

April 25, 2002 Technology Research

Ceragon Networks

Ceragon Reports March Quarter

Investment Conclusion: While Ceragon continues to report lackluster operating results, we believe that the company is successfully transforming its business model. We are encouraged by the company's continued progress in addressing the emerging broadband wireless backhaul opportunity in the cellular wireless market, in penetrating new geographic regions, in reducing its expense levels, and in maintaining a low cash burn rate. We are maintaining our Market Perform recommendation while we await further evidence regarding Ceragon's executing upon its new areas of focus.

Key Points

- Ceragon^{a,b} reported March quarter results approximately in-line with our and Street consensus expectations. Revenues of \$3.3 million and a loss of \$(0.15) per share compare to our estimates of \$3.5 million and \$(0.17), respectively.
- While it is still early, we believe the March quarter offered several datapoints that suggest Ceragon is successfully addressing the cellular backhaul market. For the first time cellular backhaul represented the largest portion of Ceragon's revenues, accounting for approximately \$1.5 million, or 35%, of total sales.
- Ceragon continues to successfully penetrate new geographic regions. Asia Pacific and Latin American revenues increased to \$1.3 million, or 40%, of total revenues, from approximately \$980,000, or 30%, of revenues in the December quarter.
- Ceragon further lowered operating expenses in the March quarter. Management expects to maintain operating expenses at current levels and to reach its breakeven point at quarterly revenues of approximately \$9-10 million.
- While the company is in the process of transitioning its business model, we do not believe the balance sheet is an issue. We believe the company has enough cash to fund its operating losses and note that Ceragon has no long or short-term debt. The company's cash burn rate remained steady at approximately \$(3.1) million, or \$(0.14) per share in the March quarter. The company currently has \$50.6 million, or \$2.28 per share, in net cash.

CRNT: \$2.63 Rating: Market Perform

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Change In	Yes/No	Was	ls
Change In Rating:	No	Was	MP
EPS F2002E:	Yes	\$(0.54)	\$(0.59)
EPS F2003E:	Yes	\$(0.35)	\$(0.42)
Rev F2002E:	Yes	\$23.5	\$15.3
Rev F2003E:	Yes	\$36.0	\$26.0
12-Month Price Target:	New	φ00.0	VE NE
52-Week Range (NASD			\$4.80-1.88
FD Shares Outstanding	/(@)		22.2 MM
Market Cap			\$58.4 MM
Avg Daily Volume (000)			207
Book Value/Share 3/02			\$2.58
5yr Hist. EPS Growth Ra	ate		NM
5yr Proj. EPS Growth Ra			20%
RÓA 2002E:			(8522)%
Dividend/Yield			NONE/ NA
Price/Book Value 3/02:			1.0x
Total Debt 3/02:			\$0.0
Net Cash/Share 3/02:			\$2.28
Cash 3/02:			\$33.4 MM
Operating Margin 3/02:			(115.6%)
FY December	F2001 A	F2002 E	F2003 E
EPS:			
1Q	\$(0.09)	\$(0.15) A	\$(0.13)
2Q	\$(0.23)	\$(0.15) E	\$(0.11)
3Q	\$(0.19)	\$(0.15) E	\$(0.10)
4Q	\$(0.17)	\$(0.14) E	\$(0.08)
Year	\$(0.67)	\$(0.59)	\$(0.42)
P/E	NM	NM	NM
Rev (MM):	F2001 A	F2002 E	F2003 E
1Q	\$12.6	\$3.3 A	\$5.0
2Q	\$5.9	\$3.5 E	\$6.0
3Q	\$3.1	\$4.0 E	\$7.0
4Q	\$3.3	\$4.5 E	\$8.0
Year	\$24.9	\$15.3	\$26.0
Mkt Cap/Rev	NM	3.8x	2.2x
EDS implies operating E	DC and ave	ludoo oll non o	oob ond

EPS implies operating EPS and excludes all non-cash and one-time charges.

Summary

As the following table shows, Ceragon reported March quarter results approximately in-line with our and Street consensus expectations. Revenues of \$3.3 million and a loss of \$(0.15) per share compare to our estimates of \$3.5 million and \$(0.17), respectively.

