

**CEVA INC. (CEVA)**

**\$10.34**

Please see important disclosures and analyst certification on page 8 of this report.

**Equity Research  
Communications Technology**

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**Sales:** 800-536-6854  
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**Statistics**

<b>52-Wk Range:</b>	\$10.58- 5.90
<b>Market Value:</b>	\$209.9 mil.
<b>Dividend:</b>	\$0.00
<b>Yield:</b>	0.000%
<b>Shares Out.:</b>	20.3 mil.
<b>Float/Avg. Trading Volume:</b>	14.5 mil./81,626
<b>Latest option grant/shares out. (net of cancellations):</b>	(3.5%)
<b>Book Value/Share (9/30/07):</b>	\$5.50
<b>Est. 3-5 yr. EPS Growth:</b>	45%
<b>Net Cash/ Share (9/30/07):</b>	\$3.25

**Revenue**

<b>2005A</b>	\$35.6 mil.	<b>2007E</b>	\$34.5 mil.
<b>2006A</b>	\$32.5 mil.	<b>2008E</b>	\$39.0 mil.

**Adjusted Earnings Per Share\***

	2005A	2006A	2007E	Prior Est. 2008E	Prior Est.
<b>Mar 1Q</b>	\$0.03	(\$0.01)	\$0.02A		\$0.08
<b>Jun 2Q</b>	(\$0.00)	\$0.02	\$0.05A		\$0.07
<b>Sep 3Q</b>	(\$0.02)	\$0.04	\$0.06A		\$0.08
<b>Dec 4Q</b>	(\$0.01)	\$0.06	\$0.07		\$0.08
<b>FY</b>	(\$0.00)	\$0.11	\$0.21		\$0.32
<b>P/E</b>	NM	94.0x	49.2x		32.3x
<b>GAAP FY</b>	(\$0.12)	(\$0.01)	\$0.13		\$0.21
<b>P/E</b>	NM	NM	79.5x		49.2x

**Explanatory Notes**

\*Adjusted EPS excludes restructuring, impairment, gain on the disposal of a minority investment and FAS 123R expenses and includes amortization.

Rating: **BUY**  
Target Price: **\$13.50**

**Increasing signs of widespread adoption**

**Action**

**Raising target significantly**

**Key Points**

- Visibility is beginning to develop from years of effort to gain adoption by major brands
- Industry consolidation appears to be concentrating on Ceva cores
- New applications are emerging
- We think the company will see quarterly royalty levels of more than 3x-4x the \$2.2 million level of 3Q07 during 2009 and that there will be significant earnings acceleration. For this reason we are increasing our three- to five-year net income growth forecast from 35% to 45% and raising our 12-month target price \$3.00 to \$13.50 per share.

**Discussion**

We believe several factors are contributing to industry momentum for a number of Ceva licensees:

- Infineon's success with Nokia (for 2G/GSM/ULC – Ultra Low Cost handset), LG (GSM/ULC, Edge), Apple (Edge), ZTE (GSM/ULC) and, with the recent purchase of LSI/Agere product lines, Samsung and NEC (GSM/Edge);
- Broadcom's success with Nokia (for 2.5G/Edge), Sony Ericsson (GSM/ULC) and Samsung (3G);
- The influence of the Silicon Labs legacy at NXP and implications for more wins at Samsung (GSM/ULC), Sony Ericsson (multimedia processor), and
- Adoption of Ericsson Mobile Platforms for Ceva-based 3G designs by i-mate, LG, Sharp, Sony Ericsson.

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While some of the progress is a function of years of effort to gain design wins with major brands like Nokia, Ericsson and Samsung, industry consolidation appears to be yielding unexpected benefits. Infineon recently purchased the wireless product lines from LSI, which include ex-Agere product lines that we think will be converted to Ceva cores. It also appears that the combination of NXP and Silicon Laps is adopting Ceva cores to update older NXP designs. We also view it likely that Mediatek will update product lines acquired from Analog Devices with Ceva cores.

In addition, the company appears well positioned to benefit from growth amongst licensees in India, Korea and China – Spreadtrum (GSM/ULC and TD-SCDMA/3G), in particular.

