

# FOCUS

Investment Banking

Telecom Technology and Services Group

## Carrier-Focused Telecom Technology Quarterly



### 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

### Summer 2020

Vol. 10, No. 2

### IN THIS ISSUE

- 2 Introduction and Sub Sector Definitions
- 3 Summary Comments: Public Markets
- 5 Carrier-Focused Telecom Technology: Public Market Summary
- 6 M&A Summary Comments
- 7 M&A Announced Transactions
- 8 M&A Announced Transactions with Revenue Multiples
- 9 Sub Sector Analysis: Large Cap
- 10 Sub Sector Analysis: OSS/BSS Software
- 11 Sub Sector Analysis: IP Networking
- 12 Sub Sector Analysis: Wireline Access and Transport
- 13 Sub Sector Analysis: Cable and Video
- 14 Sub Sector Analysis: Broadband Wireless
- 15 Sub Sector Analysis: Test and Measurement
- 16 FOCUS Telecom Technology and Services Team

# Carrier-Focused Telecom Technology Quarterly

By **Richard Pierce**, FOCUS Managing Director and Telecom Technology and Services Team Leader

FOCUS believes that the Carrier-Focused Telecom Technology sector is one of the most important in Telecom. As communications service providers struggle to keep up with ever increasing demand from their data hungry customers, they are turning to their technology partners to help them satisfy these needs in a cost-effective way. In addition to simply increasing the capacity of both wireline and wireless networks, companies in the Carrier-Focused Telecom Technology sector are also helping customers perform a variety of other critical functions including network planning and optimization, network monitoring, service assurance, network testing and service delivery and monetization. While some of the largest technology companies in the world are helping to meet many of 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 Carrier-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 professionals with substantial expertise in both Telecom and investment banking. 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 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,
- Has a national presence with coverage of both East and West coasts.

## Sub Sector Definitions

**Large Cap:** Large, diversified companies with products across a variety of sub sectors

**OSS/BSS Software:** Software systems that manage and bill the customer base and monitor and maintain telecom networks

**IP Networking:** Carrier Ethernet switching, routers and IP Multimedia Subsystem ("IMS") components

**Wireline Access and Transport:** DSL equipment, PON equipment and WDM-based transport

**Cable and Video:** Products such as headends and servers that support video delivery as well as broadband products for cable networks

**Broadband Wireless:** High capacity, fixed wireless equipment

**Test and Measurement:** Equipment used by both service providers and manufacturers to test and monitor networks and equipment

# Summary Comments

## Public Markets

After four straight reports with negative returns, the Carrier-Focused Telecom Technology Index (CFTTI) finally bounced back with a strong return of 12.6% in our summer reporting period. This outperformed both the S&P 500 (up 3.1%) and the NASDAQ (up 10.8%) by a wide margin. Even with this period's strong performance, the CFTTI still significantly lags the broader indices over the full year. The CFTTI is stuck in negative territory with a 12-month loss of 3.5%, while the S&P 500 and NASDAQ are up 10.6% and 27.3%, respectively, over the course of the past year. Multiples are also slightly lower for the sector compared to the year-ago period. The sector revenue multiple dropped from 2.5x to 2.4x, and the sector EBITDA multiple fell from 14.0x to 11.5x.

## Large Cap

Powered by a nearly 20% gain at Cisco, the Large Cap sub sector surged 11.9% over these past three months. Gains were broad-based with four of the five companies in the sub sector in positive territory for the period. The only company in negative territory was ZTE, which plummeted nearly 30%. The situation was exactly reversed for the full year period. Over this time frame, ZTE was the only stock with a positive return (up 21.3%) while the remaining companies in the sub sector all had negative year-over-year returns. Sub sector multiples closed out the period at 2.4x revenue and 11.0x EBITDA. Both of these are lower than year-ago multiples of 2.5x revenue and 13.8x EBITDA.

## OSS/BSS Software

The OSS/BSS software sub sector was one of two sub sectors in the CFTTI that delivered a negative return over this past three months. However, the drop was relatively mild at only 1.4%. The main culprits behind the decline included Optiva (down 45.4%), Pareteum (down 22.1%), Radcom (down 19.3%) and Synchronoss (down 44.6%). The OSS/BSS software sub sector is up slightly for the full year with a gain of 0.8%. While all of the companies that were down this reporting period also had significant negative returns for the full year, double digit gains at companies like Evolving Systems and NetScout helped move the sub sector into the black. Despite the overall gain in the sub sector index, multiples are lower than they were at this time last year. The revenue multiple dipped from 2.0x to 1.9x, and the EBITDA multiple fell from 12.4x to 10.4x.

## IP Networking

For the second straight reporting period the IP Networking sub sector was the top performing sub sector in the CFTTI. In fact, the sub sector gained nearly 40% over the past three months. These gains were the result of a 63.5% increase at Audiocodes as well as a 36.2% increase at Ribbon Communications. The sub sector is also the best performing sub sector in the CFTTI for the 12-month period with a gain of 67.9%. Multiple performance was mixed. The sub sector revenue multiple doubled over the course of the past year from 1.3x to 2.6x. However, the sub sector EBITDA multiple actually declined slightly over this same period from 24.2x to 22.0x. This indicates a significant improvement in EBITDA margin for the sub sector.

