



# Capstone Partners

## IMAGE RECOGNITION

Q3 2016

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### MERGER & ACQUISITION ACTIVITY

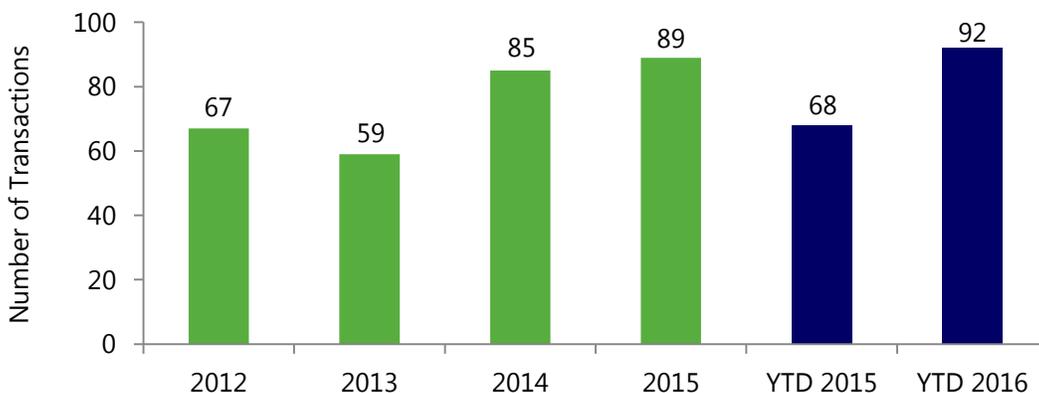
Image recognition products and services have continued to be a high-growth area in the security industry. Capturing video footage is no longer enough; today's surveillance cameras are expected to process images not only to provide timely feedback but also to provide actionable intelligence. Recently, this was demonstrated by law enforcement agents in analyzing surveillance video to accurately identify the suspect behind the bombings in Manhattan and New Jersey. The video surveillance segment of the market still remains largely fragmented, yet has seen some consolidation, and the top fifteen vendors now account for 55.0% of sector revenues, according to HIS Technology (IHS). In addition, commoditization of video hardware has led buyers to particularly seek software companies in order to differentiate their product portfolios.

Given market conditions and industry trends, we expect M&A activity to remain strong in 2016 with transactions continuing to receive premium valuations. We expect that continuing growth of the security industry coupled with the development and implementation of technological advancements will drive sector acquisition activity in the future.

### INDUSTRY OUTLOOK

Security has become a huge risk for organizations and video surveillance represents the most important hardware component in the physical security market. Terrorist threats in the US and abroad will increase demand for surveillance by the government, particularly in the military, the Department of Homeland Security, US Customs and Border Protection agencies. Each week, an estimated 30 million surveillance cameras generate over 4 billion hours of footage in the US, leaving security professionals with the difficult tasks of processing and storing massive amounts of data. Image recognition is an attractive and growing subset in this market.

### M&A Activity: Security Solutions



YTD ended as of September 15, 2016

Source: Capital IQ and Capstone Partners LLC Research

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## IMAGE RECOGNITION TRENDS AND DRIVERS

There are a number of drivers and trends that have had a significant impact on recent Image Recognition deal activity. Capstone has identified a few of these key factors and has outlined them below.