Table 1 – Ouarter Estimates (\$ in millions, except per share) Actual

c c	Actual	Robertson Stephens	Street
Revenues (mm) EPS	\$3.3 (\$0.15)	\$3.5 (\$0.17)	\$3.3 (\$0.17)
Source: Compan	(1)	st Call, and Robertson	Stephens estimates.

While Ceragon continues to report lackluster operating results, we believe that the company is successfully transforming its business model. We are encouraged by the company's continued progress in addressing the emerging broadband wireless backhaul opportunity in the cellular wireless market, in penetrating new geographic regions, in reducing its expense levels, and in maintaining a low cash burn rate. We are maintaining our Market Perform recommendation while we await further evidence regarding Ceragon's executing upon its new areas of focus.

Cellular Backhaul. While it is still early, we believe the March quarter offered several datapoints that suggest Ceragon is successfully addressing the cellular backhaul market. For the first time in the March quarter cellular backhaul represented the largest portion of Ceragon's revenues, accounting for approximately \$1.5 million, or 35%, of total sales. The company announced two major cellular backhaul contracts in Scandinavia during the quarter. While early in their respective ramp, the company projects each of these contracts could represent tens of millions of dollars over the next couple of years. The company has five to six cellular operators currently deploying the FibeAir system commercially. Ceragon is in an additional 15-20 trials with other cellular operators, up from five to six trials in the preceding quarter. The company hopes to have at least ten cellular backhaul customers by the end of calendar 2002.

Geographic Mix. Ceragon continues to successfully penetrate new geographic regions. Asia Pacific and Latin American revenues increased by approximately \$330,000, or 34%, to \$1.3 million, or 40%, of total revenues, from approximately \$980,000, or 30%, of revenues in the December quarter. The relative lack of land line infrastructure in both Asia Pacific and Latin America make these regions particularly promising markets for broadband wireless service providers and concomitantly broadband wireless equipment suppliers, in our opinion.

Expenses. Ceragon further lowered operating expenses in the March quarter, albeit slightly, to \$4.6 million from \$4.8 million in the preceding quarter. Management expects to maintain operating expenses at current levels and to reach its breakeven point at quarterly revenues of approximately \$9-10 million.

Cash/Burn Rate. While the company is in the process of transitioning its business model, we do not believe the balance sheet is an issue. We believe the company has enough cash to fund its operating losses and note that Ceragon has no long or shortterm debt. Net cash (including long and short term investments) decreased to \$50.6 million, or \$2.28 per share, from \$53.7 million, or \$2.46 per share, in the preceding quarter as the company's cash burn rate remained steady at approximately \$(3.1) million, or \$(0.14) per share in the March quarter. Management expects its cash burn rate to remain steady or to improve over the next few quarters as the company plans to maintain operating expenses at current levels while its revenues ramp.

New Products. The company introduced two new products in the March quarter, including a 7-8 gigahertz capable base station and an integrated ADM product for cellular operators deploying SONET/SDH rings. The company expects to ship these products for revenue in the current quarter.

Estimates

While we were impressed by the company's progress in the quarter, we are lowering our fiscal 2002 and fiscal 2003 estimates to reflect a very conservative outlook for the company's revenue growth. Given the early stage of Ceragon's efforts in the cellular backhaul market, we have made what we believe are fairly modest assumptions regarding revenue contributions for this market over the next two years.

Our current estimates for Ceragon are as follows:

Table 2 – Fiscal Year Estimates (\$ in millions, except per share)

	2001A	2002E	2003E		_
New					
Revenues(mm)	\$24.9	\$15.3	\$26.0		
EPS (fully taxed)	(\$0.67)	(\$0.59)	(\$0.42)		
Old					
Revenues(mm)		\$23.3	\$36.0		
EPS (fully taxed)		(\$0.52)	(\$0.35)		
Source: Company	reports a	and Rob	ertson Ste	phens estin	ates

Revenue / Product Breakout

New Customers. Ceragon shipped systems to a total of 35 customers, including 11 new customers during the quarter. These 11 new customers generated approximately \$820,000, or 25%, of total revenues during the quarter compared to \$1.3 million, or 40%, of revenues generated by 10 new customers in the December quarter.

