

FOCUS Telecom  
Technology and Services Group  
**Enterprise-Focused  
Telecom Technology  
Quarterly**

**Fall 2017 Report**

Vol. 7, No. 4

**FOCUS**

**Strategic, Personal, Dedicated**

**Investment Banking**

**Investment Banking and Advisory Services**  
FOCUS Investment Banking LLC is a leading investment bank with specialized telecom technology and services expertise, concentrating on providing highly tailored services to emerging middle market and larger organizations in this sector:

**Mergers & Acquisition Advisory**  
**Corporate Development Consulting**  
**Strategic Partnering & Alliances**  
**Capital Financing, Debt & Equity**  
**Corporate Valuations**

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# Enterprise-Focused Telecom Technology Quarterly

By Richard Pierce, Managing Director and Telecom Technology and Services Team Leader, FOCUS Investment Banking LLC

FOCUS believes that the Enterprise-Focused Telecom Technology sector is one of the most exciting in Telecom. Businesses today have an unprecedented opportunity to enhance operating efficiency and reduce costs by converging separate voice and data networks, empowering remote and mobile workers, extending communications to harsh outdoor and industrial environments, enhancing customer service, and moving applications to a hosted or “cloud” environment.

However, to achieve these benefits, organizations must overcome a host of non-trivial challenges including bandwidth management, quality of service prioritization and monitoring, device proliferation and network security. While many of the largest players in the communications equipment industry are indeed helping to meet these challenges, we believe there is significant innovation among middle market technology providers and ample opportunities for them to create meaningful value for their shareholders. FOCUS is proud of its commitment to the Enterprise-Focused Telecom Technology sector and we are excited about the prospects for middle market companies in this space.

The FOCUS Telecom Technology and Services group consists of four professionals with a mix of backgrounds that include both C-level operating expertise and experience at leading middle market investment banks. The FOCUS Telecom team is uniquely qualified to help middle market clients reach their strategic objectives because the group:

- Devotes significant senior level resources to executing transactions for lower middle market clients,
- Has a breadth of knowledge that covers most segments of the telecom industry,

- Has bankers with C-level operating experience in the telecom industry,
- Has a proven transaction methodology for delivering results,
- Is equally comfortable with buy side and sell side M&A,
- Leverages an experienced team of research professionals, and
- Has a national presence with coverage of both east and west coasts.

## Sub Sector Definitions

**Enterprise Networking:** Enterprise-grade switches and routers (wireline and wireless), enterprise CPE, and application and bandwidth management tools such as WAN optimization and application acceleration.

**Industrial Networking and M2M:** Ruggedized equipment designed for communications in harsh environments as well as equipment utilized for machine-to-machine communications.

**Network Management:** Software used by enterprises to manage and monitor their voice communications and data networks.

**Network Security:** Software applications designed to identify and protect against a wide variety of network security-related threats.

**Unified Communications and Contact Center:** PBXs, videoconferencing-related products, and software products designed to enhance the efficiency of contact center networks.

# Summary Comments

## Public Markets

The FOCUS Enterprise-Focused Telecom Technology Index (EFTTI) bounced back strongly from a disappointing performance in our summer report to post a strong gain of 8.3% in our current three-month reporting period. Gains were broad-based, with four of our five EFTTI sub sectors in positive territory for the period. Sector gains handily outperformed the broader market as the S&P 500 and NASDAQ were up 4.3% and 6.0%, respectively, over the past three months. The EFTTI still trails the broader indices over the 12-month time frame. However, with a year-over-year gain of 16.5%, sector returns are still strong for the year. Sector multiples also are higher than they were a year ago. The revenue multiple for the EFTTI increased from 2.7x to 3.3x, while the sector EBITDA multiple increased from 11.3x to 13.6x.

## Enterprise Networking

The Enterprise Networking sub sector tied for this period's top performing sub sector with a three month gain of 9.0%. Strong gains in the sector are only possible when Cisco performs well, and in this case Cisco delivered with an 8.6% increase. Other companies that performed well this period include Arista Networks (up 33.9%) and Extreme Networks (up 36.5%). At the other end of the spectrum, wireless switching vendor Aerohive Networks was the only company in the sub sector to suffer a double-digit decline with a drop of nearly 16%. Looking at the full year period, the sub sector is up nearly 14% over the past 12 months. In addition to an 11.3% year-over-year gain at Cisco, three switching companies (Accton, Arista Networks, and Extreme Networks) all more than doubled their stock price over the past year. As one might expect, sub sector multiples now are higher than year-ago levels. Sub sector multiples now stand at 2.8x revenue and 10.1x EBITDA. This compares favorably to this time last year when revenue and EBITDA multiples stood at 2.4x and 8.7x, respectively.

## Industrial and M2M

The Industrial and M2M sub sector had a third straight reporting period with relatively flat performance, this time managing to eke out a gain of 0.2%. However, this modest change masks the fact that there was quite a bit of variability among the individual companies in the index. Netcomm Wireless, Numerex, Sierra Wireless, and Telit Communications all sported steep declines ranging from roughly 15% to nearly 40%. Conversely, Belden, CalAmp, and Inseego all exhibited double-digit gains. For the full year, the Industrial and M2M sub sector is up more than 20%. Once again, over this period the sub sector bifurcates into companies with steep gains and those with steep losses. Sub sector multiples also have held fairly steady

over the past year. The sub sector revenue multiple went from 1.5x a year ago to 1.6x currently, while the sub sector EBITDA multiple exhibited a similar small increase as it went from 11.8x to 12.3x.

## Network Management

The Network Management sub sector was another sub sector that held steady this period, as the sub sector dipped 0.3%. CA turned in a respectable 4.3% gain, but this was counterbalanced by double-digit losses at both MobileIron and NetScout. The sub sector is up 5.0% for the full year, which though positive, still makes it the worst performing sub sector in the EFTTI over the past 12 months. Multiples for the Network Management sub sector closed out the period at 3.1x revenue and 12.3x EBITDA. Both of these are increases from last year's multiples of 2.8x revenue and 11.4x EBITDA.

