



Headquarters

Austin, TX

Employees

Approximately 100

Fiscal Year End

October 31

Listing

CRDS (NASDAQCM)

SUMMARY

Below are some of our recent findings relating to Crossroads Systems, Inc. (“Crossroads” or the “Company”). Crossroads is entering the commercialization phase of StrongBox, a network-attached storage (“NAS”) appliance that works with the 5th generation of the linear tape-open (“LTO”) standard. LTO-5 tapes feature the Linear Tape File System (“LTFS”).

StrongBox Competition

In June 2012, Quantum Corporation (“Quantum”) released a product called Scalar LTFS, which it marketed as a direct competitor to Crossroads’ StrongBox appliance. We have assessed Scalar LTFS and found that, although it does provide some NAS functionality, Scalar does not match StrongBox with respect to performance. Overall, we find that Crossroads should have ample room to differentiate StrongBox from Scalar LTFS in the marketplace.

Crossroads’ Intellectual Property Position

Crossroads has recently filed (or is in the process of filing) 14 new patent applications that focus on its StrongBox product. We have assessed these applications and believe that they will strengthen the Company’s already solid IP position, as they will provide broad coverage over several aspects of StrongBox’s functionality. We also believe these new applications demonstrate that Crossroads has a strong bench of qualified inventors, and confirm the Company’s broad, well-structured approach to IP development.

Go-to-Market Strategy

Crossroads’ management has provided guidance that its focus on direct sales is an opportunistic one intended at capturing early revenue opportunities, and not a reconfiguration of its long-term plan. The Company still intends to utilize original equipment manufacturer (“OEM”) and value-added reseller (“VAR”) sales channels going forward.

Price Performance



	YTD	3m	6m	12m
Return	-27.75%	-36.33%	-26.18%	-44.20%

Last Price	\$3.75
Date of Price	7/18/12
52-week Range	\$3.20 - \$8.00
Shares Outstanding (mm)	11.05

ANALYST INFORMATION

Ankur Desai

Director of Investment Research

MDB Capital Group

310-526-5036

adesai@mdb.com

Please read the disclosures beginning on page 9 for important required information, including analyst certification.

Details

Quantum Scalar LTFS

In April 2012, Quantum released a product called Scalar LTFS. Quantum’s marketing materials positioned it as a competitor to StrongBox; in our initiation report dated June 1, 2012, we indicated that we would continue to gather information about Scalar LTFS to determine the extent of the threat the product posed to Crossroads. We have now been able to review the features of Scalar LTFS in greater detail, and find that Crossroads has ample room to differentiate it from StrongBox with respect to product performance.

Both Crossroads’ StrongBox and Quantum’s Scalar LTFS are appliances (consisting of both hardware and software) that work with LTO-5 tapes, which use LTFS formats. LTFS divides LTO-5 media into two partitions: a file system index partition (which indicates the contents of the tape) and a content partition.

Despite the surface similarities, however, there are certain critical product features that distinguish StrongBox from Scalar LTFS. StrongBox provides simultaneous read/write access for multiple users, meaning that many different people may access many different files in the same library at the same time. Though Scalar LTFS offers a NAS-like front end, it limits simultaneous access to the number of drives that are in the library. For instance, if a library has two drives (as is typical) and three people want files from three different tapes in that library, Scalar LTFS can only satisfy two of the requests—the third person would have to wait until one of the two drives in the library is empty.

In addition, StrongBox can scale up to much larger data environments than Scalar LTFS. Scalar LTFS is limited to accessing approximately 10 petabytes of data. StrongBox can access over 100 times that much, or over an exabyte of data. We view this as important, as we see a cross-industry trend in analyzing “big data,” by which we mean using sophisticated analytical tools to parse massive amounts of information. For example, state planners in New Jersey are using huge amounts of cellphone and GPS data to analyze traffic patterns. The online marketing firm Genome (formerly Interclick) is analyzing patterns in hundreds of millions of search queries to determine optimal advertising content and placement in pre-roll and banner advertising. AstraZeneca is combining medical claims data with clinical data to uncover correlations that might improve patient health outcomes. In this environment, we believe that StrongBox’s data scalability advantage over Scalar LTFS is material.