## Wireline Access and Transport

The Wireline Access and Transport sub sector was another sub sector that performed very well this period, gaining 33.3% in the past three months. Many of the better-known names in the sub sector had strong returns including ADTRAN (up 41.7%), Calix (up 56.7%) and CIENA (up 43.7%). Other companies in the sub sector did not fare as well, including Infinera, which was down 26.8%. Sub sector performance was also strong for the full year period with an increase of slightly more than 50%. Calix, CIENA and Infinera were the main drivers of the sub sector's strong returns over this time frame. Not surprisingly, multiples are higher than they were in the year-ago period. The sub sector revenue multiple expanded from 1.3x to 1.8x, while the sub sector EBITDA multiple had a more modest increase from 19.2x to 22.8x.

## Cable and Video

The Cable and Video sub sector continued to have difficulties as it dropped 3.3% in the past three months. This made it the worst performing CFTTI sub sector this period. Harmonic and SeaChange both suffered steep losses, with SeaChange shedding nearly half of its value. On the plus side, Casa Systems was up more than 30% and Amino gained nearly 10%. The sub sector is also in slightly negative territory for the full year, which was almost entirely due to a 22.6% drop at Casa Systems. The other companies in the index fared reasonably well. Even with the decline in the overall index, sub sector multiples are slightly higher than they were a year ago. The sub sec-

[continued on page 4 >](#)

tor revenue multiple ended the period at 1.5x (up from 1.4x a year ago) and the sub sector EBITDA multiple was 20.0x (up from 15.1x a year ago).

### Broadband Wireless

The Broadband Wireless sub sector continued its run of zig zag performances. After a steep drop last period, the sub sector shot up 34.7% this period. This was good enough to make it the second best performing sub sector in the CFTTI. Ubiquiti Networks certainly played the biggest role in this increase with a three-month gain of 35.9%, but Aviat Networks and Ceragon Networks also posted strong gains. The sub sector is also up just shy of 50% for the full year. Multiples for the sub sector closed out the period at

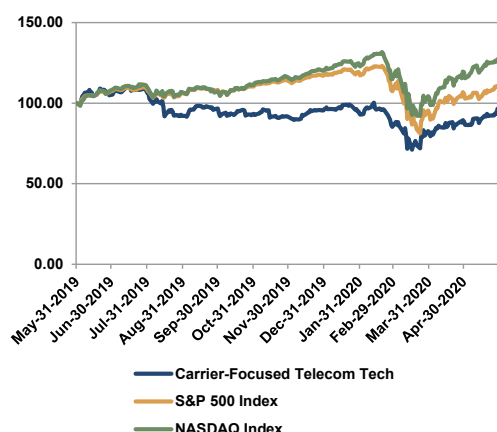
6.2x revenue and 24.2x EBITDA. These compare favorably to year-ago multiples of 5.1x revenue and 19.8x EBITDA.

### Test and Measurement

The Test and Measurement sub sector returned to the black this period with a modest gain of 3.8%. Performance was bifurcated as Anritsu and Spirent both showed double digit gains while EXFO and Viavi had double digit losses. The sub sector is also up just more than 15% for the full year, with Anritsu and Spirent once again driving the increase. Multiple performance was mixed. The sub sector revenue multiple increased from 2.2x a year ago to 2.4x currently, while the sub sector EBITDA multiple declined from 14.3x to 12.6x over the same time frame.

# Carrier-Focused Telecom Technology: Public Market Summary

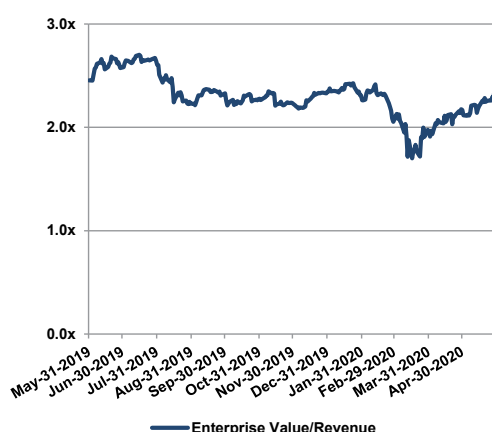
## Twelve Month Index Returns



## Sector and Sub Sector Returns

	12 Month	3 Month
Carrier-Focused Telecom Tech	-3.5%	12.6%
Large Cap	-7.2%	11.9%
OSS/BSS	0.8%	-1.4%
IP Networking	67.9%	39.1%
Wireline Access and Transport	50.1%	33.3%
Cable and Video	-2.4%	-3.3%
Broadband Wireless	48.4%	34.7%
Test and Measurement	15.4%	3.8%
S&P 500	10.6%	3.1%
NASDAQ	27.3%	10.8%

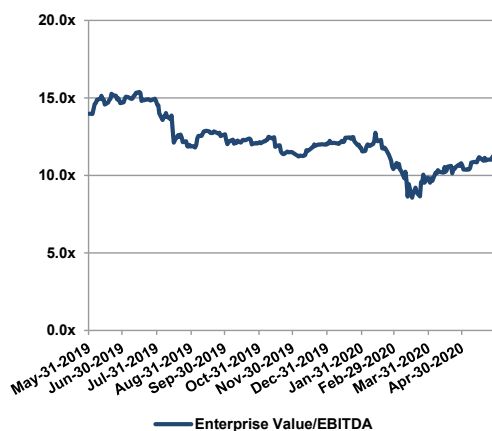
## Revenue Multiple Trends



## Sector and Sub Sector Revenue Multiples

	5/31/2020	5/31/2019
Carrier-Focused Telecom Tech	2.4x	2.5x
Large Cap	2.4x	2.5x
OSS/BSS	1.9x	2.0x
IP Networking	2.6x	1.3x
Wireline Access and Transport	1.8x	1.3x
Cable and Video	1.5x	1.4x
Broadband Wireless	6.2x	5.1x
Test and Measurement	2.4x	2.2x