## Network Security

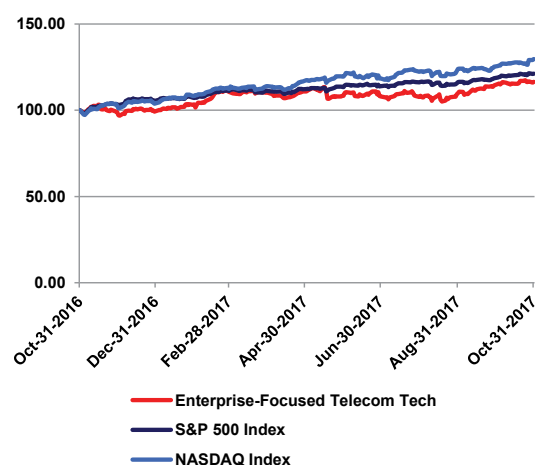
The 9.0% gain in the Network Security sub sector in our fall reporting period put it in a dead heat with Enterprise Networking for the best performing sub sector over the past three months. Gains were broad-based as 13 of the 16 companies in the index enjoyed a positive return. This included double-digit returns at five companies (Checkpoint, FireEye, Palo Alto Networks, Qualys, Rapid7, and Sophos Networks). The Network Security sub sector's full year return of 25.4% also is extremely strong, and places it behind only the Unified Communications and the Contact Center sub sector for the full-year period. Sub sector multiples continue to climb from what were already lofty levels. Network Security sub sector multiples closed out the period at 5.7x revenue and 42.5x EBITDA, both of which were higher than their counterparts from a year ago.

## Unified Communications and the Contact Center

The Unified Communications and the Contact Center sub sector slowed down a bit from our summer report, but still turned in a respectable 5.5% gain for this most recent three months. The main engine driving this increase was eGain, which was up more than 70% in the past three months. Five9 also was impressive with a gain of 14.4% over the same time period. On the downside, conferencing vendor ClearOne plummeted 25.8% as the market reacted negatively to the company's second quarter earnings report. Performance looks even better for the full-year period, with the sub sector boasting a 29.4% increase. This was good enough to make it the best performing sub sector in the EFTTI for the full-year period. Over the past year, the sub sector revenue multiple increased from 2.1x to 2.7x, while the sub sector EBITDA multiple jumped from 18.9x to 27.7x.

## Enterprise-Focused Telecom Technology: Public Market Summary

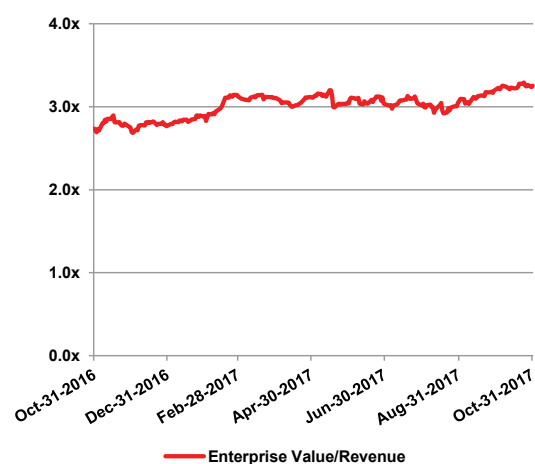
**Twelve Month Index Returns**



**Sector and Sub Sector Returns**

	12 Month	3 Month
Enterprise-Focused Telecom Tech	16.5%	8.3%
Enterprise Networking	13.7%	9.0%
Industrial and M2M	20.3%	0.2%
Network Management	5.0%	-0.3%
Network Security	25.4%	9.0%
Unified Comms & Contact Center	29.4%	5.5%
S&P 500	21.1%	4.3%
NASDAQ	29.7%	6.0%

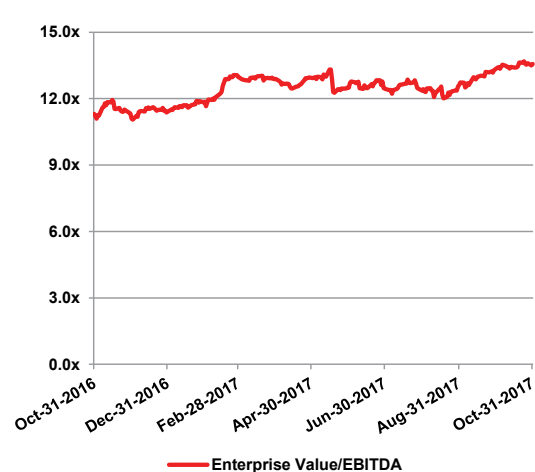
**Revenue Multiple Trends**



**Sector and Sub Sector Revenue Multiples**

	10/31/2017	10/31/2016
Enterprise-Focused Telecom Tech	3.3x	2.7x
Enterprise Networking	2.8x	2.4x
Industrial and M2M	1.6x	1.5x
Network Management	3.1x	2.8x
Network Security	5.7x	4.8x
Unified Comms & Contact Center	2.7x	2.1x

**EBITDA Multiple Trends**



**Sector and Sub Sector EBITDA Multiples**

	10/31/2017	10/31/2016
Enterprise-Focused Telecom Tech	13.6x	11.3x
Enterprise Networking	10.1x	8.7x
Industrial and M2M	12.3x	11.8x
Network Management	12.3x	11.4x
Network Security	42.5x	36.6x
Unified Comms & Contact Center	27.7x	18.9x

Source: Capital IQ

## Summary Comments

### M&A

Our fall reporting period saw a healthy volume of M&A activity with 40 transactions for a total announced dollar volume of \$3.1 billion. This latter figure was particularly welcome in a year that has seen plenty of announced deals but little in the way of big dollar transactions. For the first 10 months of 2017, we counted 145 transactions for a total announced transaction dollar volume of only \$7.5 billion. This puts 2017 on pace to be a very strong year in terms of the number of transactions, but barring a major pick up in deal size, it will be the lowest year in the last five in terms of dollar volume.