StrongBox’s hard disk drive front end stubs files in an archive in a way that provides other benefits. For example, this practice enables a virtualized view of the files in the archive, which provides a more user-friendly experience. It also means that the user sees a persistent view of the files, meaning that the user will see files in the archive whether or not the files are on the disk that is currently in the drive. Unlike StrongBox, Scalar LTFS does not provide a virtualized view of the files, nor does it provide a persistent view of the entire archive.

StrongBox has several other features that Scalar LTFS does not have. StrongBox monitors both the media and server hardware, and provides active, constant updates as to system health. StrongBox also offers enhanced security features, including network-wide authentication and encrypted connection to web browsers.

Details

In addition, StrongBox validates the LTFS index partition and performs self-healing and tamper-checking functions to maintain the integrity of data stored to LTO tape.

Finally, Crossroads continues to work on developing StrongBox to add still more features. We are convinced that StrongBox is significantly more sophisticated technologically than Quantum’s offering, and believe that Crossroads has ample room to differentiate its product from Scalar LTFS.

IP Position

In our initiation report dated June 1, 2012, we indicated that we would continue to gather information regarding Crossroads’ intellectual property position and strategy. Crossroads has provided us with 14 U.S. patent applications related to StrongBox’s LTFS technology; of these, 8 were filed between May 2011 and April 2012, and 6 have yet to be filed. We have reviewed these applications and believe they effectively cover the key features of StrongBox.

The new patent applications cover several system aspects including error correction, flexibility, and performance, and appear to map closely to the product’s stated features and functionality. Therefore, we believe that, once these patents are granted, Crossroads will be in a strong position to protect StrongBox’s competitive advantage. Further, we believe this confirms Crossroads’ broad, well-structured approach to IP development.

Finally, we note that several different inventors were credited with the new applications, which is a good sign, as it means the Company has a deep bench of inventors and little “key man” risk.

Go-to-Market Strategy

Our recent conversations with Crossroads’ management have indicated that the Company’s recent shift towards direct sales is primarily an opportunistic capture of early revenue opportunities. Crossroads management has indicated that its go-to-market strategy continues to track to its previous long-term plan, and that the Company still intends to utilize OEM and VAR sales channels in the future. We will continue to monitor Crossroads’ sales activities, including its sales strategy and go-to-market approach.

Risk Factors

Competitive Risk

The data storage market is very competitive, and includes large enterprise level players in both tape-based and disk-based storage solutions working to develop and enhance new technologies. Data storage players include both LTFS vendors (such as IBM and Quantum) as well as traditional, disk-based hierarchical storage management (“HSM”) vendors.

As we noted in our initiation report dated June 1, 2012, we believe that Crossroads has a significant technological advantage over its competitors in both the LTO and HSM spaces. The LTO players, in general, have solutions that do not perform as strongly as StrongBox (see “Quantum Scalar LTFS,” above, for an assessment of some of the differences between StrongBox and one other LTFS product). The HSM players tend to provide proprietary solutions, which can cause significant pain for customers who want to migrate their data from one system to another.

However, the storage business is an important one for many of these large players, so we expect they will exert their market power and resources to defend and grow their market position. If Crossroads is able to generate positive momentum by rapidly winning new customers, that would serve to diminish this risk.

Customer Acquisition Risk

Enterprise customers may be reluctant to award a major contract to a company as small as Crossroads. However, we note that Crossroads’ recent channel partnerships with Fujitsu and Fujifilm mitigate this risk somewhat, by providing significant technology validation and putting the face of a larger, more established company on Crossroads’ technology.