## EBITDA Multiple Trends



## Sector and Sub Sector EBITDA Multiples

	5/31/2020	5/31/2019
Carrier-Focused Telecom Tech	11.5x	14.0x
Large Cap	11.0x	13.8x
OSS/BSS	10.4x	12.4x
IP Networking	22.0x	24.2x
Wireline Access and Transport	22.8x	19.2x
Cable and Video	20.0x	15.1x
Broadband Wireless	24.2x	19.8x
Test and Measurement	12.6x	14.3x

Source: Capital IQ

# M&A Summary Comments

## M&A

Although the number of transactions picked up somewhat from our spring report, the overall level of M&A activity remained low both in terms of the total number of transactions and total announced transaction dollar volume. There were only 12 transactions in the Carrier-Focused Telecom Technology sector in this past three months, and total announced transaction dollar volume was even more anemic at just under \$32 million. Thus far in 2020 the sector has seen 21 transactions for a total announced transaction dollar volume of slightly more than \$100 million. While there is still time for activity to pick up, at least as of now the sector is on pace to have one of its lowest levels of overall activity in the past five years.

## OSS/BSS Software

The only major technology name that was active in the OSS/BSS Software sub sector this period was Cisco Systems. However, Cisco was actually a seller as it divested its Self Optimizing Network (SON) technology assets to HCL Technologies. On the smaller acquirer front, the National Rural Telecommunications Cooperative acquired software vendor CrowdFiber. CrowdFiber provides GIS-based solutions that facilitate the sales and marketing efforts of smaller telecoms. In addition, we also noted that Altair acquired the software assets of WRAP, which assists with the management and planning of wireless networks. The

remaining acquirers in the OSS/BSS Software sub sector this period were Rakuten Mobile, Polystar Instruments, Etern Group and NHN Corporation.

## IP Networking

There were two transactions in the IP Networking sub sector this period, and Microsoft accounted for both of them. The first was the acquisition of SDN networking company Affirmed Networks, while the second involved telephony application server and switching vendor MetaSwitch Networks. These are Microsoft's first ever acquisitions in the Carrier-Focused Telecom Technology space, and would seem to indicate the Company's desire to expand its presence in the Telecom vertical.

## Wireline Access and Transport

In the Wireline Access and Transport sub sector, Ideiasnet acquired optical communications systems company Padtec for \$25.7 million.

## Cable and Video

There were no transactions in the Cable and Video sub sector this period.

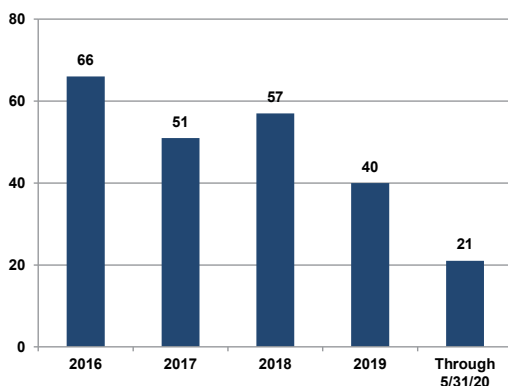
## Broadband Wireless

In addition to divesting certain telecom software assets, Cisco Systems was also a buyer in the Broadband Wireless

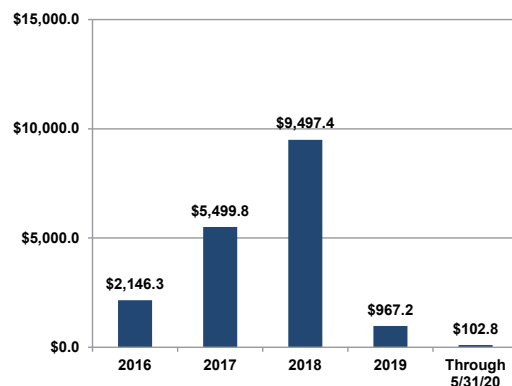
[continued on page 7 >](#)

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

M&A Activity: Number of Transactions



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



space as the company acquired Fluidmesh Networks. Fluidmesh is a provider of wireless IP backhaul systems.

### Test and Measurement

The Test and Measurement sub sector had its first transaction of 2020 with the acquisition of Rohde & Schwarz's 5G testing business by PCTEST.

### Transactions with Multiples

For the second straight reporting period we had only a single transaction with an announced multiple. This was the acquisition of Beijing Etern Zhiyuan Network Technology by Etern Group for \$5.8 million. The revenue multiple associated this transaction was a mere 0.5x. The EBITDA multiple was not disclosed.

