

(6) Shared Voting Power

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-----  
(7) Sole Dispositive Power  
-----

-----  
(8) Shared Dispositive Power  
-----

-----  
(9) Aggregate  
-----

-----  
(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*  
-----

-----  
(11) Percent of Class Represented by Amount in Row (9)  
0.00%  
-----

-----  
(12) Type of Reporting Person\*  
BK  
-----

CUSIP No. 589378108  
-----

-----  
(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
-----

BARCLAYS BANK PLC  
-----

-----  
(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/  
-----

-----  
(3) SEC Use Only  
-----

-----  
(4) Citizenship or Place of Organization  
England  
-----

-----  
Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With  
-----

(5) Sole Voting Power  
27,800  
-----

(6) Shared Voting Power  
-----

-----  
(7) Sole Dispositive Power  
27,800  
-----

(8) Shared Dispositive Power  
-----

-----  
(9) Aggregate  
27,800  
-----

-----  
(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*  
-----

-----  
(11) Percent of Class Represented by Amount in Row (9)  
0.13%  
-----

-----  
(12) Type of Reporting Person\*  
-----

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BK

-----  
CUSIP No.            589378108  
-----

-----  
(1) Names of Reporting Persons.  
    I.R.S. Identification Nos. of above persons (entities only).

    BARCLAYS CAPITAL SECURITIES LIMITED  
-----

(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

-----  
(3) SEC Use Only

-----  
(4) Citizenship or Place of Organization  
    England.

-----  
Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-----  
-

(6) Shared Voting Power

-----  
-

(7) Sole Dispositive Power

-----  
-

(8) Shared Dispositive Power

-----  
-

-----  
(9) Aggregate

-----  
-

-----  
(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

-----  
(11) Percent of Class Represented by Amount in Row (9)  
    0.00%

-----  
(12) Type of Reporting Person\*

    BK  
-----

-----  
CUSIP No.            589378108  
-----

-----  
(1) Names of Reporting Persons.  
    I.R.S. Identification Nos. of above persons (entities only).

    BARCLAYS CAPITAL INC  
-----

(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

-----  
(3) SEC Use Only

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-----  
(4) Citizenship or Place of Organization  
U.S.A.

-----  
Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-----  
-

(6) Shared Voting Power

-----  
-

(7) Sole Dispositive Power

-----  
-

(8) Shared Dispositive Power

-----  
-

-----  
(9) Aggregate

-----  
-

-----  
(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

-----  
(11) Percent of Class Represented by Amount in Row (9)

-----  
0.00%

-----  
(12) Type of Reporting Person\*

-----  
BD

-----  
CUSIP No. 589378108  
-----

-----  
(1) Names of Reporting Persons.

I.R.S. Identification Nos. of above persons (entities only).

-----  
BARCLAYS PRIVATE BANK & TRUST (ISLE OF MAN) LIMITED

-----  
(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

-----  
(3) SEC Use Only

-----  
(4) Citizenship or Place of Organization

-----  
England.

-----  
Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-----  
-

(6) Shared Voting Power

-----  
-

(7) Sole Dispositive Power

-----  
-

(8) Shared Dispositive Power

-----  
-

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(9) Aggregate

-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)

0.00%

(12) Type of Reporting Person\*

BK

CUSIP No. 589378108

(1) Names of Reporting Persons.

I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS PRIVATE BANK AND TRUST (JERSEY) LIMITED

(2) Check the appropriate box if a member of a Group\*

(a) / /

(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization

England

Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-

(6) Shared Voting Power

-

(7) Sole Dispositive Power

-

(8) Shared Dispositive Power

-

(9) Aggregate

-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)

0.00%

(12) Type of Reporting Person\*

BK

CUSIP No. 589378108



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(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS BANK TRUST COMPANY LIMITED

(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization  
England

Number of Shares  
Beneficially Owned  
by Each Reporting  
Person With

(5) Sole Voting Power

-

(6) Shared Voting Power

-

(7) Sole Dispositive Power

-

(8) Shared Dispositive Power

-

(9) Aggregate

-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*

(11) Percent of Class Represented by Amount in Row (9)  
0.00%

(12) Type of Reporting Person\*  
BK

CUSIP No. 589378108

(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).