### Enterprise Networking

Activity in the Enterprise Networking sub sector slowed down dramatically with only a single transaction this reporting period. This was the acquisition of the SDN controller assets of Brocade Communications by Lumina Networks.

### Industrial and M2M

The Industrial and M2M sub sector also saw limited M&A activity with two transactions for the period. The most significant of these was the Sierra Wireless acquisition of publicly traded IoT vendor Numerex for just shy of \$130 million. In the sub sector's second transaction, QuecLink Wireless Solutions acquired modem and wireless module manufacturer Shanghai Simcom Wireless Solutions for \$66.5 million.

### Network Management

The Network Management sub sector saw a nice spike in M&A activity with seven transactions for the period. Four of these transactions centered around managing data center infrastructures. These were Cisco's acquisition of Perspica, Syncsort's acquisition of Metron Technology, NetApp's acquisition of Greencloud, and Monolith Software's acquisition of TDB Fusion. The remaining transactions were in the areas of IT Management (Splunk's acquisition of Rocana), device management (Vista Equity Partner's acquisition of JMF Software), and application management (Datadog's acquisition of Focusmatic).

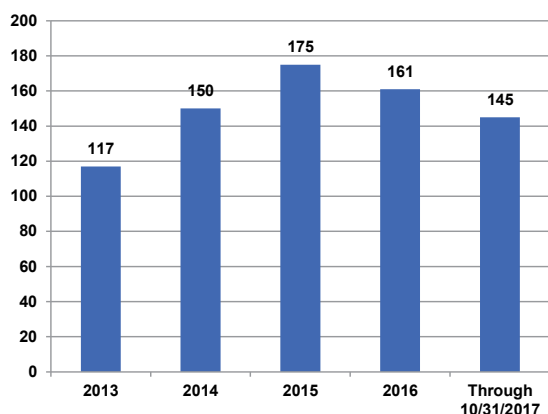
### Network Security

With 21 transactions this period, activity in the Network Security sub sector continued to roll along at a robust level. The most noteworthy transaction in the sub sector was DigiCert's acquisition of the website security business of Symantec for \$950 million. Identity and access management was by far the most active segment in the Network Security sub sector. Transactions in this segment were the acquisitions of the digital certificate business of Comodo (by Francisco Partners), the IAM software business of Caradigm (by Imprivata), Clearlogin (by EvolveIP), ICAR (by MiTek), Bitium (by Google), SecurAuth (by Core Security), and Datalink (by Watchguard Technologies).

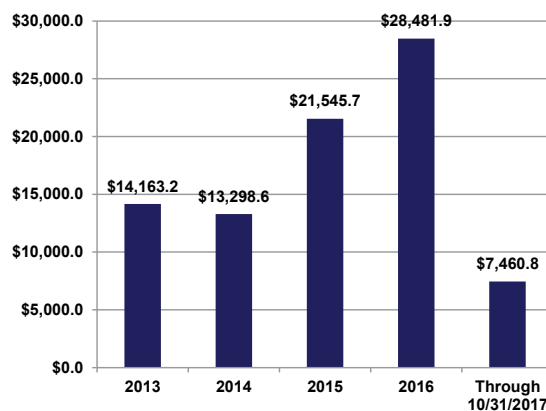
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## Enterprise-Focused Telecom Technology: M&A Summary

**M&A Activity: Number of Transactions**



**M&A Activity (\$ Value of Transactions in Millions)**





## Unified Communications and the Contact Center

The nine transactions this period in the Unified Communications and the Contact Center sub sector were only one shy of the combined total for the past two reporting periods, so the level of activity was brisk. They also included the period's largest transaction. This was the Cisco acquisition of unified communications vendor Broadsoft for \$1.9 billion. Other unified communications transactions this period include the purchase of Askozia, a developer of asterisk-based phone systems, by 3CX; the Atos purchase of Siemens Convergence Creators; and the purchase of CSI Secure Computing by Acorn Growth Companies. The remaining five transactions were all for companies in the contact center space. Acquirers included

serial acquirer Enghouse Systems, IFS, Marlin-equity backed Serenova, Nice Systems, and Verint Systems.

## Transactions with Announced Multiples

We had only two transactions with announced multiples. At 5.4x revenue and 78.8x EBITDA, the Cisco acquisition of Broadsoft was far and away the highest multiple transaction for the period. In contrast, the Sierra Wireless acquisition of Numerex was at a much lower 1.9x revenue. However, this still represents a healthy valuation, particularly given the fact that Numerex did not even have positive EBITDA on a trailing 12-month basis at the time of the transaction announcement.