Marketing Risk

Crossroads will have to make a compelling case differentiating StrongBox from the other LTFS and HSM products in order to gain traction in the marketplace. If the Company is unable to educate its target customers on the benefits of its technological advantage, the value of that advantage may diminish.

Sales Risk

Crossroads is currently in the process of scaling up its sales force to commercialize StrongBox. There is a risk that the Company will be unable to adequately staff, train, and deploy this sales force in a timely manner.

Financing Risk

Though we do not believe that the Company will need to significantly increase its capital expenditures to support the growth of StrongBox, it will need to increase operating expenses build its sales force. As a result, there is the possibility that the Company will require additional financing in the coming year to fund this growth. Crossroads is pursuing a sale of some key data storage patents for its legacy products (the “972 Patent Family”), which may be able provide this growth capital.

Risk Factors

Management Risk

The Company's management has demonstrated its strength in the development phase of its technology. However, investors should note the risks inherent in transitioning management focus from development to commercialization.

Licensing Risk

Crossroads is currently involved as plaintiff in two separate patent lawsuits regarding the 972 Patent Family. A negative judgment in these lawsuits may diminish its ability to further secure licensing revenues and impair the planned sale of the 972 Patent Family.

Key Customer Risk

A significant portion of Crossroads' current revenue comes from Hewlett-Packard ("HP"). Sales to HP accounted for 71.3% of the Company's revenues in fiscal 2011; approximately half of that revenue comes from IP licensing and royalties for Crossroads' legacy router technology, and the other half comes from sales of white-label SPHiNX boxes that are branded with HP logos. If HP discontinues either of these businesses, Crossroads' financial position could suffer. However, Crossroads management has provided guidance that a large percentage of these revenues comes from maintenance revenue from products already sold, so these cash flows are safer than revenues based solely on new sales. In addition, if Crossroads is able to effectively commercialize StrongBox, the percentage of its revenues that come from HP should decline, which would mitigate this risk.

Disruptive Technology Risk

Although Crossroads has developed a strong solution to the current data storage problem based on LTO-5, emerging technologies may still disrupt the industry. For example, cloud storage may disrupt the current space, since the providers of cloud storage (e.g., Amazon) will be able to choose what storage medium they want to use in their data centers. This would give these providers a large amount of customer power in the storage industry, which would increase risk for all providers in the space. As cloud storage gains market share, the choices those cloud providers make could have a massive impact on the market. (We do also note, however, that this concentration of buyer power might also be considered an opportunity to an emerging player such as Crossroads.)

We also note that the storage industry is a place of significant innovation, which means there is risk that an altogether new technology might disrupt the way we think about storage altogether.