Cellular Backhaul. We continue to believe that the cellular market represents a large market opportunity for Ceragon. The cellular backhaul application involves using a point-to-point broadband fixed wireless connection to backhaul traffic from base stations and hubs to the mobile switching center or intermediate aggregation points in a cellular network. We believe Ceragon is well positioned in this market, given that the FibeAir system has the capability to form a SDH ring internally, as opposed to other systems that need an external system to provide SDH capabilities.

In terms of application mix, cellular backhaul represented the largest portion of Ceragon's revenues for the first time in the March quarter, accounting for approximately \$1.5 million, or 35%, of total sales. The company announced two major cellular backhaul contracts in Scandinavia during the quarter. While early in their respective ramp, the company projects each of these contracts could represent tens of millions of dollars over the next couple of years. The company has five to six cellular operators currently deploying the FibeAir system commercially. Ceragon is in an additional 15-20 trials with other cellular operators, up from five to six trials in the preceding quarter. The company hopes to have at least ten cellular backhaul customers by the end of calendar 2002.

Enterprise. We believe enterprises using Ceragon's base stations for connecting LANs between independent buildings will continue to represent a steady source of revenues for Ceragon. Enterprise customers represented \$985,000, or 30%, of revenues in the March quarter, from \$1.3 million, or 40%, of revenues in the December quarter.

Geographic Mix. Ceragon continues to successfully penetrate new geographic regions. Ceragon recognized the majority of its revenues from non-North American customers in the March quarter. EMEA (Europe, Middle East and Africa) revenues increased by approximately \$900,000, or 129%, sequentially to \$1.6 million, or 48%, of total revenues from approximately \$690,000, or 21%, of revenues in the preceding quarter. North American revenues decreased by approximately \$1.2 million, or 76%, sequentially to \$390,000, or 12%, of total revenues from \$1.6 million, or 49%, of revenues in the preceding quarter. Asia Pacific and Latin American revenues increased approximately \$330,000, or 34%, to \$1.3 million, or 40%, of total revenues from approximately \$980,000, or 30%, of revenues in the December quarter. The relative lack of land line infrastructure in both Asia and Latin America make these regions particularly promising markets for broadband wireless service providers and concomitantly broadband wireless equipment suppliers, in our opinion.

OEM Relationships. OEM revenues remained essentially flat at approximately \$330,000, or 10%, of total revenues from approximately \$330,000, or 10%, of revenues in the December quarter.

Balance Sheet

While the company is in the process of transitioning its business model, we do not believe the balance sheet is an issue. We believe the company has enough cash to fund its operating losses and note that the Ceragon has no long or short-term debt.

Net cash (including long and short term investments) decreased to \$50.6 million, or \$2.28 per share, from \$53.7 million, or \$2.46 per share, in the preceding quarter as the company's cash burn rate remained steady at approximately (3.1) million, or (0.14) per share in the March quarter. Management expects its cash burn rate to remain steady or to improve over the next few quarters as the company plans to maintain operating expenses at current levels while ramping revenues.

Accounts receivable DSOs decreased by 16 days to 62 days versus the previous quarter level of 78 days. Inventory days (quarter-end) decreased by 20 days to 234 days from 254 days in the December quarter.

	1Q01	2Q01	3Q01	4Q01	1Q02		
Revenues qtr/qtr growth yr/yr growth	\$12.6 2.2% 293.5%	\$5.9 -53.5% 9.6%	\$3.1 -46.3% -62.3%	\$3.3 4.2% -73.4%	\$3.3 0.2% -73.9%		
NOPAT qtr/qtr growth yr/yr growth	(\$2.8) 65.3% 148.4%	(\$5.5) 97.1% 305.1%	(\$4.6) -16.1% 178.3%	(\$4.1) -11.2% 142.6%	(\$3.8) -7.2% 36.2%		
Net Cash Incremental change	67.2 (13.2)	61.1 (6.0)	56.8 (4.3)	53.7 (3.1)	50.6 (3.1)		
A/R days (qtr. end)	65	62	63	78	62		
Inventory days (qtr. end)	276	531	236	254	234		
Invested Capital96.687.365.862.158.8Source: Company reports and Robertson Stephens analysis							

Table 3 – Selected Balance Sheet Data (\$ in millions)

Action Now

The shares of Ceragon Networks are rated Market Perform.