## Announced Transactions (08/01/16 – 10/31/17)

Acquiror	Target	Sector	Date Announced	Purchase Price	Description
Francisco Partners	Comodo (Digital Certificate Business)	Security	10/31/17	NA	Provides security encryption, authentication and access control software for businesses and consumers.
Ansys	LAW Trusted Third Party Services	Security	10/30/17	\$7.7	Offers e-mail messaging solutions, digital identification certificates and user authentication applications.
NetScout Systems	Efflux Systems	Security	10/26/17	NA	Provides machine learning threat detection SaaS, as well as post-exploit analysis SaaS for businesses.
Symantec Corporation	Outlier Security	Security	10/25/17	NA	Endpoint security SaaS enabling the automated detection, response and remediation of data breaches for enterprises.
Imprivata	Caradigm (IAM Software Business)	Security	10/24/17	NA	Healthcare-focused identity and access management software.
Cisco Systems	Broadsoft	Unified Comms & Contact Center	10/23/17	\$1,913.4	Software and services that enable telecom service providers to deliver hosted cloud-based unified communications services.
Serenova	TelStrat	Unified Comms & Contact Center	10/23/17	NA	Develops call recording, quality, analytics and workforce management solutions for customers worldwide.
Cisco Systems	Perspica	Network Management	10/19/17	NA	Software provides features for analytics reporting and observability in virtualized data center environments.
Fidelis Cybersecurity Solutions	TopSpin Security	Security	10/19/17	NA	Provides IoT-focused network security SaaS for enterprises.
EvolvIP	Clearlogin	Security	10/17/17	NA	Provides cloud access management and authentication SaaS for users, administrators and developers.
MiTek	ICAR	Security	10/17/17	NA	Provides identity verification software for mobile, Web and desktop devices for businesses.
Vista Equity Partners	JAMF Software	Network Management	10/12/17	NA	iOS-focused device management SaaS for enterprises.
Nice Systems	WorkFlex Solutions	Unified Comms & Contact Center	10/11/17	NA	Contact center software as a service solutions that include call distribution, workforce management and performance monitoring.
Splunk	Rocana	Network Management	10/9/17	NA	IT monitoring & analytics SaaS for business administrators.
Verint Systems	Verba Technologies	Unified Comms & Contact Center	10/9/17	NA	Provides call recording, training and speech recognition software for businesses globally.
Marlin Equity Partners	AppRiver	Security	10/5/17	NA	Microsoft-based email security and managed messaging SaaS for enterprises.
Atos	Siemens Convergence Creators	Unified Comms & Contact Center	10/2/17	NA	Provides unified communications software, mobile device management and provisioning services.
Google	Bitium	Security	9/26/17	NA	Enterprise identity and access management software as a service.
Acorn Growth Companies	CSI Secure Computing	Unified Comms & Contact Center	9/25/17	NA	Secure telephones, encrypted tactical communication systems and specialty systems used in secure networks.
Queclink Wireless Solutions	Shanghai Simcom Wireless Solutions	Industrial and M2M	9/24/17	\$66.5	Designs, manufactures and distributes modems and wireless modules with different technology platforms.

## Announced Transactions (08/01/16 – 10/31/17) *continued*

Acquiror	Target	Sector	Date Announced	Purchase Price	Description
Core Security	SecurAuth	Security	9/20/17	NA	Provides authentication, single sign-on and user identity management SaaS for enterprises.
Silent Circle	Kesala	Security	9/13/17	NA	Mobile firewall, Wi-Fi hotspot, and virtual private network cloud service outfitted with government-grade encryption technology.
Datadog	Focusmatic	Network Management	9/7/17	NA	Provides enterprise software as a service that analyzes a company's logs to improve application performance.
Sunayu	Fractal Technology	Security	9/5/17	NA	Product that secures unmanaged and managed devices at both the application and device level.
Enghouse Systems	Survox	Unified Comms & Contact Center	9/5/17	NA	Multi-mode, voice-based survey automation software and services provider.
Juniper Networks	Cyphort	Security	8/31/17	NA	Provides single-pane advance threat prevention and management SaaS for enterprise networks.
Syncsort	Metron Technology	Network Management	8/29/17	NA	Server capacity management, IT management, capacity planning and virtualization software and SaaS for businesses globally.
Carbonite	Datacastle	Security	8/22/17	NA	Enterprise endpoint backup and data protection solutions for the mobile workforce.
Covata	CipherPoint Software	Security	8/16/17	\$3.0	Data centric auditing and protection solutions for securing unstructured information in various platforms.
NetApp	Greencloud	Network Management	8/16/17	NA	SaaS for deploying, managing and provisioning distributed data centers and private cloud infrastructures.
Monolith Software	TDB Fusion	Network Management	8/16/17	NA	Platform that integrates datacenter infrastructure management software with other applications.
Webroot Software	Securecast	Security	8/15/17	NA	Web-based enterprise-class security awareness solution platform.
Watchguard Technologies	Datablink	Security	8/8/17	NA	Strong authentication for network access, remote network access, privileged user access and SaaS application access.
Lumina Networks	Brocade Communications (SDN Controller Assets)	Enterprise Networking	8/7/17	NA	OpenDaylight-based open source software-defined networking SaaS for use in managing and monitoring enterprise networks.
3CX	Askozia	Unified Comms & Contact Center	8/3/17	NA	Develops Asterisk-based software phone systems.
DigiCert	Symantec (Website Security Business)	Security	8/3/17	\$950.0	Software includes anti-virus, anti-malware, endpoint security, encryption, anti-data leakage and network access control.
Sierra Wireless	Numerex	Industrial and M2M	8/2/17	\$127.9	Portfolio of managed end-to-end IoT solutions, including smart devices, network connectivity and service applications.
IFS	mplsystems	Unified Comms & Contact Center	8/1/17	NA	Provides call, email, chat, social and mobile contact center software and SaaS for businesses.
Qualys	Nevis Networks	Security	8/1/17	NA	Network access control hardware and SaaS that provides features for endpoint assessment, authentication and risk remediation.
Zeneth Technology Partners	PierceMatrix	Security	8/1/17	NA	Security software products to reduce risk chain exposure.

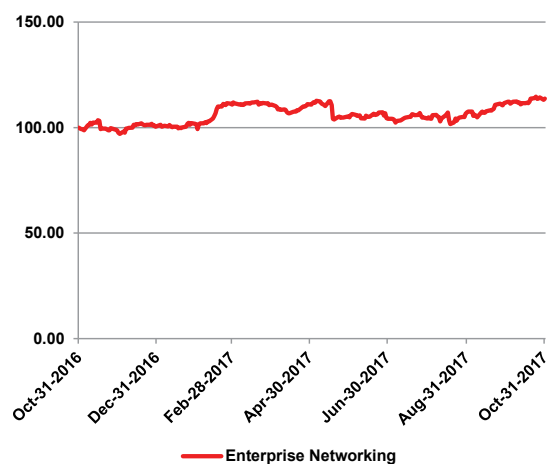
## Announced Transactions with Revenue Multiples (11/01/16 – 10/31/17)