Crossroads Systems, Inc.: Historical Balance Sheet														
(\$ in thousands)	1Q09	2Q09	3Q09	4Q09	1Q10	2Q10	3Q10	4Q10	1Q11	2Q11	3Q11	4Q11	1Q12	2Q12
Assets														
Cash & Near Cash Items	5,888	5,285	5,623	5,297	5,851	6,588	6,152	13,811	14,703	8,513	4,591	7,336	7,227	9,544
Short term Investments	-	-	-	-	-	-	-	-	-	4,200	4,864	3,385	1,992	350
Accounts & Notes Receivable	4,173	3,758	3,480	5,124	2,124	2,452	2,817	5,607	2,953	2,840	2,599	2,659	2,943	2,343
Net Inventories	252	155	147	111	91	106	68	93	167	164	287	188	350	284
Other Current Assets	257	350	262	423	424	299	304	293	227	1,286	872	297	272	310
Total Current Assets	10,570	9,548	9,512	10,955	8,490	9,425	9,341	19,804	18,050	17,003	13,213	13,865	12,784	12,831
Net Fixed Assets	1,283	1,107	986	830	723	653	596	575	610	1,188	1,262	1,320	1,274	1,474
Net Intangible Assets	2,297	2,032	1,767	1,502	1,237	972	707	739	427	204	157	110	63	16
Investment in Subsidiaries	968	968	940	940	940	940	940	-	-	-	-	-	-	-
Other Long-Term Assets	75	69	69	69	57	56	57	60	55	57	64	56	34	38
Total Long-Term Assets	4,623	4,176	3,762	3,341	2,957	2,621	2,300	1,374	1,092	1,449	1,483	1,486	1,371	1,528
Total Assets	15,193	13,724	13,274	14,296	11,447	12,046	11,641	21,178	19,142	18,452	14,696	15,351	14,155	14,359
Liabilities & Shareholders' Equity														
Accounts Payable	889	864	1,030	1,036	550	1,073	884	990	663	1,803	1,128	2,228	821	1,060
Accrued Expenses	1,381	1,264	1,629	1,877	1,209	1,436	1,459	2,271	1,617	1,524	1,612	2,156	1,675	2,579
Accrued Warranty Costs	30	28	22	18	16	19	28	-	-	-	-	-	-	-
Deferred Revenue	261	362	333	199	185	307	1,510	1,517	1,250	2,315	1,567	1,009	1,528	1,437
Other Short-Term Liabilities	2,024	2,024	1,973	1,973	1,973	1,973	1,973	1,973	1,973	1,973	1,973	1,973	2,597	2,927
Total Current Liabilities	4,585	4,542	4,987	5,103	3,933	4,808	5,854	6,751	5,503	7,615	6,280	7,366	6,621	8,003
Long-Term Liabilities	-	43	81	59	110	105	88	103	112	35	127	126	1,629	2,134
Total Long-Term Liabilities	45	43	81	59	110	105	88	103	112	35	127	126	1,629	2,134
Total Liabilities	4,630	4,585	5,068	5,162	4,043	4,913	5,942	6,854	5,615	7,650	6,407	7,492	8,250	10,137
Total Equity	10,563	9,139	8,206	9,134	7,404	7,133	5,699	14,324	13,527	10,802	8,289	7,859	5,905	4,222
Total Liabilities & Equity	15,193	13,724	13,274	14,296	11,447	12,046	11,641	21,178	19,142	18,452	14,696	15,351	14,155	14,359