Company Info

The Company

Ceragon designs, develops, manufactures and sells high-capacity broadband wireless network equipment that enables communications service providers to deliver integrated data, video and voice services between wireless transmission links on a point-to-point basis. The company's products deliver high-speed, fiber-like transmission quality in a rapid, robust, cost-effective and flexible manner. The company believes its broadband wireless systems provide more versatility than any available wireless equipment solutions in terms of licensed frequency bands, communication protocols and international standards. Ceragon's digital signal processing technology provides superior performance for all major transmission protocols, including IP/Fast Ethernet, ATM and SONET/SDH. Ceragon's products operate over multiple high frequencies licensed in various countries in North America, Europe, South America and the Asia-Pacific region.

Investment Thesis

We believe Ceragon is positioned to effectively address worldwide demand in the fixed wireless market. Ceragon is currently the only high-capacity provider whose product is deployable over all ranges of high frequency spectrums worldwide and interoperates with the IP/Fast Ethernet, ATM and SONET/SDH standards. None of Ceragon's current competitors products can offer Ceragon's range of service and scalability, making the Ceragon solution the most attractive in the high frequency fixed wireless communications marketplace. The company's FibeAir product line offers the broadest range of protocol interoperability, frequency compatibility and international standards. In addition, Ceragon has several large OEM agreements. By working with large OEMs, the company is able to target customers requiring complete network integration, support services and vendor financing.

Investment Risks

Among the investment risks are that the company's revenue ramp is contingent upon significant service provider deployments and the success of Ceragon's relationship with its large OEM customers; the company's ability to expand its distribution capabilities to multiple channels and to expand its customer base; intense competition; and limited operating history.

Our rating system is based upon 12-month price targets that assume a flat market.

For stocks with market cap of **\$2 billion or greater:**

Strong Buy describes stocks that we expect to appreciate by 25% or more.
Buy describes stocks that we expect to appreciate by 10-25%.
Market Perform describes stocks that we expect to change plus or minus 10%.
Market Underperform describes stocks that we expect to decline by more than 10%.

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Paul, a principal and senior analyst at Robertson Stephens, joined the firm in 1996 and currently covers communication equipment companies. He joined the firm from Columbia Business School and previously practiced corporate and securities law for five years. Paul holds a BA in history and economics from the University of Pennsylvania, a JD from Cornell Law School and an MBA from Columbia Business School.