BARCLAYS BANK (Suisse) SA

(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/

(3) SEC Use Only

(4) Citizenship or Place of Organization  
Switzerland

Number of Shares  
Beneficially Owned  
by Each Reporting

(5) Sole Voting Power

-

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Person With (6) Shared Voting Power  
-----  
-  
(7) Sole Dispositive Power  
-----  
-  
(8) Shared Dispositive Power  
-----  
-

(9) Aggregate  
-----  
-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*  
-----

(11) Percent of Class Represented by Amount in Row (9)  
0.00%  
-----

(12) Type of Reporting Person\*  
BK  
-----

CUSIP No. 589378108  
-----

(1) Names of Reporting Persons.  
I.R.S. Identification Nos. of above persons (entities only).  
  
BARCLAYS PRIVATE BANK LIMITED  
-----

(2) Check the appropriate box if a member of a Group\*  
(a) / /  
(b) /X/  
-----

(3) SEC Use Only  
-----

(4) Citizenship or Place of Organization  
England  
-----

Number of Shares (5) Sole Voting Power  
Beneficially Owned -  
by Each Reporting -----  
Person With (6) Shared Voting Power  
-----  
-  
(7) Sole Dispositive Power  
-----  
-  
(8) Shared Dispositive Power  
-----  
-

(9) Aggregate  
-----  
-

(10) Check Box if the Aggregate Amount in Row (9) Excludes Certain Shares\*  
-----

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(11) Percent of Class Represented by Amount in Row (9)  
0.00%

(12) Type of Reporting Person\*  
BK

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS GLOBAL INVESTORS, NA

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
45 Fremont Street  
San Francisco, CA 94105

ITEM 2(C). CITIZENSHIP  
U.S.A

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

ITEM 2(E). CUSIP NUMBER  
589378108

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act (15 U.S.C. 78o).
- (b) /X/ 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) // Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b) (1) (ii) (F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b) (1) (ii) (G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS GLOBAL FUND ADVISORS

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ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
45 Fremont Street  
San Francisco, CA 94105

ITEM 2(C). CITIZENSHIP  
U.S.A

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

ITEM 2(E). CUSIP NUMBER  
589378108

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), 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) /X/ Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b) (1) (ii) (F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b) (1) (ii) (G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS GLOBAL INVESTORS, LTD

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
Murray House  
1 Royal Mint Court  
LONDON, EC3N 4HH

ITEM 2(C). CITIZENSHIP  
England

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

ITEM 2(E). CUSIP NUMBER  
589378108

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

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- (a) // Broker or Dealer registered under Section 15 of the Act (15 U.S.C. 78o).
- (b) /X/ 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) // Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b) (1) (ii) (F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b) (1) (ii) (G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

ITEM 1(A).           NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

-----  
ITEM 1(B).           ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

-----  
ITEM 2(A).           NAME OF PERSON(S) FILING  
BARCLAYS GLOBAL INVESTORS JAPAN TRUST AND BANKING COMPANY LIMITED

-----  
ITEM 2(B).           ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
Ebisu Prime Square Tower 8th Floor  
1-1-39 Hiroo Shibuya-Ku  
Tokyo 150-0012 Japan

-----  
ITEM 2(C).           CITIZENSHIP  
Japan

-----  
ITEM 2(D).           TITLE OF CLASS OF SECURITIES  
Common Stock

-----  
ITEM 2(E).           CUSIP NUMBER  
589378108

-----  
ITEM 3.           IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act (15 U.S.C. 78o).
- (b) /X/ 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) // Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b) (1) (ii) (F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b) (1) (ii) (G).
- (h) // A savings association 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

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(15U.S.C. 80a-3).