- ▶ **Increased collection of surveillance footage** – As organizations collect vast amounts of footage, the traditional model of hiring operators to monitor footage is no longer sufficient. Companies have begun to develop technology to automate this process to identify threats and facilitate a response in real-time. This is especially true among government, city surveillance and transportation end users. IHS forecasts that these three verticals will account for 58.0% of all storage expenditures in 2018, due to large surveillance camera networks and a need to store footage for longer periods of time. Video content analysis will be particularly useful to these industries in decreasing operational costs and enhancing the ability to detect threats. The importance of video surveillance technology to buyers is exemplified by Convergent Technology's recent acquisition of Total Recall, a designer of video surveillance solutions, and in general by the success that law enforcement officials are enjoying as a result of the increased availability of video recordings.
- ▶ **Decreased costs and increased adoption of high resolution cameras** – The shift from analog to IP-based video surveillance has been occurring since 1996 when the first network camera was introduced. However, long replacement cycles and the higher perceived cost of IP cameras have delayed adoption of newer camera technologies. The number of network cameras installed globally increased by 47.0% to 118 million from 2015 to 2016, according to IHS. In contrast, while the installed base of analog cameras still outnumbers IP-based cameras, its market presence only increased by 2.0% during the same timeframe, from 205 to 208 million. Increased implementation of IP cameras allows for video analytics to enhance security solutions. Additionally, more low-cost high-definition IP security cameras are available, which have the resolution required to support applications such as facial and license plate recognition. One example of this growing trend is the acquisition of Citilog, a provider of intelligent real-time traffic video monitoring, by Axis Communications. The deal complements Axis's traffic safety offerings and gives it increased capabilities in this growing segment.
- ▶ **Maturation of image recognition technologies** – Since its inception, image recognition has shown promise in solving challenges in the utilization of video surveillance for security purposes. Video content analysis (VCA) provides the ability to detect targeted behaviors, patterns and areas of interest to provide instant alerts. However, early adoption of image recognition technology was constrained by its high costs and high levels of false alarms. As image recognition capabilities have improved dramatically in recent years, the number of false alerts has been reduced. Video analytic capabilities have expanded to utilize a broad variety of applications, including character and inscription recognition, facial recognition, density of people, behavior detection, object tracking, illegally parked cars and smoke recognition.

## NOTABLE IMAGE RECOGNITION TRANSACTIONS

Several notable transactions have already been completed or announced in the Image Recognition industry in the recent term. Select transactions are outlined below, followed by a more comprehensive list on the following table.

- ▶ **FLIR furthers visible imaging product offerings by acquiring DVTel and ISD (November 2015 and June 2016)** – FLIR Systems, Inc. (FLIR) acquired DVTel on November 30, 2015 for approximately \$92 million in cash. FLIR has extensive thermal and visual offerings of security cameras and security systems. FLIR first entered the visible imaging surveillance market through its acquisition of Lorex Technology in 2012, and the acquisition of DVTel represented an opportunity to provide a broader product offering in the mid and high-end security sectors. DVTel develops integrated video management software (VMS), advanced video analytics software, visible and thermal security cameras, and related servers and encoders. The acquisition of DVTel will allow FLIR to provide full-spectrum end-to-end security systems to a wide variety of end users. Andy Teich, President and CEO of FLIR, commented, “DVTel’s extensive video analytics and VMS capability will position us well to offer differentiated and highly accurate perimeter security solutions.” Most recently, FLIR announced that on June 3, 2016, it had also acquired Innovative Security Designs (ISD), an expert in visible imaging cameras, from rival Digital Watchdog.
- ▶ **Canon enters video surveillance market through acquisitions of Axis and Milestone (June 2014 and May 2015)** – Canon, Inc. (Canon) acquired Denmark-based Milestone Systems A/S (Milestone), a provider of open platform video management software in June 2014. Rokus van Iperen, President & CEO of Canon Europe, Middle East and Africa, said “Canon is aiming to take a leadership position in network video surveillance.” The transaction has an enterprise value of \$187.4 million, representing a 2.4x revenue multiple for the prior twelve months. In May 2015, Canon acquired Axis AB, the global leader in network video solutions, for an enterprise value of \$2.7 billion. The transaction represented revenue and EBITDA multiples for the prior twelve months of 4.1x and 26.0x, respectively.
- ▶ **Avigilon acquires ObjectVideo patents and VideoIQ to further video analytics offerings (December 2014)** – In December 2014, Avigilon Corporation (Avigilon), a provider of video surveillance and access control software and equipment for the worldwide security market, acquired ObjectVideo’s IP portfolio of 76 patents and 50 patent applications related to video analytics software for \$80.3 million. Previously, Avigilon acquired VideoIQ in January 2014 for \$31.3 million, representing a LTM multiple of 2.8x revenue. VideoIQ manufactures cameras and video analytics for detecting and classifying people, vehicles, or suspicious objects in real time. VideoIQ’s video analytics intellectual property portfolio includes 23 patents. Alexander Fernandes, President & CEO of Avigilon, commented, “As we integrate VideoIQ’s technology in the Avigilon system, we will expand our end-to-end high-definition surveillance solutions to include robust analytics capabilities, giving users the ability to prevent crime proactively and more effectively analyze large amounts of data.”