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Quarterly in thousands		2001		L		2002				2003		
	March	June	Sept	Dec	March	June	Sept	Dec	March	June	Sept	Dec
Net Sales Cost of Goods Gross Profit Gross Margin	12,585 7,039 5,546 44.1%	5,851 3,979 1,872 32.0%	3,142 2,824 318 10.1%	3,274 2,609 665 20.3%	3,282 2,476 806 24.6%	3,500 2,625 875 25.0%	4,000 2,960 1,040 26.0%	4,500 3,285 1,215 27.0%	5,000 3,600 1,400 28.0%	6,000 4,200 1,800 30.0%	7,000 4,760 2,240 32.0%	8,000 5,280 2,720 34.0%
Research & Development, net Margin Sales & Marketing Margin G & A Margin Operating Expenses Margin	3,472 27.6% 3,918 31.1% 941 7.5% 8,331 66.2%	2,564 43.8% 3,784 64.7% 1,013 17.3% 17.3%	2,232 71.0% 2,093 66.6% 599 19.1% 4,924 156.7%	2,039 62.3% 65.0% 65.0% 585 17.9% 14.753	1,829 55.7% 2,272 69.2% 15.2% 499 15.2% 140.2%	1,850 52.9% 2,300 65.7% 15.7% 4,700 134.3%	1,850 46.3% 2,300 57.5% 550 13.8% 4,700 117.5%	1,850 41.1% 2,300 51.1% 550 12.2% 4,700 104.4%	1,850 37.0% 2,300 46.0% 550 11.0% 4,700 94.0%	1,850 30.8% 2,300 38.3% 550 9.2% 4,700 78.3%	1,850 26.4% 2,300 32.9% 550 7.9% 4,700 67.1%	1,850 23.1% 2,300 28.8% 550 6.9% 4,700 58.8%
Operating Profit Margin Interest Expense	(2,785) -22.1%	(5,489) -93.8%	(4,606) -146.6%	(4,088) -124.9%	(3,794) -115.6%	(3,825) -109.3%	(3,660) -91.5%	(3,485) -77.4%	(3,300) -66.0%	(2,900) -48.3%	(2,460) -35.1%	(1,980) -24.8%
Interest income Other IBT from continuing operations Margin	844 (1,941) -15.4%	772 (4,717) -80.6%	683 (3,923) -124.9%	470 (3,618) -110.5%	388 (3,406) -103.8%	350 (3,475) -99.3%	300 (3,360) -84.0%	250 (3,235) -71.9%	200 (3,100) -62.0%	150 (2,750) -45.8%	100 (2,360) -33.7%	50 (1,930) -24.1%
Income Taxes Tax Rate Net Income Before	0 0.0% (1,941)	0 0.0% (4,717)	0 0.0% (3,923)	0 0.0% (3,618)	0 0.0% (3,406)	0 0.0% (3,475)	0 0.0% (3,360)	0 0.0% (3,235)	0 0.0% (3,100)	0 0.0% (2,750)	0 0.0% (2,360)	0 0.0% (1,930)
Margin Tax Adjustment Net Income Margin	-15.4% (1,941) -15.4%	-80.6% (4,717) -80.6%	-124.9% (3,923) -124.9%	-110.5% (3,618) -110.5%	-103.8% (3,406) -103.8%	-99.3% (3,475) -99.3%	-84.0% (3,360) -84.0%	-71.9% (3,235) -71.9%	-62.0% (3,100) -62.0%	-45.8% (2,750) -45.8%	-33.7% (2,360) -33.7%	-24.1% (1,930) -24.1%
EPS Reported Fully Taxed SharesFully Diluted	(\$0.09) (\$0.09) 20,657	(\$0.23) (\$0.23) 20,868	(\$0.19) (\$0.19) 21,064	(\$0.17) (\$0.17) 21,808	(\$0.15) (\$0.15) 22,229	(\$0.15) (\$0.15) 22,600	(\$0.15) (\$0.15) 23,000	(\$0.14) (\$0.14) 23,400	(\$0.13) (\$0.13) 23,800	(\$0.11) (\$0.11) 24,200	(\$0.10) (\$0.10) 24,600	(\$0.08) (\$0.08) 25,000

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Ceragon Networks, 4/25/02, 4:10 PM

Source: Robertson Stephens estimates and company reports

Annual

Annual Fiscal Veer December				
Fiscal Year December in thousands	20014	20025	20025	
in thousands	2001A	2002E	2003E	
Net Sales	24,852	15,282	26,000	
Cost of Goods	16,451	11,346	17,840	
Gross Profit	8,401	3,936	8,160	
Gross Margin	33.8%	25.8%	31.4%	
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Research & Development	10,307	7,379	7,400	
Margin	41.5%	48.3%	28.5%	
Sales & Marketing	11,924	9,172	9,200	
Margin	48.0%	60.0%	35.4%	
G & A	3,138	2,149	2,200	
Margin	12.6%	14.1%	8.5%	
Operating Expenses	25,369	18,700	18,800	
Margin	102.1%	122.4%	72.3%	
Operating Profit	(16,968)	(14,764)	(10,640)	
Margin	-68.3%	-96.6%	-40.9%	
Interest Expense	0	0	0	
Interest Income	0	0	0	
Other	2,769	1,288	500	
IBT from continuing				
operations	(14,199)	(13,476)	(10,140)	
Margin	-57.1%	-88.2%	-39.0%	
Income Taxes	0	0	0	
Tax Rate	0 0.0%	0 0.0%	0 0.0%	
Tax Rale	0.0%	0.0%	0.0%	
Net Income Before	(14,199)	(13,476)	(10,140)	
Margin	-57.1%	-88.2%	-39.0%	
	011170	00.270	001070	
Tax Adjustment				
Net Income	(14,199)	(13,476)	(10,140)	
Margin	-57.1%	-88.2%	-39.0%	
margin	07.170	00.270	00.070	
EPS				
Reported	(\$0.67)	(\$0.59)	(\$0.42)	
Fully Taxed	(\$0.67)	(\$0.59)	(\$0.42)	
-	. ,			
SharesFully Diluted	21,125	22,790	24,315	

Source: Robertson Stephens estimates and company reports