## M&A Announced Transactions (3/1/20 – 5/31/20)

Acquiror	Target	Sector	Date Announced	Purchase Price	Description
HCL Technologies	Cisco Systems (SON Assets)	OSS/BSS Software	5/29/20	NA	Machine learning network management software to automate the radio access networks of mobile operators.
Microsoft	MetaSwitch	IP Networking	5/14/20	NA	Telephony application server, switching and routing systems and software for telecom service providers and OEMs.
Rakuten Mobile	Innoeye	OSS/BSS Software	5/13/20	NA	Software enables network and device monitoring and management as well as predictive analytics and workflow automation.
Altair	WRAP (Software Business)	OSS/BSS Software	5/7/20	NA	Software technology for spectrum management and radio network planning for civil and defense organizations.
PCTEST	Rohde & Schwarz (5G Testing System Assets)	Test and Measurement	5/5/20	NA	Network operator testing system for 5G networks in the FR1 and FR2 frequency ranges.
Polystar Instruments	Elisa Automate	OSS/BSS Software	5/4/20	NA	Solutions and services for operators to automate network management and operations utilizing machine learning.
Etern Group	Beijing Etern Zhiyuan Network Technology	OSS/BSS Software	4/11/20	\$5.8	Software for mobile operators for signaling collection analysis, business operation support and user behavior and security analysis.
NHN Corporation	Bango	OSS/BSS Software	4/10/20	NA	Billing and payments application that facilitates billing for mobile applications for mobile app stores and wireless carriers.
Cisco Systems	Fluidmesh Networks	Broadband Wireless	4/6/20	NA	Provides wireless IP backhaul systems for businesses and government agencies globally.
Ideiasnet	Padtec	Wireline Access and Transport	3/30/20	\$25.7	Optical communication systems and solutions for internet providers, network operators and businesses.
Microsoft	Affirmed Networks	IP Networking	3/26/20	NA	Cloud native wireless network virtualization and software-defined networking SaaS for network operators.
National Rural Telecommunications Cooperative	CrowdFiber	OSS/BSS Software	3/19/20	NA	Broadband marketing and online sales automation utilizing analysis of geographic areas.



## M&A Announced Transactions with Revenue Multiples (6/1/19 – 5/31/20)

Acquiror	Target	Sector	Date Announced	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Etern Group	Beijing Etern Zhiyuan Network Technology	OSS/BSS Software	4/11/20	\$5.8	0.5 x	NA	Software for mobile operators for signaling collection analysis, business operation support and user behavior and security analysis.
Digital Turbine Media	Mobile Posse	OSS/BSS Software	2/10/20	\$66.0	1.1 x	5.2 x	Mobile content discovery solutions for wireless carriers that enable manufacturers to capitalize on the mobile advertising economy.
Single Digits	Billing Services Group (Wireless Business)	OSS/BSS Software	1/31/20	\$5.3	1.8 x	10.9 x	Roaming hub service that acts as a managed service for enabling interconnection between Wi-Fi networks.
Ribbon Communications	ECI Telecom	Wireline Access and Transport	11/14/19	\$455.6	1.2 x	19.8 x	Networking and data transport products for service providers, utilities, governments and defense and security customers.
Huber+Suhner	Bktel	Wireline Access and Transport	10/1/19	\$50.2	1.1 x	NA	Active and passive components for fiber-to-the-home and hybrid fiber coax broadband networks.
IMI Mobile	3Cinteractive	OSS/BSS Software	7/24/19	\$53.2	2.2 x	NA	Mobile application deployment SaaS for businesses and wireless telecom service providers.
Astronics	Freedom Communication Technologies	Test and Measurement	7/1/19	\$22.0	2.0 x	NA	Communication test equipment for land-based mobile radio and long-term evolution high-speed wireless communications networks.



## Sub Sector Analysis: Large Cap

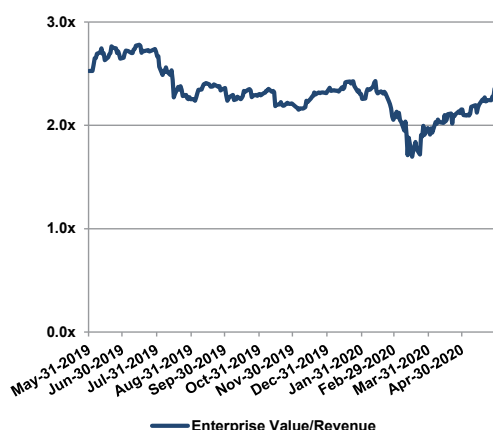
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Large Cap Index	-7.2%	11.9%
Cisco	-8.1%	19.8%
Ericsson	-5.5%	13.7%
Juniper	-1.4%	14.3%
Nokia	-20.6%	4.6%
ZTE	21.3%	-29.4%

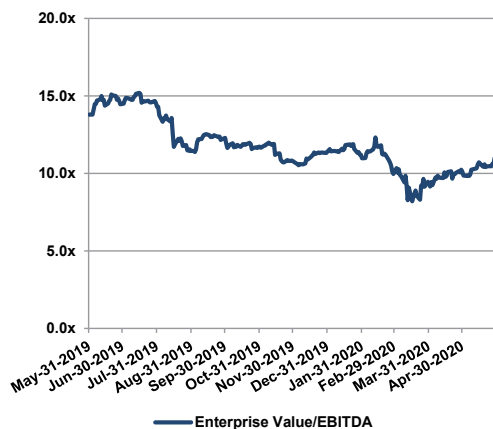
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
Large Cap Index	2.4x	2.5x
Cisco	3.8x	4.1x
Ericsson	1.4x	1.3x
Juniper	1.8x	1.6x
Nokia	0.8x	1.0x
ZTE	1.7x	1.5x