**IMAGE RECOGNITION: SELECT M&A TRANSACTIONS**

Ann. Date	Target	Acquirer	Target Business Description	Enterprise Value (mm)	EV / LTM Revenue	EBITDA
08/10/16	LenSec	JValley Software	Provides IP-based video surveillance solutions to local government, law enforcement and education markets.	-	-	-
08/08/16	Eutecus	Sensity Systems	Develops high-throughput video analytics for commercial and military applications.	-	-	-
07/11/16	AllGo Embedded	Visteon	Develops software solutions including video analytics for automotive, consumer and security markets.	\$22.0	-	-
07/06/16	Simulation Systems	Costain Group	Manufactures electronics including digital and analog CCTV equipment for traffic control and surveillance.	\$21.9	-	-
06/30/16	Spikenet Technology	BrainChip	Develops neural computing technology used in visual image recognition.	-	-	-
06/29/16	ID Scan Biometrics	GB Group	Develops document and identity verification software.	\$60.7	5.9x	14.1x
06/09/16	Innovative Security Designs	FLIR Systems	Provides edge based computing platform for security, surveillance and business optimization.	-	-	-
06/06/16	AssureTec Technologies	Acuant	Provides identity document authentication for government agencies.	-	-	-
05/26/16	Itseez	Intel	Provides computer vision software solutions including facial recognition and identification.	-	-	-
05/26/16	Next Wave	Envysion	Develops SaaS theft detection for the quick service restaurant industry.	-	-	-
05/02/16	Total Recall	Convergint Technologies	Provides video surveillance, identity verification and license plate recognition systems.	-	-	-
04/21/16	Morpho Detection	Smiths Group	Manufactures detection systems for high-risk organizations.	\$710.0	2.2x	10.1x
04/01/16	Aimetis	Senstar	Develops intelligent video management solutions for surveillance and license plate detection.	\$14.0	-	-
03/29/16	Mobotix	Konica Minolta	Develops video management software and smart IP cameras.	-	-	-
03/01/16	RSI Video Technologies	Honeywell	Provides security solutions, including integrated camera, illumination and motion sensor devices.	\$123.0	-	-
02/08/16	Quickservice Technologies	Panasonic Canada	Provides security cameras and video analytics solutions to quick service restaurants.	-	-	-
02/04/16	Xtralis	Honeywell	Develops remote monitoring, software applications and intelligence traffic detectors.	\$480.0	-	-
02/01/16	Citilog	Axis	Provides intelligent real-time video monitoring for traffic, transportation and security markets.	-	-	-
01/21/16	Group Techna	ACCEO Solutions	Develops mobile software products for law enforcement and public safety applications.	-	-	-
01/04/16	Dakota Security Systems	Convergint Technologies	Designs and manufactures security systems.	-	-	-
12/21/15	TeraLogics	Cubic	Provides video streaming, tagging and tracking software.	\$39.0	-	-
12/11/15	Brimtek	Digital Barriers	Provides surveillance systems and software solutions to security, law enforcement and military communities.	\$45.0	-	-
12/02/15	N2 Imaging Systems	UTC Aerospace Systems	Provides low power, visible and infrared imaging systems for use in surveillance and threat detection.	-	-	-

