

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL

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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

<div>1. Name and Address of Reporting Person*</div> <div><u>MOORTHY GANESH</u></div> <div>(Last) (First) (Middle)</div> <div><u>C/O MICROCHIP TECHNOLOGY INCORPORATED</u></div> <div><u>2355 WEST CHANDLER BOULEVARD</u></div> <div>(Street)</div> <div><u>CHANDLER</u> <u>AZ</u> <u>85224-6199</u></div> <div>(City) (State) (Zip)</div>	<div>2. Issuer Name and Ticker or Trading Symbol</div> <div><u>MICROCHIP TECHNOLOGY INC [ MCHP ]</u></div> <div>3. Date of Earliest Transaction (Month/Day/Year)</div> <div><u>02/01/2010</u></div> <div>4. If Amendment, Date of Original Filed (Month/Day/Year)</div>	<div>5. Relationship of Reporting Person(s) to Issuer (Check all applicable)</div> <div>Director 10% Owner</div> <div><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)</div> <div><u>Exec. VP &amp; COO</u></div> <div>6. Individual or Joint/Group Filing (Check Applicable Line)</div> <div><input checked="" type="checkbox"/> Form filed by One Reporting Person</div> <div>Form filed by More than One Reporting Person</div>
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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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/01/2010		M		2,000	A	\$26.51	34,057 <sup>(1)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(1)</sup>
Common Stock	02/01/2010		F		776	D	\$26.51	33,281 <sup>(2)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(2)</sup>
Common Stock	02/01/2010		M		152	A	\$26.51	33,433 <sup>(3)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(3)</sup>
Common Stock	02/01/2010		F		59	D	\$26.51	33,374 <sup>(4)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(4)</sup>
Common Stock	02/01/2010		M		1,500	A	\$26.51	34,874 <sup>(5)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(5)</sup>
Common Stock	02/01/2010		F		560	D	\$26.51	34,314 <sup>(6)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(6)</sup>
Common Stock	02/01/2010		M		850	A	\$26.51	35,164 <sup>(7)</sup>	I	Shares held Directly and Indirectly, by Trust. <sup>(7)</sup>

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			Code	V	Amount	(A) or (D)	Price			
Common Stock	02/01/2010		F		277	D	\$26.51	34,887 <sup>(8)</sup>	I	Shares held Directly and Indirectly, by Trust. (8)

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

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)		8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Restricted Stock Units	\$26.51	02/01/2010		M			2,000	(9)	(9)	Common Stock	16,000	\$0	0	D	
Restricted Stock Units	\$26.51	02/01/2010		M			152	(10)	(10)	Common Stock	303	\$0	0	D	
Restricted Stock Units	\$26.51	02/01/2010		M			1,500	(11)	(11)	Common Stock	12,000	\$0	10,500	D	
Restricted Stock Units	\$26.51	02/01/2010		M			850	(12)	(12)	Common Stock	850	\$0	0	D	

**Explanation of Responses:**

- Of the 34,057 shares held, 7,480 shares were held Directly; 26,577 shares were held by Trust.
- Of the 33,281 shares held, 6,704 shares were held Directly; 26,577 shares were held by Trust.
- Of the 33,433 shares held, 6,856 shares were held Directly; 26,577 shares were held by Trust.
- Of the 33,374 shares held, 6,797 shares were held Directly; 26,577 shares were held by Trust.
- Of the 34,874 shares held, 8,297 shares were held Directly; 26,577 shares were held by Trust.
- Of the 34,314 shares held, 7,737 shares were held Directly; 26,577 shares were held by Trust.
- Of the 35,164 shares held, 8,587 shares were held Directly; 26,577 shares were held by Trust.
- Of the 34,887 shares held, 8,310 shares were held Directly; 26,577 shares were held by Trust.
- The restricted stock units vest in eight equal quarterly installments beginning May 1, 2008. Vested shares will be delivered to the reporting person upon vest.
- The restricted stock units will vest 151 shares on November 1, 2009 and 152 shares on February 1, 2010 as long as the individual remains a service provider through the vesting date and the Company achieves performance targets for operating income in the six month period ending September 30, 2008.
- The restricted stock units vest in eight equal quarterly installments beginning February 1, 2010, as long as the individual remains a service provider through the vesting date and the Company achieves performance targets for operating profit in the quarter ending June 30, 2009. Vested shares will be delivered to the reporting person upon vest.
- The restricted stock units will vest in full on February 1, 2010 as long as the individual remains a service provider through the vesting date and the Company achieves performance targets for operating profit in the quarter ended June 30, 2009. Vested shares will be delivered to the reporting person upon vest.

**Remarks:**

Deborah L. Wussler, as Attorney-in-Fact      02/02/2010

\*\* Signature of Reporting Person      Date

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

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

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

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.**