Industry checks suggest Ceva is gaining sufficient scope of design-wins to have the kind of “critical mass” that accelerates usage. We spoke with one licensee that indicated that since it became known that Nokia began to design with Ceva-based products, others have become comfortable with the decision to use Ceva cores. Further, it appears that more semiconductor companies are implementing Ceva-based designs in recognition of alternative sourcing opportunities in high-volume applications.

This progress implies Ceva’s share of the worldwide mobile network terminal (handset/PDAs, etc.) market will escalate significantly in coming years. Meanwhile the processing demands of high-definition technologies are resulting in architectural upgrades and the company is gaining adoption in new consumer electronics applications (DVD, HD-DVD, Blu-ray, game consoles), as well as broadband customer premise (VoIP in setop boxes and residential gateways) and security applications (surveillance camera and finger print recognition).

The timing for all these developments to be recognized as royalties is difficult to gauge; for instance, many of the recent design-wins will not ship until well into 2008 and 2009. However, with growth in market share, higher average unit royalties (newer/more complex cores) and the likelihood that current licensees will be shipping through pre-paid royalty volume thresholds, we think the company will see quarterly royalty levels of more than 3x-4x the \$2.2 million level of 3Q07 during 2009 and that there will be significant earnings acceleration.

For this reason we are increasing our three- to five-year net income growth rate forecast from 35% to 45% and raising our 12-month target price from \$10.50 to \$13.50 per share.

### **Company Background**

With primary operations in Herzeliya, Israel, and Dublin, Ireland, Ceva, Inc. ([www.ceva-dsp.com](http://www.ceva-dsp.com)) emerged November 1, 2002, with the combination of Parthus Technologies Plc and Ceva, Inc., the latter having spun off from DSP Group, Inc. concurrently with the merger.

Ceva generates 85%–90% of its revenue from licensing (60%-65%) and royalty (~25%) fees associated with delivery of intellectual property, primarily in the form of integrated circuit designs involving digital signal processing (DSP) cores and applications. Ceva is the industry leading licensor of DSP cores.

The remaining 10%–15% of revenue is derived primarily design services (consultation). The company’s license and royalty revenue typically provides percentage gross margins in the low 90s. Non-licensing activities bring the company’s blended average margin to the high-80s percentage level.

Currently Ceva offers platform designs for multi-media (MP3 audio, MPEG4 and H.264 video – the MobileMedia2000 platform), Voice-over-Packet, Bluetooth, high-speed serial communications (multi-Gigabit Serial ATA) for mobile phones, disk drives, digital TV, IP TV, and other consumer electronics products. The company’s digital signal processor cores are suited for applications that range from narrow-band speech to digital communications (both wireless and wire-line), broadband, multi-media (audio/video), and communications infrastructure.

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Mobile phones are currently the largest end-market applications for the company's core revenue, while AV/digital media applications represent a large portion of Ceva applications platform sales. The company currently follows Texas Instruments as the largest contributor of digital signal processing technology for non-CDMA mobile phones. As 3G multi-media products and WCDMA in particular become larger factors in the handset market, we expect Ceva to increasingly address CDMA-oriented markets that have historically been served by Qualcomm.

We believe Ceva's primary customers/ end-market applications include: Atmel/disk drives and WiFi phones, Broadcom/mobile phones, Eonex/mobile phones, Fujitsu /disk drives, Infineon/mobile phones, Kawasaki Microelectronics/VoIP, Marvel/disk drives, Oki/mobile phones, NXP/mobile phones, Rohm/mobile phones, Samsung/mobile phones, Sharp/multi-purpose, Sony Ericsson/mobile phones, and Spreadtrum Communication/mobile phones.

Ceva's primary competitor in DSP technology licensing is privately-held VeriSilicon.