## IMAGE RECOGNITION: SELECT M&amp;A TRANSACTIONS (CONTINUED)

Ann. Date	Target	Acquirer	Target Business Description	Enterprise Value (mm)	EV / LTM Revenue	EBITDA
11/30/15	DVTel	FLIR Systems	Develops video surveillance solutions including cameras, servers, storage solutions and software.	\$92.3	-	-
11/23/15	JNU Global	The Value Co.	Manufactures security cameras.	\$68.9	1.8x	-
10/25/15	Diebold	Securitas	Provides electronic security services and products including video management and physical security.	\$350.0	1.1x	-
09/21/15	Eye3Data	Point Blank Enterprises	Manufactures IP surveillance, CCTV and camera products.	-	-	-
09/11/15	Linstar	IdentiSys	Provides incident command, access control, video surveillance and positive ID solutions.	-	-	-
09/10/15	Concurrent's Video Analytics	Verimatrix	Develops video analytics and monitoring solutions.	-	-	-
09/01/15	EyeLock	VOXX International	Develops iris-based identity technology for border control, access control and identity management.	\$28.0	-	-
08/03/15	Qognify	Battery Ventures	Develops video management systems for security and safety applications.	\$85.0	-	-
07/09/15	CitySync	TagMaster	Deploys automatic number plate systems and police systems for national security and parking solutions.	-	-	-
06/28/15	VIEVU	Safariland	Develops wearable video cameras and systems focused on the storage and management of video files.	-	-	-
06/10/15	Brivo Systems	Dean Drako	Provides cloud-based physical access control and video surveillance systems.	\$50.0	-	-
06/02/15	Cam Connections	Protection 1	Offers security services and loss prevention programs including video analytic solutions.	-	-	-
05/13/15	TVT Video Technologies	STATS	Provides video analytics technologies for MLB teams.	-	-	-
05/11/15	HD Protech	Wolfcom	Provides body worn cameras, LPR capture solutions and integrated security enclosures.	-	-	-
04/07/15	SeeTec	On-Net Surveillance	Provides video management and analytics software solutions.	-	-	-
02/10/15	Axis	Canon	Offers network cameras, accessories, video management software and analytics.	\$2,800.0	41.2x	26.0x
02/03/15	Video Insight	Panasonic	Develops IP video surveillance systems including software, hardware and cameras.	-	-	-
12/17/14	ObjectVideo	Avigilon	Provides intelligent video software for security and public safety applications.	\$83.0	42.9x	-
11/05/14	Blackbird Technologies	Raytheon	Provides technology solutions for defense, intelligence and law enforcement communities.	\$420.0	-	-
07/07/14	Milestone Systems	Canon Europe	Develops open platform video management software.	\$187.0	2.4x	-
06/06/14	CohuHD	Costar Technologies	Develops HD video surveillance cameras for traffic, security and critical infrastructure applications.	\$10.0	0.6x	-
05/01/14	Intelligent Video Systems	RoadPixel	Provides automotive license plate recognition software.	-	-	-
01/13/14	VideoIQ	Avigilon	Manufactures cameras and video analytics appliances.	\$31.3	2.8x	-

**CAPSTONE PARTNERS: SELECT IMAGE RECOGNITION TRANSACTIONS**

Capstone Partners has successfully completed several transactions in the security industry, including the sale of businesses, debt financing and valuation advisory services, as well as acquisition (buyside) services. Capstone's experience in this sector includes projects for security integrators, security product manufacturers, software developers and network security providers serving the commercial, residential and government/military markets. Capstone's professionals have completed transactions and/or developed sector-specific expertise in the following areas:

- ▶ Aerospace & Defense
- ▶ Communications/Electronics
- ▶ Homeland Security
- ▶ Intelligence & Cybersecurity
- ▶ IT & Engineering Services
- ▶ Logistics & Support Services
- ▶ Military Equipment
- ▶ Protection & Weaponry
- ▶ Public Safety Software
- ▶ Simulation & Training
- ▶ Cloud Software & Services
- ▶ Consumer Electronics
- ▶ Consumer Internet & E-Commerce
- ▶ Data Analytics & Business Intelligence
- ▶ Digital Content & Media
- ▶ Enterprise SaaS/Software
- ▶ IT & Data Center Infrastructure
- ▶ IT Security
- ▶ Mobile/Wireless
- ▶ Telecom Equipment & Services