(j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

---

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

---

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS LIFE ASSURANCE COMPANY LIMITED

---

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
Unicorn House 5th floor  
252 Romford Road, Forest Gate  
London 37 9JB England

---

ITEM 2(C). CITIZENSHIP  
England

---

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

---

ITEM 2(E). CUSIP NUMBER  
589378108

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR 13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act (15 U.S.C. 78o).
- (b) /X/ 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) // Investment Adviser in accordance with section 240.13d(b)(1)(ii)(E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b)(1)(ii)(F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b)(1)(ii)(G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

---

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

---

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS BANK PLC

---

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
54 Lombard Street  
London, England EC3P 3AH

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-----  
ITEM 2(C).           CITIZENSHIP  
                          England  
-----

ITEM 2(D).           TITLE OF CLASS OF SECURITIES  
                          Common Stock  
-----

ITEM 2(E).           CUSIP NUMBER  
                          589378108  
-----

ITEM 3.               IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act  
(15 U.S.C. 78o).
- (b) /X/ 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) // Investment Adviser in accordance with section 240.13d(b)(1)(ii)(E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section  
240.13d-1(b)(1)(ii)(F).
- (g) // Parent Holding Company or control person in accordance with section  
240.13d-1(b)(1)(ii)(G).
- (h) // A savings association 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  
(15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A).           NAME OF ISSUER  
                          MERCURY COMPUTER SYSTEMS INC  
-----

ITEM 1(B).           ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
                          199 RIVERNECK ROAD  
                          CHELMSFORD MA 01824  
-----

ITEM 2(A).           NAME OF PERSON(S) FILING  
                          BARCLAYS CAPITAL SECURITIES LIMITED  
-----

ITEM 2(B).           ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
                          5 The North Colonmade  
                          Canary Wharf, London, England E14 4BB  
-----

ITEM 2(C).           CITIZENSHIP  
                          England  
-----

ITEM 2(D).           TITLE OF CLASS OF SECURITIES  
                          Common Stock  
-----

ITEM 2(E).           CUSIP NUMBER  
                          589378108  
-----

ITEM 3.               IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act  
(15 U.S.C. 78o).
- (b) /X/ 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

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- (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) // Investment Adviser in accordance with section 240.13d(b)(1)(ii)(E).
  - (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b)(1)(ii)(F).
  - (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b)(1)(ii)(G).
  - (h) // A savings association 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 (15U.S.C. 80a-3).
  - (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A).           NAME OF ISSUER  
                    MERCURY COMPUTER SYSTEMS INC

---

ITEM 1(B).           ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
                    199 RIVERNECK ROAD  
                    CHELMSFORD MA 01824

---

ITEM 2(A).           NAME OF PERSON(S) FILING  
                    BARCLAYS CAPITAL INC

---

ITEM 2(B).           ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
                    200 Park Ave  
                    NY, NY 10166

---

ITEM 2(C).           CITIZENSHIP  
                    U.S.A.

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ITEM 2(D).           TITLE OF CLASS OF SECURITIES  
                    Common Stock

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ITEM 2(E).           CUSIP NUMBER  
                    589378108

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ITEM 3.             IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
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- (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A).           NAME OF ISSUER  
                    MERCURY COMPUTER SYSTEMS INC



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-----  
ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824  
-----

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS PRIVATE BANK & TRUST (ISLE OF MAN) LIMITED  
-----

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
4th Floor, Queen Victoria House  
Isle of Man, IM99 IDF  
-----

ITEM 2(C). CITIZENSHIP  
England  
-----

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock  
-----

ITEM 2(E). CUSIP NUMBER  
589378108  
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ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

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(c) // Insurance Company as defined in section 3(a) (19) of the Act  
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(f) // Employee Benefit Plan or endowment fund in accordance with section  
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(g) // Parent Holding Company or control person in accordance with section  
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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  
(15U.S.C. 80a-3).  
(j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

-----

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC  
-----

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824  
-----

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS PRIVATE BANK AND TRUST (JERSEY) LIMITED  
-----

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
39/41 Broad Street, St. Helier  
Jersey, Channel Islands JE4 8PU  
-----

ITEM 2(C). CITIZENSHIP  
England  
-----

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

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-----  
ITEM 2(E).           CUSIP NUMBER  
  589378108  
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ITEM 3.            IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
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- (d) // Investment Company registered under section 8 of the Investment  
Company Act of 1940 (15 U.S.C. 80a-8).
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- (h) // A savings association as defined in section 3(b) of the Federal Deposit  
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- (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  
(15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