## Ceva, Inc.

(in millions, except per share data)

<b>Company</b>	<b>Symbol</b>	<b>Close 11/8/2007</b>	<b>Shares Outstanding</b>	<b>Market Cap.</b>	<b>Enterprise Value (EV)</b>	<b>Trailing 12-month (TTM) Revenue</b>	<b>EV / TTM Rev.</b>
ARM Holdings	ARMHY	\$8.71	454	3,956	3,736	554	6.7
Imagination Technologies	IMG.L	£122.00	2	560	526	101	5.2
InterDigital Communications	IDCC	\$22.75	49	1,110	935	244	3.8
MIPS Technologies	MIPS	\$7.15	46	328	183	83	2.2
Synopsys	SNPS	\$25.33	150	3,792	2,998	1,181	2.5
<b>Peer Average &gt;&gt;</b>							<b>4.1</b>
<b>Ceva Inc.</b>	<b>CEVA</b>	<b>\$10.34</b>	<b>20.3</b>	<b>209.8</b>	<b>139.6</b>	<b>33.0</b>	<b>4.2</b>
<b>Implied Valuation (peer revenue multiple applied to CEVA revenue)</b>							
<b>Ceva Inc.</b>	<b>CEVA</b>	<b>\$10.14</b>	<b>20.3</b>	<b>205.6</b>	<b>135.4</b>		<b>4.1</b>
<b>Implied valuation at ARM Holdings multiple</b>							
	<b>CEVA</b>	<b>\$14.44</b>	<b>20.3</b>	<b>293.0</b>	<b>222.8</b>		<b>6.7</b>

Sources: company data, FBW data, Thomson data

### Ceva, Inc. (CEVA)

Beta for 15% discount rate	1.94
3 - 5 Year Growth Rate	45%
6 - 10 Year Growth Rate	25%
Long-Term Growth Rate (uniform for all tech. stocks)	5%
Risk Free Rate	11/8/2007 4.28%
Market Equity Risk Premium	5.50%
Required Return on Equity for "Long Term" Beta	15.0%
Shares Outstanding (millions)	20.3
Most Recent Quarter (December Fiscal Year)	3

		3-5 Year Growth Rate ==>				6 - 10 Year Growth Rate ==>				LT Growth ==>		
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Perpetuity--2017 and Beyond
Net Income --- >>>		4.3	6.7	9.7	14.2	20.6	25.9	32.5	40.7	51.1	64.2	543.3

	<b>Period</b>
2007	0.25
2008	1.25
2009	2.25
2010	3.25
2011	4.25
2012	5.25
2013	6.25
2014	7.25
2015	8.25
2016	9.25
Perpetuity--2017 and Beyond	10.25

<b>Present Value</b>	
	\$4.17
	\$5.62
	\$7.12
	\$9.01
	\$11.40
	\$12.45
	\$13.59
	\$14.84
	\$16.20
	\$17.69
	\$130.25

**Total (millions): \$242.35**

**NPV Per Share on 15% discount rate 1.94 \$11.95**

### Ceva FTM Valuation

Beta for 15% discount rate	1.94
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		2008	2009	2010	2011	2012	2013	2014	2015	2016	Perpetuity--2017 and Beyond
Net Income --- >>>		6.7	9.7	14.2	20.6	25.9	32.5	40.7	51.1	64.2	543.3

	<b>Period</b>
2008	0.25
2009	1.25
2010	2.25
2011	3.25
2012	4.25
2013	5.25
2014	6.25
2015	7.25
2016	8.25
Perpetuity--2017 and Beyond	9.25

<b>Present Value</b>	
	\$6.46
	\$8.18
	\$10.36
	\$13.11
	\$14.31
	\$15.62
	\$17.06
	\$18.62
	\$20.33
	\$149.73

**Total (millions): \$273.79**

**NPV Per Share on 15% discount rate 1.94 \$13.50**

Source: FBW research



## Ceva, Inc. (CEVA)

### Balance Sheet

(\$'000, except per share data)

