

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* FRODSHAM JAMES (Last) (First) (Middle) C/O CIENA CORPORATION 1201 WINTERSON ROAD (Street) LINTHICUM, MD 21090 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol CIENA CORP [CIEN]	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) SR. VP, Chief Strategy Officer
	3. Date of Earliest Transaction (Month/Day/Year) 12/21/2009	
		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> 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 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		3,143 ⁽¹⁾	D	\$10.9105	168,433	D	
Common Stock	12/21/2009		S		267 ⁽²⁾	D	\$10.9104	168,166	D	
Common Stock	12/21/2009		S		3,300 ⁽³⁾	D	\$10.9106	164,866	D	
Common Stock	12/21/2009		S		3,928 ⁽⁴⁾	D	\$10.9103	160,938 ⁽⁵⁾	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		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 3 on December 17, 2009.
- 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. RSU was previously reported in Table I of reporting person's Form 3 on 12/17/09.
- 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 3 on December 17, 2009.
- 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 3 on 12/17/2009.
- Shares reported include unvested Restricted Stock Units (RSUs).

By: Erik J. Lichter For: James A. Frodsham 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.