

**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

OMB APPROVAL	
OMB Number:	3235-0287
Estimated average burden hours per response:	0.5

1. Name and Address of Reporting Person* <b>SMITH GARY B</b>  (Last) (First) (Middle) <b>C/O CIENA CORPORATION</b> <b>1201 WINTERSON ROAD</b>  (Street) <b>LINTHICUM, MD 21090</b>  (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <b>CIENA CORP [ CIEN ]</b>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <b>PRESIDENT, CEO</b>
	3. Date of Earliest Transaction (Month/Day/Year) <b>12/21/2009</b>	
	4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> 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 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	12/21/2009		S		8,928 <sup>(1)</sup>	D	\$10.9105	737,709	D	
Common Stock	12/21/2009		S		642 <sup>(2)</sup>	D	\$10.9104	737,067	D	
Common Stock	12/21/2009		S		8,481 <sup>(3)</sup>	D	\$10.9105	728,586	D	
Common Stock	12/21/2009		S		18,598 <sup>(4)</sup>	D	\$10.9105	709,988 <sup>(5)</sup>	D	

**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					

**Explanation of Responses:**

- Shares reported reflect the amount sold to cover the tax liabilities of the reporting person pursuant to a 10b5-1 sale instruction related to a Performance-Accelerated Restricted Stock Unit (PARSU) award agreement dated December 18, 2006. Acquisition of the PARSU was previously reported in Table I of reporting person's Form 4 on December 19, 2006.
- Shares reported represent an amount sold to cover the tax liabilities of the reporting person pursuant to a 10b5-1 sales instruction related to a restricted stock unit (RSU) award agreement dated 12/18/2007. Acquisition of the RSU was previously reported in Table I of reporting person's Form 4 on 12/20/2007.
- Shares reported reflect the amount sold to cover the tax liabilities of the reporting person pursuant to a 10b5-1 sale instruction related to a Performance-Accelerated Restricted Stock Unit (PARSU) award agreement dated December 18, 2007. Acquisition of the PARSU was previously reported in Table I of reporting person's Form 4 on December 20, 2007.
- Shares reported represent an amount sold to cover the tax liabilities of the reporting person pursuant to a 10b5-1 sales instruction related to a restricted stock unit (RSU) award agreement dated 12/16/2008. Acquisition of the RSU was previously reported in Table I of reporting person's Form 4 on 12/18/2008.
- Shares reported include unvested Restricted Stock Units (RSUs).

By: Erik J. Lichter For: Gary B. Smith 12/23/2009

\*\* 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.