ITEM 1(A).           NAME OF ISSUER  
  MERCURY COMPUTER SYSTEMS INC  
-----

ITEM 1(B).           ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
  199 RIVERNECK ROAD  
  CHELMSFORD MA 01824  
-----

ITEM 2(A).           NAME OF PERSON(S) FILING  
  BARCLAYS BANK TRUST COMPANY LIMITED  
-----

ITEM 2(B).           ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
  54 Lombard Street  
  London, EC3P 3AH, England  
-----

ITEM 2(C).           CITIZENSHIP  
  England  
-----

ITEM 2(D).           TITLE OF CLASS OF SECURITIES  
  Common Stock  
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ITEM 2(E).           CUSIP NUMBER  
  589378108  
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ITEM 3.            IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
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- (d) // Investment Company registered under section 8 of the Investment  
Company Act of 1940 (15 U.S.C. 80a-8).
- (e) // Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section  
240.13d-1(b) (1) (ii) (F).

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- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b)(1)(ii)(G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

---

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

---

ITEM 2(A). NAME OF PERSON(S) FILING  
BARCLAYS BANK (Suisse) SA

---

ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
10 rue d'Italie  
CH-1204 Geneva  
Switzerland

---

ITEM 2(C). CITIZENSHIP  
Switzerland

---

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock

---

ITEM 2(E). CUSIP NUMBER  
589378108

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ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR 13D-2(B), CHECK WHETHER THE PERSON FILING IS A

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- (j) // Group, in accordance with section 240.13d-1(b)(1)(ii)(J)

ITEM 1(A). NAME OF ISSUER  
MERCURY COMPUTER SYSTEMS INC

---

ITEM 1(B). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES  
199 RIVERNECK ROAD  
CHELMSFORD MA 01824

---

ITEM 2(A). NAME OF PERSON(S) FILING

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BARCLAYS PRIVATE BANK LIMITED

-----  
ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE, RESIDENCE  
59/60 Grosvenor Street  
London, W1X 9DA England  
-----

ITEM 2(C). CITIZENSHIP  
England  
-----

ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock  
-----

ITEM 2(E). CUSIP NUMBER  
589378108  
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ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULES 13D-1(B), OR  
13D-2(B), CHECK WHETHER THE PERSON FILING IS A

- (a) // Broker or Dealer registered under Section 15 of the Act (15 U.S.C. 78o).
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- (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) // Investment Adviser in accordance with section 240.13d(b) (1) (ii) (E).
- (f) // Employee Benefit Plan or endowment fund in accordance with section 240.13d-1(b) (1) (ii) (F).
- (g) // Parent Holding Company or control person in accordance with section 240.13d-1(b) (1) (ii) (G).
- (h) // A savings association 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 (15U.S.C. 80a-3).
- (j) // Group, in accordance with section 240.13d-1(b) (1) (ii) (J)

ITEM 4. OWNERSHIP

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

(a) Amount Beneficially Owned:  
2,542,645  
-----

(b) Percent of Class:  
12.08%  
-----

- (c) Number of shares as to which such person has:
- (i) sole power to vote or to direct the vote  
2,350,516  
-----
  - (ii) shared power to vote or to direct the vote  
-  
-----
  - (iii) sole power to dispose or to direct the disposition of  
2,350,516  
-----
  - (iv) shared power to dispose or to direct the disposition of  
-  
-----

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-----  
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. //

ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON

The shares reported are held by the company in trust accounts for the economic benefit of the beneficiaries of those accounts. See also Items 2(a) above.

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

Not applicable

ITEM 10. CERTIFICATION

(a) The following certification shall be included if the statement is filed pursuant to section 240.13d-1(b):

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.

(b) The following certification shall be included if the statement is filed pursuant to section 240.13d-1(c):

By signing below I certify that, to the best of my 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.

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.

February 13, 2004

-----  
Date

-----  
Signature

Nancy Yeung  
Manager of Global Accounting  
-----

Name/Title