### EBITDA Multiple Trends



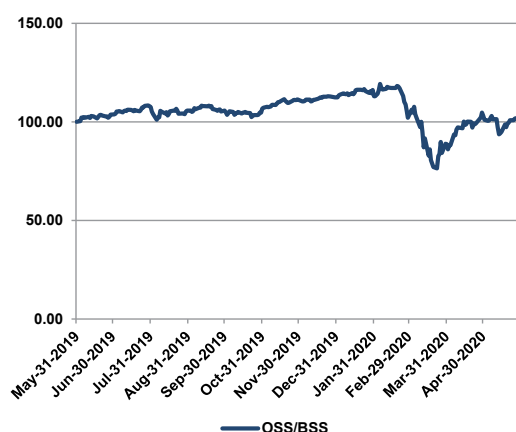
### Company EBITDA Multiples

	5/31/2020	5/31/2019
Large Cap Index	11.0x	13.8x
Cisco	11.8x	13.6x
Ericsson	11.1x	16.3x
Juniper	11.3x	8.9x
Nokia	7.3x	9.8x
ZTE	23.5x	28.3x

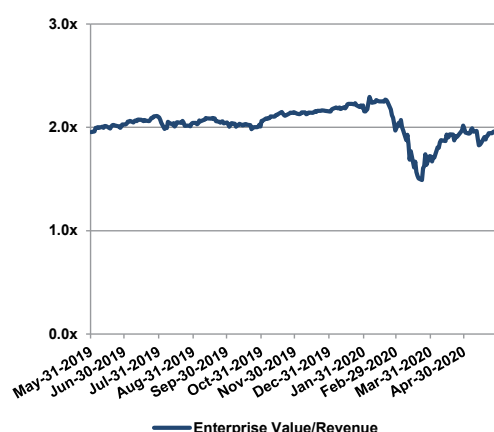
Source: Capital IQ

## Sub Sector Analysis: OSS/BSS Software

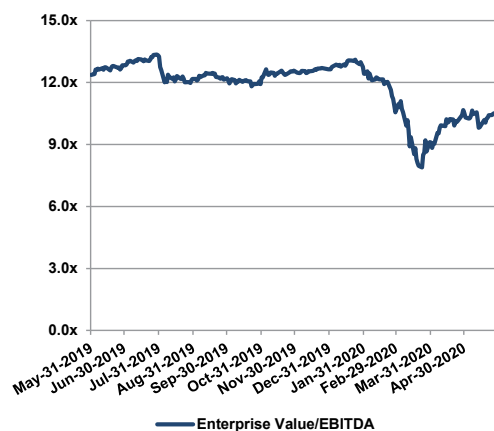
### Twelve Month Index Returns



### Revenue Multiple Trends



### EBITDA Multiple Trends



Source: Capital IQ

### Company Returns

	12 Month	3 Month
OSS/BSS Index	0.8%	-1.4%
Amdocs	4.8%	-2.3%
CSG Systems	5.6%	7.0%
Evolving Systems	14.8%	18.8%
NetScout	12.1%	6.9%
Optiva	-46.2%	-45.4%
Pareteum	-88.9%	-22.1%
Radcom	-20.7%	-19.3%
Subex	-1.6%	17.3%
Synchronoss	-57.3%	-44.6%
Tecnotree	203.1%	-13.0%

### Company Revenue Multiples

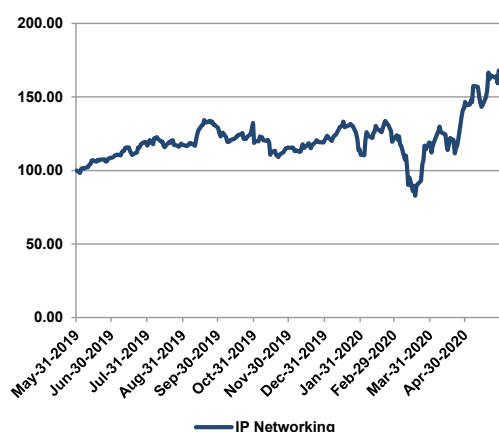
	5/31/2020	5/31/2019
OSS/BSS Index	1.9x	2.0x
Amdocs	2.0x	1.9x
CSG Systems	1.9x	1.9x
Evolving Systems	0.5x	0.4x
NetScout Systems	2.4x	2.2x
Optiva	1.4x	1.7x
Pareteum	1.0x	8.8x
Radcom	1.1x	2.3x
Subex	0.8x	0.9x
Synchronoss	1.3x	1.5x
Tecnotree	1.4x	0.7x

### Company EBITDA Multiples

	5/31/2020	5/31/2019
OSS/BSS Index	10.4x	12.4x
Amdocs	10.4x	10.3x
CSG Systems	11.2x	11.7x
Evolving Systems	27.8x	8.6x
NetScout Systems	15.7x	15.2x
Optiva	28.0x	NM
Pareteum	30.2x	NM
Radcom	NM	NM
Subex	3.6x	5.9x
Synchronoss	NM	NM
Tecnotree	4.8x	3.0x