	Dec-02	Dec-03	Mar-04	Jun-04	Sep-04	Dec-04	Mar-05	Jun-05	Sep-05	Dec-05	Mar-06	Jun-06	Sep-06	Dec-06	Mar-07	Jun-07	Sep-07
<b>ASSETS</b>																	
Cash & Cash Equivalents	73,810	59,130	58,615	56,832	27,035	28,844	33,220	37,929	24,492	43,446	31,690	30,113	36,509	37,968	37,177	43,026	42,679
Marketable Securities	-	-	-	-	30,730	30,794	27,118	21,717	35,869	18,174	28,424	33,480	27,259	26,266	27,251	21,880	23,278
Accounts Receivables, Net	4,029	10,226	10,698	10,707	11,583	10,835	9,045	9,284	7,331	6,159	9,090	6,086	7,091	8,421	8,663	9,949	10,994
Inventories	168	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Deferred Income Taxes	-	-	-	-	-	125	158	147	-	600	550	543	571	613	537	642	761
Prepaid Expenses & Other	4,190	1,945	1,245	1,757	1,591	1,350	2,482	2,859	3,473	2,082	2,159	2,036	2,255	2,454	2,843	2,623	2,297
Assets of discontinued operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Current Assets</b>	<b>82,197</b>	<b>71,301</b>	<b>70,558</b>	<b>69,296</b>	<b>70,939</b>	<b>71,948</b>	<b>72,023</b>	<b>71,936</b>	<b>71,165</b>	<b>70,461</b>	<b>71,913</b>	<b>72,258</b>	<b>73,685</b>	<b>75,722</b>	<b>76,471</b>	<b>78,120</b>	<b>80,009</b>
Property/Equip., Net	6,593	4,792	4,595	5,211	4,690	4,471	4,184	4,066	3,642	3,226	2,851	2,111	1,883	1,706	1,941	1,887	1,767
Severance Pay Fund	1,152	1,487	1,470	1,458	1,534	1,713	1,693	1,725	1,808	1,912	2,020	2,205	2,332	2,338	2,220	2,291	2,573
Long Term Lease Deposits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Investments	1,350	-	-	-	-	-	-	-	-	-	-	5,984	4,233	4,233	4,233	4,233	4,233
Goodwill & Intangibles, Net of Amortization	43,890	41,853	41,630	41,407	41,184	40,961	40,850	40,241	40,049	39,858	39,668	36,782	36,740	36,699	36,657	36,616	36,575
Deferred Income Taxes	-	-	-	-	-	70	59	56	57	292	342	382	434	382	624	703	600
<b>Total Assets</b>	<b>135,182</b>	<b>119,433</b>	<b>118,253</b>	<b>117,372</b>	<b>118,347</b>	<b>119,163</b>	<b>118,809</b>	<b>118,024</b>	<b>116,721</b>	<b>115,749</b>	<b>116,794</b>	<b>119,722</b>	<b>119,307</b>	<b>121,080</b>	<b>122,146</b>	<b>123,850</b>	<b>125,757</b>
<b>LIABILITIES</b>																	
Accounts Payable	2,491	3,030	2,124	2,018	1,881	1,714	1,555	1,702	575	548	588	630	638	718	838	884	541
Accrued & Other Current Liabilities	19,007	12,876	11,137	10,053	9,604	9,816	8,026	8,755	9,730	7,778	8,026	8,929	8,629	9,462	9,575	10,013	8,691
Deferred Revenue	1,115	1,064	867	775	1,046	1,751	1,987	2,056	1,234	453	406	377	589	406	385	626	683
Related Party - DSP Group, Inc.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Taxes Payable	1,291	891	859	737	965	707	624	676	589	442	392	363	331	135	140	119	131
<b>Total Current Liabilities</b>	<b>23,904</b>	<b>17,861</b>	<b>14,987</b>	<b>13,583</b>	<b>13,496</b>	<b>13,988</b>	<b>12,192</b>	<b>13,189</b>	<b>12,128</b>	<b>9,221</b>	<b>9,412</b>	<b>10,299</b>	<b>10,187</b>	<b>10,721</b>	<b>10,938</b>	<b>11,642</b>	<b>10,046</b>
Accrued Severance Pay and other LT liability:	1,231	3,093	2,945	2,823	2,838	2,626	2,514	2,561	2,213	4,295	4,369	4,304	4,320	4,216	3,938	3,838	4,147
<b>Total Liabilities</b>	<b>25,135</b>	<b>20,954</b>	<b>17,932</b>	<b>16,406</b>	<b>16,334</b>	<b>16,614</b>	<b>14,706</b>	<b>15,750</b>	<b>14,341</b>	<b>13,516</b>	<b>13,781</b>	<b>14,603</b>	<b>14,507</b>	<b>14,937</b>	<b>14,876</b>	<b>15,480</b>	<b>14,193</b>
<b>SHAREHOLDERS' EQUITY</b>	<b>110,047</b>	<b>98,479</b>	<b>100,321</b>	<b>100,966</b>	<b>102,013</b>	<b>102,549</b>	<b>104,103</b>	<b>102,274</b>	<b>102,380</b>	<b>102,233</b>	<b>103,013</b>	<b>105,119</b>	<b>104,800</b>	<b>106,143</b>	<b>107,270</b>	<b>108,370</b>	<b>111,564</b>