Acquiror	Target	Sector	Date Announced	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Cisco Systems	Broadsoft	Unified Comms & Contact Center	10/23/17	\$1,913.4	5.4 x	78.8 x	Software and services that enable telecom service providers to deliver hosted cloud-based unified communications services.
Sierra Wireless	Numerex	Industrial and M2M	8/2/17	\$127.9	1.9 x	NM	Portfolio of managed end-to-end IoT solutions, including smart devices, network connectivity and service applications.
Mitel Networks	ShoreTel	Unified Comms & Contact Center	7/27/17	\$430.0	1.2 x	42.4 x	Internet protocol-based business communication solutions that integrate voice, video, data and mobile applications.
OpenText	Guidance Software	Security	7/26/17	\$238.8	2.1 x	NM	Provides forensic security solutions including endpoint investigation solutions and security products.
Constellation Software	Magor Corporation	Unified Comms & Contact Center	6/28/17	\$2.1	1.6 x	NM	Visual collaboration software platform that integrates personal computer collaboration, high definition video and wideband audio.
OpenText	Covisint	Security	6/5/17	\$103.0	1.5 x	NA	Provides identity and access management SaaS and IoT application development SaaS for businesses.
Belden	Thinklogical	Enterprise Networking	5/4/17	\$160.0	3.1 x	9.3 x	Provides fiber-optic KVM video routers, extenders and switches for enterprise video teleconferencing networks.
BICS	TeleSign	Security	4/25/17	\$230.0	2.3 x	NA	Cloud-based APIs and SDKs to help prevent registration fraud, reduce the risk of account takeover and authenticate end users.
Shearwater Group	SecurEnvoy	Security	4/20/17	\$25.7	6.4 x	9.6 x	Mobile phone based tokenless two-factor authentication solutions.
Extreme Networks	Brocade Communications (Data Center Switching Assets)	Enterprise Networking	3/29/17	\$55.0	0.2 x	NA	Switchers, routers and analytics SaaS for use in enterprise datacenters.
IMImobile	Infracast	Security	3/27/17	\$21.0	1.4 x	36.2 x	Develops and provides mobile communication, identity and security solutions.
Palo Alto Networks	LightCyber	Security	2/28/17	\$105.0	10.5 x	NA	Automated behavioral analytics capabilities to identify attacks based on behavioral anomalies inside the network.
NICS TECH CO.	Secuplus	Security	2/1/17	\$0.9	0.6 x	NA	Develops security software to counter cyber threats.
u-blox	SIMcom (Wireless Module Business)	Industrial and M2M	1/20/17	\$52.5	0.6 x	NA	2G, 3G and 4G wireless communication modules.
Nuri Telecom	Apivio Systems	Unified Comms & Contact Center	1/17/17	\$16.3	0.4 x	13.8 x	VoIP desktop telephones, wireless VoIP handset phones and an Android IP Phone.
Zhuhai Kaiteng Investment Partnership	Shenzhen ZTEWeLink Technology	Industrial and M2M	11/30/16	\$112.0	1.7 x	NA	Develops, manufactures and markets wireless communication modules, industry customized terminals and M2M solutions.
Broadcom	Brocade Communications	Enterprise Networking	11/2/16	\$5,936.2	2.6 x	12.1 x	Provides storage area networking and Internet protocol networking solutions for businesses and organizations.



## Sub Sector Analysis: Enterprise Networking

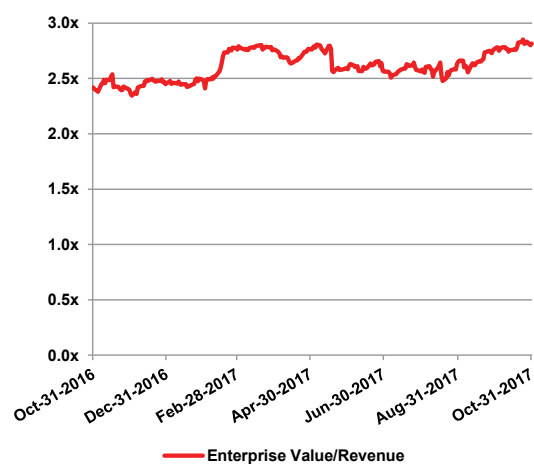
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Enterprise Networking Index	13.7%	9.0%
A10 Networks	-4.6%	3.4%
Accton	101.9%	21.1%
Aerohive Networks	-25.1%	-15.9%
Arista Networks	135.9%	33.9%
Brocade	9.9%	-7.8%
Cisco	11.3%	8.6%
Citrix	-2.6%	4.6%
D-Link	16.6%	1.7%
Extreme Networks	185.0%	36.5%
F5 Networks	-12.3%	0.4%
NetGear	-7.6%	-2.6%
Radware	29.8%	1.3%
Unizyx Holding (Zyxel)	6.9%	0.7%

**Revenue Multiple Trends**



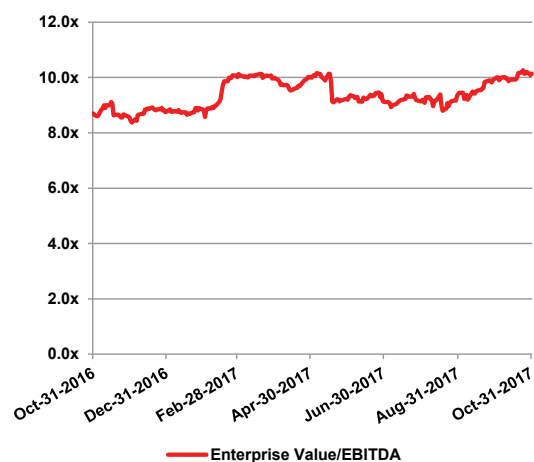
**Company Revenue Multiples**

	10/31/2017	10/31/2016
Enterprise Networking Index	2.8x	2.4x
A10 Networks	1.6x	1.7x
Accton	1.4x	0.7x
Aerohive Networks	1.0x	1.2x
Arista Networks	8.9x	4.9x
Brocade	2.2x	2.0x
Cisco	2.8x	2.4x
Citrix	3.6x	4.4x
D-Link	0.3x	0.3x
Extreme Networks	2.2x	0.8x
F5 Networks	3.1x	4.1x
NetGear	0.8x	0.9x
Radware	3.0x	1.8x
Unizyx Holding (Zyxel)	0.2x	0.2x