## Sub Sector Analysis: IP Networking

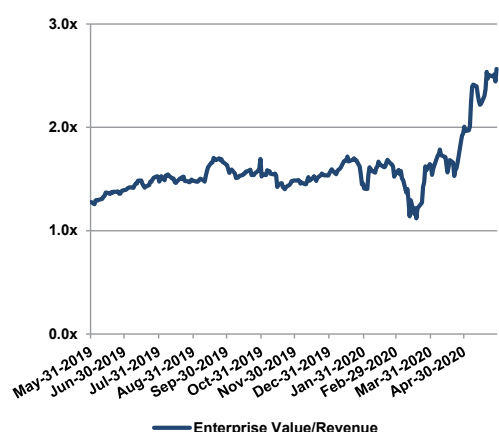
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
IP Networking Index	67.9%	39.1%
Allot Communications	55.8%	-1.7%
Audiocodes	145.0%	63.5%
Ribbon Communications	3.0%	36.2%

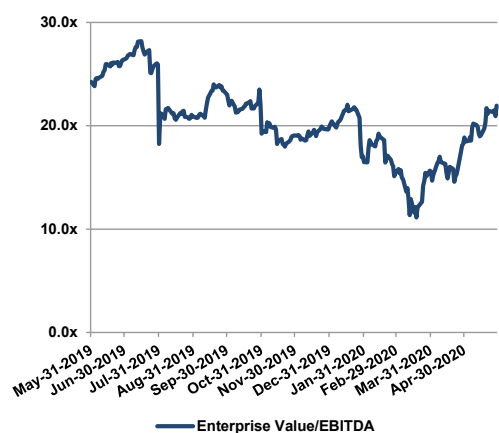
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
IP Networking Index	2.6x	1.3x
Allot Communications	2.6x	1.4x
Audiocodes	5.1x	2.2x
Ribbon Communications	1.7x	1.0x

### EBITDA Multiple Trends



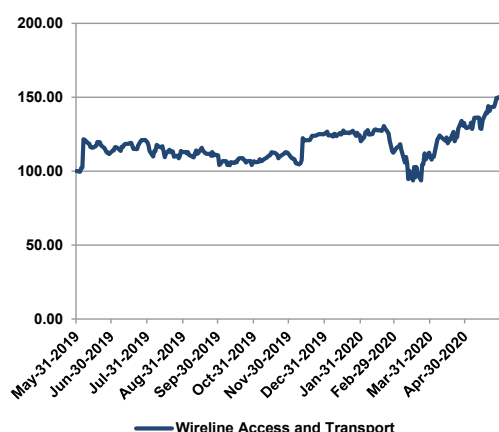
### Company EBITDA Multiples

	5/31/2020	5/31/2019
IP Networking Index	22.0x	24.2x
Allot Communications	NM	NM
Audiocodes	39.6x	19.8x
Ribbon Communications	24.1x	NM

Source: Capital IQ

## Sub Sector Analysis: Wireline Access and Transport

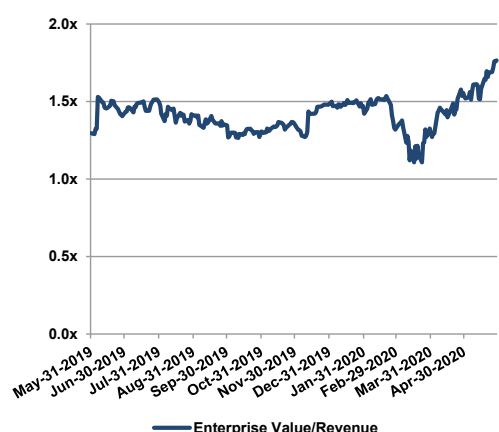
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Wireline Access & Transport Index	50.1%	33.3%
ADTRAN	-27.3%	41.7%
ADVA	-14.8%	-1.8%
BATM	73.6%	75.2%
Calix	133.1%	56.7%
CIENA	58.2%	43.7%
Communications Systems	81.6%	-9.8%
Dasan Zhone Solutions	-43.8%	-3.7%
Infinera	60.1%	-26.8%
Net Insight	37.4%	34.4%

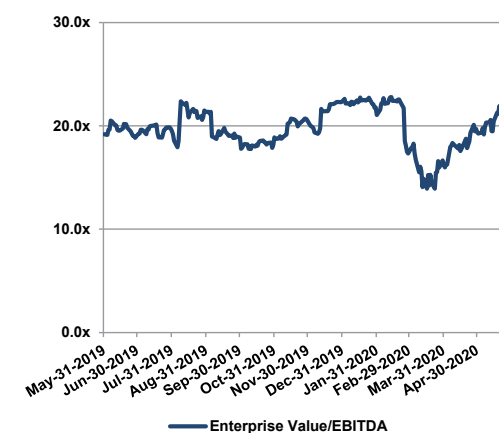
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
Wireline Access & Transport Index	1.8x	1.3x
ADTRAN	1.0x	1.2x
ADVA	0.6x	0.8x
BATM	3.5x	1.9x
Calix	1.9x	0.8x
CIENA	2.3x	1.6x
Communications Systems	0.3x	0.5x
DASAN Zhone Solutions	0.7x	1.1x
Infinera	1.0x	0.7x
Net Insight	1.6x	1.4x