Crossroads Systems, Inc: Historical Income Statement

(\$ in thousands, except per share data)	1Q09A	2Q09A	3Q09	4Q09	FY09	1Q10	2Q10	3Q10	4Q10	FY10	1Q11	2Q11	3Q11	4Q11	FY11	1Q12	2Q12
Total Revenue	3,246	3,737	3,861	6,004	16,848	2,722	5,043	3,159	5,444	16,368	3,601	2,577	2,577	6,232	14,987	2,579	3,453
Cost of Revenue	653	572	594	848	2,667	265	1,071	429	727	2,492	503	367	297	1,498	2,665	317	392
Gross Profit	2,593	3,165	3,267	5,156	14,181	2,457	3,972	2,730	4,717	13,876	3,098	2,210	2,280	4,734	12,322	2,262	3,061
Sales and marketing	1,564	1,453	1,164	1,210	5,391	1,323	1,322	1,217	1,409	5,271	1,215	1,175	1,295	1,533	5,218	1,409	1,534
Research and development	2,487	2,267	2,320	2,309	9,383	2,280	2,185	2,129	2,312	8,906	2,117	2,820	2,917	2,847	10,701	2,757	2,662
General and administrative	233	559	460	572	1,824	662	570	579	812	2,923	647	835	665	1,010	3,157	762	833
FAS 123R and stock based compensation	283	118	191	-	592	-	-	-	-	-	-	-	-	-	-	-	-
Business restructuring expense	217	-	-	-	217	-	-	-	-	-	-	-	-	-	-	-	-
Amortization of intangibles	284	265	265	265	1,079	312	312	312	312	1,248	312	224	47	48	631	47	47
Total Operating Expenses	5,068	4,662	4,400	4,356	18,486	4,577	4,389	4,237	4,845	18,048	4,291	5,054	4,924	5,438	19,707	4,975	5,076
Operating Income (Loss)	(2,475)	(1,497)	(1,133)	800	(4,305)	(2,120)	(417)	(1,507)	(128)	(4,172)	(1,193)	(2,844)	(2,644)	(704)	(7,385)	(2,713)	(2,015)
Interest income (expense), net	(22)	(48)	(7)	(25)	(102)	(24)	(23)	(24)	(42)	(113)	(31)	(24)	(29)	(20)	(104)	(50)	(53)
Other income (expense)	-	-	-	(0)	(0)	-	-	-	(1)	(1)	(7)	-	-	1	(6)	14	1
Income (Loss) before income taxes	(2,497)	(1,545)	(1,140)	775	(4,407)	(2,144)	(440)	(1,531)	(171)	(4,286)	(1,231)	(2,868)	(2,673)	(723)	(7,495)	(2,749)	(2,067)
Provision for (benefit from) income taxes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net income (Loss)	(2,497)	(1,545)	(1,140)	775	(4,407)	(2,144)	(440)	(1,531)	(171)	(4,286)	(1,231)	(2,868)	(2,673)	(723)	(7,495)	(2,749)	(2,067)
EPS diluted	(\$0.35)	(\$0.21)	(\$0.16)	\$0.11	(\$0.61)	(\$0.29)	(\$0.06)	(\$0.20)	(\$0.02)	(\$0.56)	(\$0.12)	(\$0.27)	(\$0.25)	(\$0.07)	(\$0.69)	(\$0.25)	(\$0.19)
Weighted Average Shares fully diluted	7,198	7,242	7,276	7,349	7,258	7,300	7,533	7,607	7,834	7,586	10,669	10,711	10,868	10,908	10,820	10,974	11,048

Crossroads Systems, Inc.: Historical Statement of Cash Flows

(\$ in thousands, except per share data)	1009	2009	3009	4009	FY09	1010	2010	3010	4010	FY10	1011	2011	3011	4011	FY11	1012	2012
Cash From Operating Activities																	
Net Income	(2,497)	(1,545)	(1,140)	775	(4,407)	(2,144)	(440)	(1,531)	(171)	(4,286)	(1,231)	(2,868)	(2,673)	(724)	(7,496)	(2,749)	(2,067)
Depreciation & Amortization	232	224	202	181	839	163	148	127	115	553	100	127	149	159	535	161	175
Business restructuring expenses	217	-	-	(217)	-	-	-	-	-	-	-	-	-	-	-	-	-
Amortization of intangible assets	284	265	265	265	1,079	312	312	312	312	1,248	312	224	46	48	630	47	47
Loss (gain) on disposal of fixed assets	-	-	1	-	1	-	-	-	-	-	6	-	-	-	6	(15)	-
Stock based compensation	283	119	190	124	716	392	124	55	193	764	82	83	137	575	877	763	416
Provision for doubtful accounts receivable	1	1	-	(72)	(70)	(12)	(2)	(2)	-	(16)	-	1	-	(9)	(8)	33	(3)
Provision for excess and obsolete inventory	24	32	51	1	108	(2)	(4)	28	(2)	20	-	(3)	4	4	5	-	-
Changes in Non Cash Capital	380	250	704	(1,569)	(235)	2,174	748	729	(2,113)	1,538	1,856	707	(558)	1,564	3,569	(1,480)	1,539
Cash From Operations	(1,076)	(654)	273	(512)	(1,969)	883	886	(282)	(1,666)	(179)	1,125	(1,729)	(2,895)	1,617	(1,882)	(3,240)	107
Cash From Investing Activities																	
Purchase of Property and Equipment	(71)	(53)	(79)	(13)	(216)	(65)	(78)	(69)	(88)	(320)	(142)	(702)	(223)	(222)	(1,289)	(119)	(371)
Purchase of held-to-maturity investments	-	-	-	-	-	-	-	-	-	-	-	(4,511)	(2,159)	-	(6,970)	(185)	-
Maturity of held-to-maturity investments	-	-	-	-	-	-	-	-	-	-	-	311	1,495	1,478	3,284	1,578	1,642
Cash From Investing Activities	(71)	(53)	(79)	(13)	(216)	(65)	(78)	(69)	(88)	(320)	(142)	(4,902)	(887)	1,256	(4,675)	1,274	1,271
Cash from Financing Activities																	
Proceeds from issuance of common stock	1	-	-	-	1	-	-	-	9,178	9,178	1	58	3	82	144	34	107
Proceeds from borrowing on term loan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,000	1,000
Paydown of Line of Credit	-	-	(51)	-	(51)	-	-	-	-	-	-	-	-	-	-	-	-
Cash from Financing Activities	1	-	(51)	-	(50)	-	-	-	9,178	9,178	1	58	3	82	144	2,034	910
Effect of exchange rate on cash	(52)	104	195	198	445	(244)	(92)	(64)	235	(165)	(92)	383	(144)	(210)	(63)	(177)	29
Net Changes in Cash	(1,198)	(603)	338	(327)	(1,790)	554	716	(415)	7,659	8,514	892	(6,190)	(3,923)	2,745	(6,476)	(109)	2,317