Source: Capital IQ

## Sub Sector Analysis: Enterprise Networking *continued*

**EBITDA Multiple Trends**



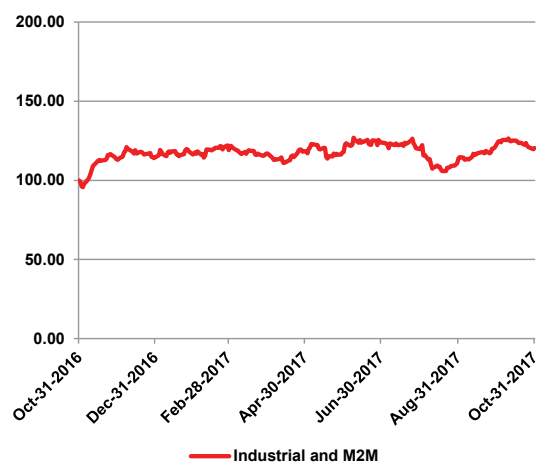
Source: Capital IQ

**Company EBITDA Multiples**

	10/31/2017	10/31/2016
Enterprise Networking Index	10.1x	8.7x
A10 Networks	NM	NM
Accton	14.6x	8.1x
Aerohive Networks	NM	NM
Arista Networks	31.3x	21.9x
Brocade	14.6x	9.5x
Cisco	9.0x	7.8x
Citrix	12.6x	15.7x
D-Link	NM	NM
Extreme Networks	29.8x	14.7x
F5 Networks	10.4x	13.5x
NetGear	8.6x	8.4x
Radware	NM	49.4x
Unizyx Holding (Zyxel)	30.2x	5.7x

## Sub Sector Analysis: Industrial Networking and M2M

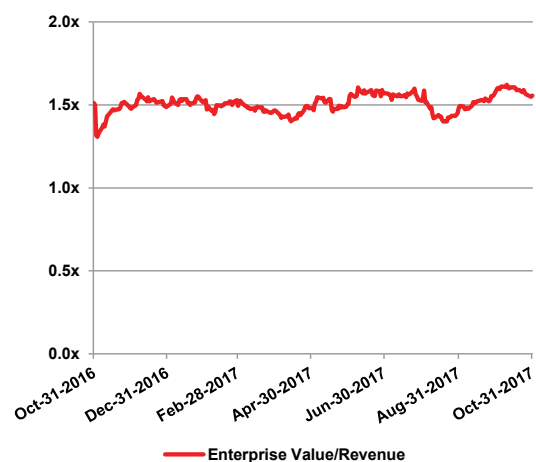
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Industrial and M2M Index	20.3%	0.2%
Belden	23.3%	11.1%
CalAmp	75.9%	19.0%
Digi International	13.7%	-0.5%
Inseego	NA	27.1%
Netcomm Wireless	-47.7%	-32.2%
Numerex	-43.9%	-15.7%
Sierra Wireless	63.4%	-23.8%
Telit Communications	-27.5%	-36.6%

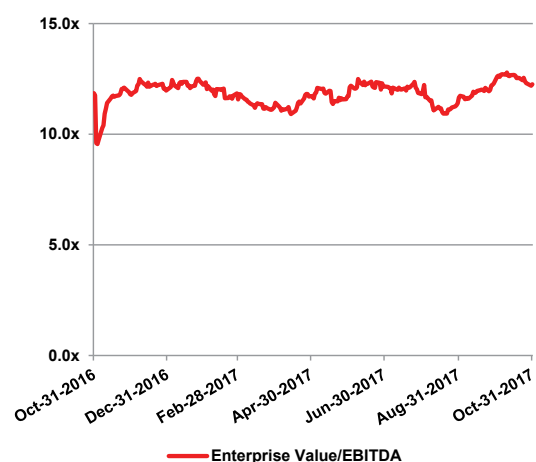
**Revenue Multiple Trends**



**Company Revenue Multiples**

	10/31/2017	10/31/2016
Industrial and M2M Index	1.6x	1.5x
Belden	1.8x	1.8x
CalAmp	2.4x	1.5x
Digi International	0.9x	0.5x
Inseego	0.8x	NA
Netcomm Wireless	1.4x	3.4x
Numerex	1.4x	2.0x
Sierra Wireless	0.9x	0.6x
Telit Communications	0.8x	1.1x

**EBITDA Multiple Trends**



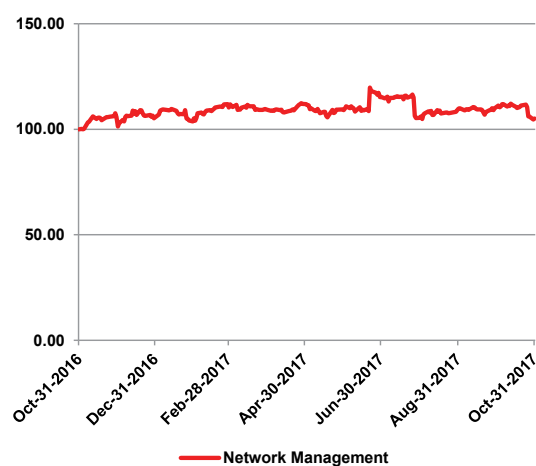
**Company EBITDA Multiples**

	10/31/2017	10/31/2016
Industrial and M2M Index	12.3x	11.8x
Belden	9.7x	10.3x
CalAmp	23.0x	12.1x
Digi International	9.9x	4.7x
InSeego	395.7x	NA
Netcomm Wireless	NM	293.4x
Numerex	NM	485.0x
Sierra Wireless	13.7x	13.2x
Telit Communications	14.0x	13.8x