### EBITDA Multiple Trends



### Company EBITDA Multiples

	5/31/2020	5/31/2019
Wireline Access & Transport Index	22.8x	19.2x
ADTRAN	NM	NM
ADVA	10.6x	10.4x
BATM	1634.0x	56.0x
Calix	573.1x	NM
CIENA	14.4x	11.9x
Communications Systems	28.9x	NM
DASAN Zhone Solutions	NM	34.4x
Infinera	NM	NM
Net Insight	85.1x	64.5x

Source: Capital IQ

## Sub Sector Analysis: Cable and Video

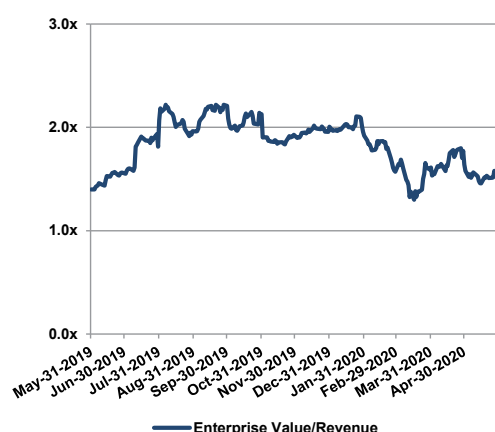
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Cable and Video Index	-2.4%	-3.3%
Amino	52.0%	9.6%
Casa Systems	-22.6%	32.6%
Harmonic	3.3%	-12.2%
NetGem	-6.1%	-15.0%
SeaChange	48.8%	-48.4%

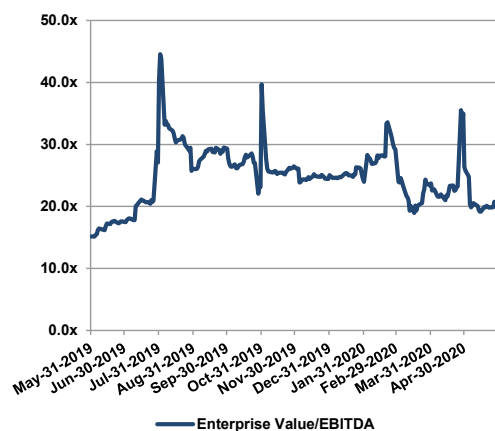
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
Cable and Video Index	1.5x	1.4x
Amino	1.7x	0.8x
Casa Systems	1.6x	2.1x
Harmonic	1.6x	1.4x
NetGem	0.8x	0.6x
SeaChange	0.9x	0.4x

### EBITDA Multiple Trends



### Company EBITDA Multiples

	5/31/2020	5/31/2019
Cable and Video Index	20.0x	15.1x
Amino	17.9x	6.9x
Casa Systems	26.9x	9.6x
Harmonic	23.2x	29.4x
NetGem	20.5x	9.6x
SeaChange	30.4x	NM

Source: Capital IQ

## Sub Sector Analysis: Broadband Wireless

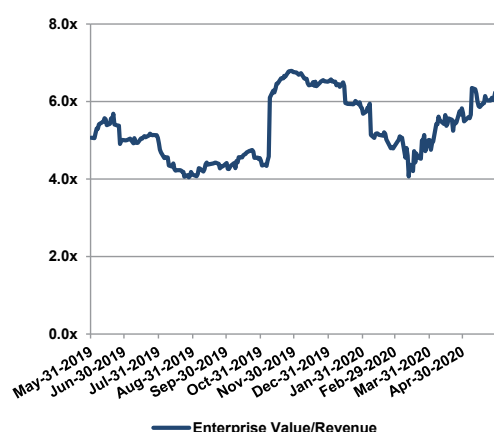
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Broadband Wireless Index	48.4%	34.7%
Aviat Networks	13.8%	27.0%
Cambium Networks	NA	-29.9%
Ceragon Networks	-15.2%	39.1%
Redline Communications	-37.1%	-28.3%
Ubiquiti Networks	53.3%	35.9%

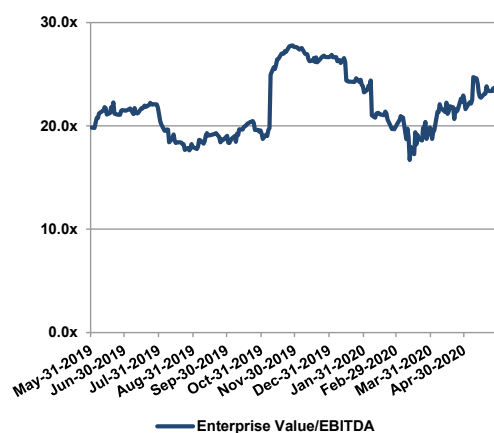
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
Broadband Wireless Index	6.2x	5.1x
Aviat Networks	0.2x	0.2x
Cambium Networks	0.6x	NA
Ceragon Networks	0.7x	0.6x
Redline Communications	0.3x	0.4x
Ubiquiti Networks	9.8x	7.5x