Disclosures

Analyst Certification

The analyst whose name appears on page 1 of this report certifies that the views expressed herein accurately reflect the analyst's personal views as to the subject securities and issuers, and further certifies that no part of such analyst's compensation was, is, or will be, directly or indirectly, related to the specific views expressed by the analyst in the report.

The analyst responsible for this report does not hold a financial interest in the equity securities of the company covered in this report. The analyst responsible for this report has received and is eligible to receive compensation, including bonus compensation, based on the overall operating revenues of MDB Capital Group LLC ("MDB"), including revenues generated by MDB's investment banking department.

Important Disclosures

MDB employs the following foreign research associate(s) in Nicaragua that contributed partially to the preparation of this report: Scarlett Hooker, Ana Jimenez Saavedra. MDB's foreign research associates may or may not be registered as research analysts with FINRA and/or NYSE.

This report does not include valuation methodology, as MDB has not issued a rating or a price target in this report. General risk factors appear on pages 4-5.

MDB does not make markets in the securities of the company covered in this report. MDB seeks to perform investment banking and other services for the company covered in this report. MDB performed the following services in the previous twelve months for this company: patent strategy consulting and development. MDB expects to seek compensation

from this company within the next three months for: patent strategy consulting and development.

MDB currently has a warrant to purchase common stock of the company, which represents at least 1% beneficial ownership of the company's common stock. From time to time, MDB, its affiliated entities and their respective directors, officers, employees or members of their immediate families may have a long or short position in the securities mentioned in this report. These securities may be sold to or purchased from customers or others by MDB acting as principal or agent.

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable, but is not guaranteed as to accuracy and does not purport to be complete. Because of individual client objectives, the report should not be construed as advice designed to meet the particular investment needs of any investor.

Any opinions expressed herein are subject to change. The report is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned.

This publication has been issued and approved by MDB under a compliance routine approved by MDB for distribution to non-private clients.

MDB is a member of FINRA and SIPC.

Copyright 2012 MDB Capital Group LLC All rights reserved.

Headquarters

401 Wilshire Boulevard
Suite 1020
Santa Monica, CA 90401
310.526.5000

New York

1350 Avenue of the Americas
2nd Floor
New York, NY 10019
310.526.5000

Managua

Embajada de Mexico,
una cuadra arriba,
a la esquina, casa #100
Managua, Nicaragua
310.526.5000



The IP Investment Bank

SEEING VALUE OTHERS DO NOT. CREATING VALUE OTHERS CAN NOT.