Source: Capital IQ

## Sub Sector Analysis: Network Management

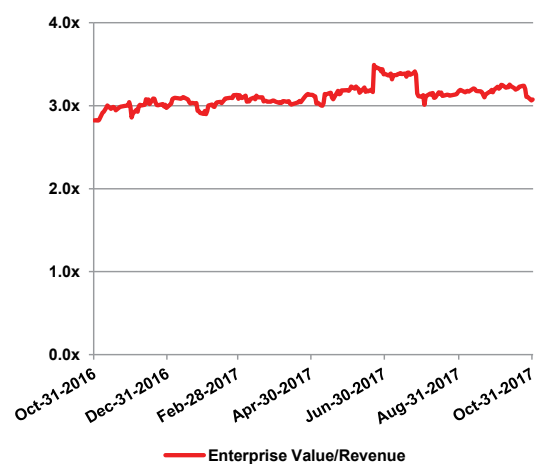
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Network Management Index	5.0%	-0.3%
CA	5.3%	4.3%
MobileIron	5.5%	-14.9%
NetScout	3.5%	-17.7%

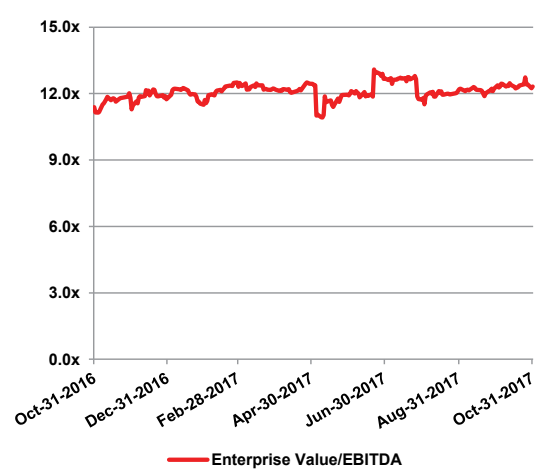
**Revenue Multiple Trends**



**Company Revenue Multiples**

	10/31/2017	10/31/2016
Network Management Index	3.1x	2.8x
CA	3.3x	3.0x
MobileIron	1.6x	1.5x
NetScout	2.3x	2.2x

**EBITDA Multiple Trends**



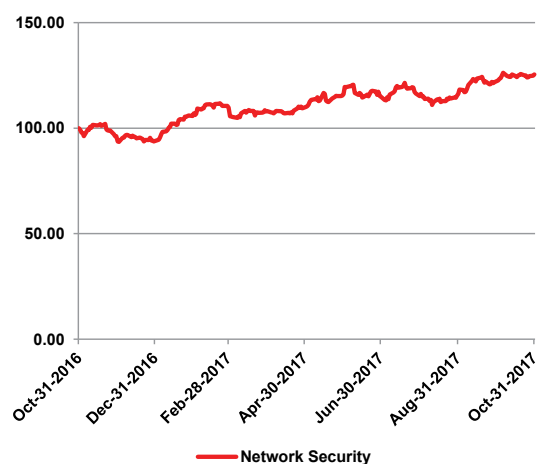
**Company EBITDA Multiples**

	10/31/2017	10/31/2016
Network Management Index	12.3x	11.4x
CA	11.4x	9.5x
MobileIron	NM	NM
NetScout	13.3x	12.9x

Source: Capital IQ

## Sub Sector Analysis: Network Security

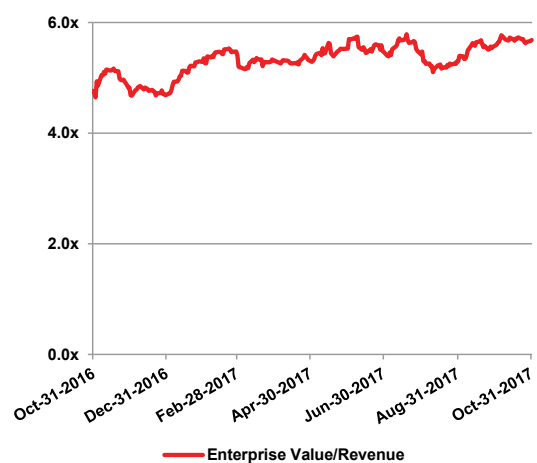
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Network Security Index	25.4%	9.0%
Barracuda Networks	0.0%	3.7%
Checkpoint	39.2%	11.3%
Cheetah Mobile	-15.7%	-18.3%
CyberArk	-9.4%	1.7%
FireEye	45.6%	15.7%
Fortinet	22.9%	6.8%
Imperva	15.7%	-5.2%
Palo Alto Networks	-4.3%	11.7%
Proofpoint	17.9%	8.4%
Qualys	42.0%	31.8%
Rapid7	26.2%	19.0%
Secure Works	-15.0%	-8.4%
Sophos	192.2%	38.5%
Symantec	29.8%	4.9%
Trend Micro	51.2%	6.5%
VASCO Data Security	-1.1%	0.7%

**Revenue Multiple Trends**

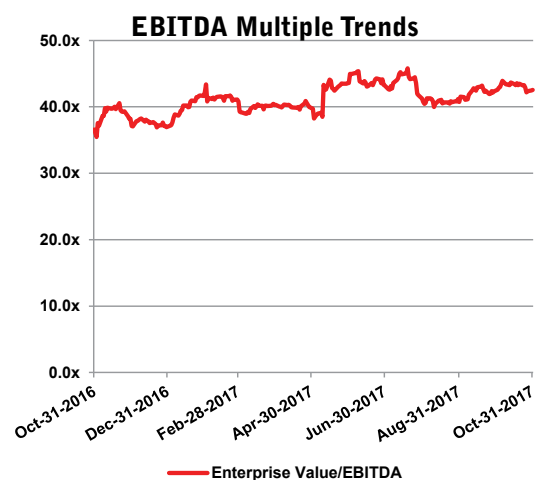


**Company Revenue Multiples**

	10/31/2017	10/31/2016
Network Security Index	5.7x	4.8x
Barracuda Networks	2.8x	3.1x
Checkpoint	9.7x	7.7x
Cheetah Mobile	1.5x	2.2x
CyberArk	4.9x	6.5x
FireEye	4.1x	2.5x
Fortinet	3.9x	3.7x
Imperva	3.8x	3.7x
Palo Alto Networks	7.2x	9.0x
Proofpoint	8.5x	9.5x
Qualys	7.6x	5.8x
Rapid7	3.9x	3.6x
Secure Works	1.6x	2.1x
Sophos	7.8x	3.0x
Symantec	5.2x	3.5x
Trend Micro	4.9x	3.0x
VASCO Data Security	2.1x	2.1x