### EBITDA Multiple Trends



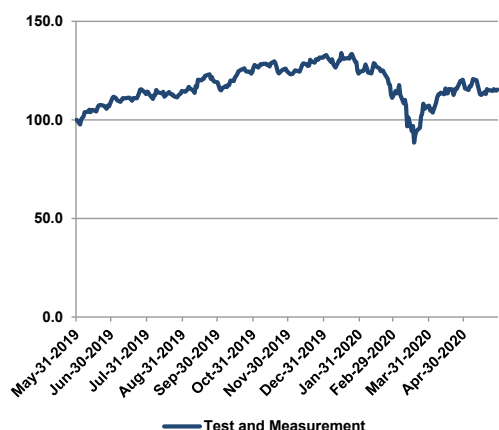
### Company EBITDA Multiples

	5/31/2020	5/31/2019
Broadband Wireless Index	24.2x	19.8x
Aviat Networks	5.6x	6.6x
Cambium Networks	7.8x	NA
Ceragon Networks	19.4x	6.0x
Redline Communications	NM	NM
Ubiquiti Networks	26.4x	21.1x

Source: Capital IQ

## Sub Sector Analysis: Test and Measurement

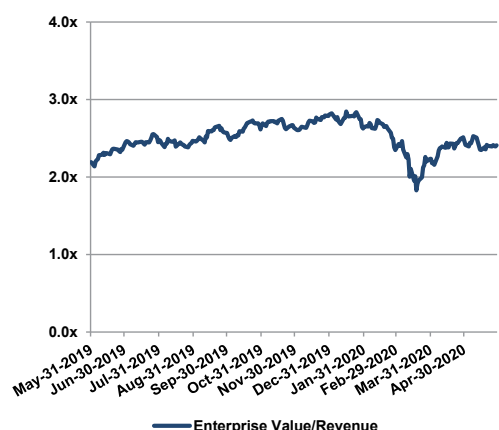
### Twelve Month Index Returns



### Company Returns

	12 Month	3 Month
Test and Measurement Index	15.4%	3.8%
Anritsu	23.3%	20.4%
EXFO	-37.2%	-26.8%
Spirent	55.0%	14.4%
Viavi	-3.8%	-12.1%

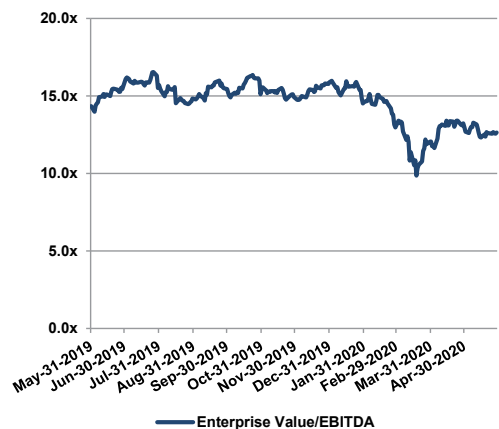
### Revenue Multiple Trends



### Company Revenue Multiples

	5/31/2020	5/31/2019
Test and Measurement Index	2.4x	2.2x
Anritsu	2.4x	2.2x
EXFO	0.6x	0.8x
Spirent	3.4x	2.3x
Viavi	2.4x	2.6x

### EBITDA Multiple Trends



### Company EBITDA Multiples

	5/31/2020	5/31/2019
Test and Measurement Index	12.6x	14.3x
Anritsu	11.6x	13.9x
EXFO	12.9x	10.6x
Spirent	16.5x	11.8x
Viavi	13.1x	16.4x

Source: Capital IQ



# FOCUS Telecom Technology and Services Team

---



## **Richard H. Pierce**

Managing Director and Telecom  
Technology and Services Team  
Leader, Washington, DC

rich.pierce@focusbankers.com  
202-470-1983

Rich Pierce has 20 years of investment banking experience advising middle market clients on a variety of mergers and acquisitions and capital raising transactions. During that time, Mr. Pierce's primary emphasis has been on serving clients in the telecommunications industry including providers of network related hardware and software products, wireless and wireline telecommunications service providers and network engineering and construction companies.



## **David Freeland**

Managing Director,  
San Francisco, California

david.freeland@focusbankers.com  
978-505-1837

David Freeland, a FOCUS Managing Director, has more than fifteen years of experience providing investment banking and management consulting services to a variety of corporate clients, ranging from the Fortune 500 to start-up businesses. He has been an investment banker since 2003, advising clients on mergers and acquisitions and capital raising transactions. Mr. Freeland has broad experience in the telecom and technology industry and has significant experience with data center companies.

---

## About FOCUS Investment Banking LLC

With more than three decades of experience, FOCUS Investment Banking is a trusted name in M&A advisory services worldwide. FOCUS works to understand each client's strategic and financial objectives, craft the best plan to achieve these goals, and deliver success. Whether helping to sell, buy, or raise capital, FOCUS strives to maximize the value of every transaction to the benefit of its clients. FOCUS bankers are seasoned operating and financial executives with extensive transaction experience. Securities transactions conducted by FOCUS Securities LLC, an affiliated company, registered Broker Dealer member FINRA/SIPC. For more information on FOCUS, please visit [www.focusbankers.com](http://www.focusbankers.com).

© 2020 FOCUS Investment Banking LLC

# FOCUS

Investment Banking

## **HEADQUARTERS**

FOCUS Investment Banking LLC  
8065 Leesburg Pike, Suite 750, Vienna, VA 22182  
202.785.9404 | 202.785.9413 (fax)

Securities transactions conducted by FOCUS Securities LLC, an affiliated company, registered Broker Dealer member FINRA/SIPC.