<p><b>CONFIDENTIAL</b></p> <p>Corporate Sale (IN PROCESS)</p> <p><b>TAMPER-EVIDENT SECURITY PRODUCTS MANUFACTURER</b></p>	<p><b>CONFIDENTIAL</b></p> <p>Corporate Sale (IN PROCESS)</p> <p><b>CUSTOM DESIGNER OF SECURITY SYSTEMS &amp; PRODUCTS</b></p>	<p><b>CONFIDENTIAL</b></p> <p>Corporate Sale (IN PROCESS)</p> <p><b>AUDIO/VIDEO &amp; IP CONNECTIVITY PRODUCTS</b></p>	<p><b>CONFIDENTIAL</b></p> <p>Corporate Sale (IN PROCESS)</p> <p><b>IT SERVICES &amp; SECURITY SYSTEM INTEGRATOR</b></p>
 <p>has been acquired by</p> 	 <p>has been acquired by</p> 	<p><b>Command System, Inc.</b></p> <p>has been acquired by</p> 	 <p>has been acquired by</p> 
 <p>has been acquired by</p> 	 <p>has been acquired by</p> 	 <p>has been acquired by</p> 	 <p>has been acquired by</p>  <p>a portfolio company of</p> 

## THE IMAGE RECOGNITION TEAM



**Ted Polk, Managing Director**  
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Ted is Managing Director and Head of the Central Region at Capstone, based out of Chicago. Prior to Capstone, Ted ran the corporate finance practice in the Central region for Morgan Stanley Smith Barney's Capital Strategies Group and its predecessor, Citi Capital Strategies. He has over 20 years of experience, having completed strategic sale and recapitalization transactions across a variety of industries. Ted is a frequent public speaker on the topic of business exits and recapitalizations of privately owned businesses. In 2008, Ted was recognized by The M&A Advisor for the Cross-Border Middle-Market Deal of the Year. In 2009, another of his transactions was recognized as the Middle-Market M&A Financing Deal of the Year, in 2011 he was recognized for lead-managing the Middle-Market Deal of the Year and he was most recently recognized for lead-managing the Professional Services Deal of the year in 2015. Previously, Mr. Polk worked at Valuemetrics, Inc. and in the Corporate Banking Group at The Bank of New York. Ted received his BSBA degree from Georgetown University and MBA from the University of Chicago. He is a Chartered Financial Analyst (CFA), a Series 7 and 63 Registered Securities Representative and a Series 24 Registered Securities Principal.



**Lisa Tolliver, Director**  
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Lisa has over 18 years of experience in the investment banking industry, primarily focused on advising private business owners in liquidity related transactions. Presently, Lisa is a Director in Capstone's Chicago office, supporting the management of the Central Region. Prior to Capstone, Ms. Tolliver worked in the Capital Strategies Group at Morgan Stanley Smith Barney, where she was involved in the evaluation, marketing and closing of numerous transactions across a wide range of industries. Specifically, Lisa has developed expertise within various industries including government and defense, software and technology, manufacturing and outsourced business services. Lisa received her BA on academic scholarship from Illinois State University and is a Series 7 and 63 Registered Securities Representative.



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Parker is an Associate in Capstone's Chicago office, working closely with private business owners to execute and optimize corporate finance transactions. Prior to joining Capstone, Parker was an Associate in Deloitte's Business Valuation practice, specializing in enterprise, equity and intangible asset valuations across multiple industries including consumer, industrials, manufacturing and healthcare. Parker received his BA in Finance from the University of Notre Dame.

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## ABOUT CAPSTONE PARTNERS

Capstone Partners LLC is a premier investment banking firm dedicated to serving the corporate finance needs of middle market business owners, investors and creditors. The firm provides M&A, corporate restructuring, private placement and financial advisory services. Headquartered in Boston, Capstone has offices in Chicago, London, Los Angeles, New York, Orange County, Philadelphia, San Diego, Silicon Valley and Tampa with an international presence that spans 450+ professionals in 70 offices across 31 countries.

**For more information  
about our expertise,  
please visit**

**[www.capstonellc.com](http://www.capstonellc.com)**



# Capstone Partners

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