Source: Capital IQ

## Sub Sector Analysis: Network Security *continued*



### Company EBITDA Multiples

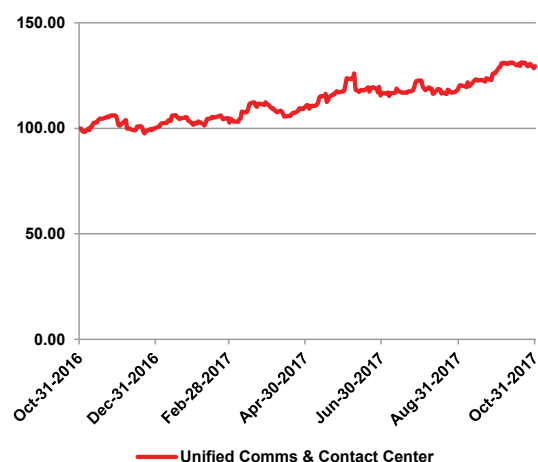
	10/31/2017	10/31/2016
Network Security Index	42.5x	36.6x
Barracuda Networks	31.5x	42.3x
Checkpoint	19.4x	15.4x
Cheetah Mobile	24.4x	41.1x
CyberArk	41.2x	34.0x
FireEye	NM	NM
Fortinet	33.3x	75.0x
Imperva	NM	NM
Palo Alto Networks	NM	NM
Proofpoint	NM	NM
Qualys	29.7x	24.4x
Rapid7	NM	NM
Secure Works	NM	NM
Sophos	389.7x	94.0x
Symantec	40.0x	9.4x
Trend Micro	14.1x	9.4x
VASCO Data Security	36.9x	20.0x

Source: Capital IQ



## Sub Sector Analysis: Unified Communications and Contact Center

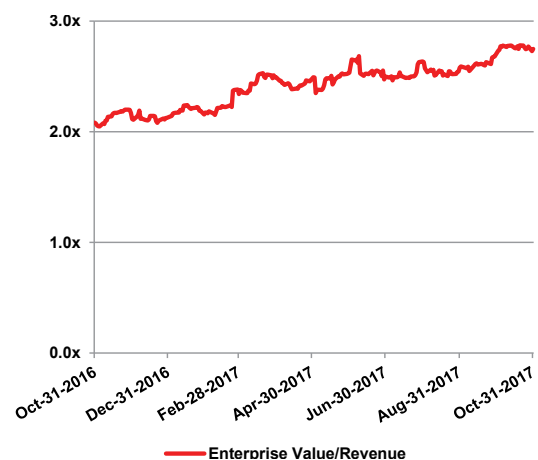
**Twelve Month Index Returns**



**Company Returns**

	12 Month	3 Month
Unified Comms & Contact Center Index	29.4%	5.5%
ClearOne	-32.7%	-25.8%
eGain	15.8%	78.4%
Enghouse Systems	12.4%	-1.1%
Five9	76.2%	14.4%
Liveperson	65.3%	3.7%
Mitel	28.4%	0.8%
Verint	17.2%	6.4%

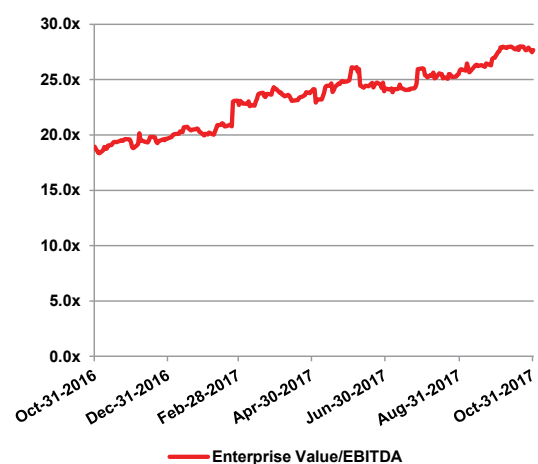
**Revenue Multiple Trends**



**Company Revenue Multiples**

	10/31/2017	10/31/2016
Unified Comms & Contact Center Index	2.7x	2.1x
ClearOne	1.2x	1.5x
eGain	1.6x	1.3x
Enghouse Systems	4.1x	4.1x
Five9	7.7x	4.8x
Liveperson	3.6x	1.9x
Mitel	1.3x	1.4x
Verint	2.8x	2.5x

**EBITDA Multiple Trends**



**Company EBITDA Multiples**

	10/31/2017	10/31/2016
Unified Comms & Contact Center Index	27.7x	18.9x
ClearOne	57.4x	8.3x
eGain	NM	437.2x
Enghouse Systems	15.9x	18.1x
Five9	650.9x	NM
Liveperson	79.1x	45.6x
Mitel	11.6x	10.6x
Verint	31.8x	25.6x

Source: Capital IQ

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John Bradshaw has over 30 years experience in sales, marketing, manufacturing, finance, and systems engineering with corporations specializing in technology-driven business products and services. Mr. Bradshaw has been a successful senior executive and manager in both large and small organizations, and has spent the last 15 years working with entrepreneurial companies. Mr. Bradshaw has particular expertise in enterprise communications and contact center related technology.



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# FOCUS

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