Source: company reports and FBW estimates

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***Important Disclosures and Analyst Certification***

At the time of this report, Ferris, Baker Watts, Inc. makes a market in the shares of this company.

Prices herein are as of the close of November 8, 2007.

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Analyst Certification: I, Matthew Robison, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject company and its underlying securities. I further certify that I have not and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendation(s) in this research report.

**Ratings Distribution & Investment Banking Disclosure**

<b>Rating</b>	<b>Ratings Distribution<sup>^</sup></b>	<b>Investment Banking<sup>*</sup></b>
Buy-rated	56%	21%
Hold (Neutral)-rated	38%	8%
Sell-rated	3%	0%

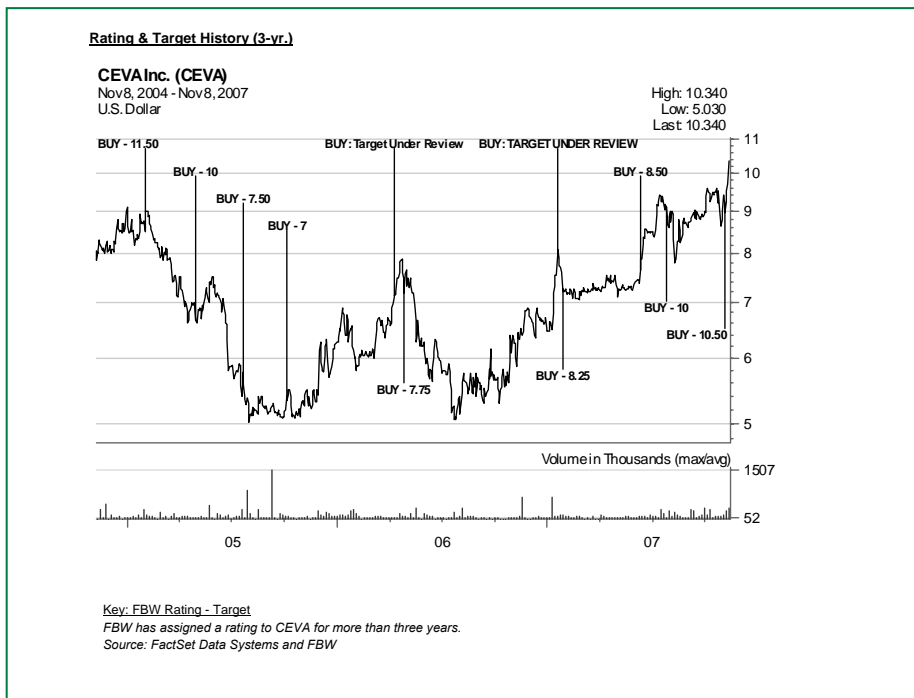
<sup>^</sup> Percentage of all FBW-covered stocks assigned an equivalent Buy, Hold, or Sell rating.

<sup>\*</sup> Percentage of companies within FBW-rated Buy, Neutral (Hold), and Sell categories for which FBW or an associated firm provided investment banking services within the past 12 months.

Data as of 9/30/07



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To request further information regarding the companies discussed in this report, readers may send an email to [info@fbw.com](mailto:info@fbw.com) or may write to the Ferris, Baker Watts, Inc. Research Department, 100 Light Street 8th Floor, Baltimore MD 21202.

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