

# 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

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# 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

The FOCUS Carrier-Focused Telecom Technology Index (CFTTI) was in the black for the second straight reporting period with a three-month gain of 5.7%. While this gain beat the 5.2% increase in the S&P 500 over the corresponding time period, it also fell short of the 8.2% gain in the NASDAQ. The sector also looks strong for the full year period with a gain of 17.8%. However, despite the robust increase, the CFTTI still lagged far behind both the 29.0% gain in the S&P 500 and the 54.0% gain in the NASDAQ. Sector multiples closed out the period at 2.3x revenue and 11.2x EBITDA. Both of these are higher than year-ago multiples of 2.1x revenue and 10.4x EBITDA.

## Large Cap

While it was the worst performing sub sector in the CFTTI this period, the Large Cap sub sector still managed to deliver a positive three-month return of 2.8%. Cisco, Ericsson and Juniper all had single digit gains, while Nokia and ZTE fell. The Large Cap sub sector also brought up the rear for the CFTTI for the full year period with a 12-month increase of 11.2%. Ericsson was far and away the best performing company in the index as it jumped up 55.8% compared to last year. Conversely, ZTE plummeted more than 30%. Sub sector multiples ended the period higher than a year ago, but only by a small margin. The sub sector revenue multiple ticked up from 2.1x to 2.2x, while the sub sector EBITDA multiple went from 10.0x to 10.3x.

## OSS/BSS Software

The OSS/BSS software sub sector followed up the solid gains in our winter reporting period to post even stronger increases in the spring. The sub sector was up 14.4% this period, and gains were broad-based as nine of the 10 companies in the index traded higher. The strongest performers were Evolving Systems (up 70.3%), Synchronoss (up 49.7%) and Pareteum (up 38.4%). The sub sector's full year gain of 17.0% is a bit more modest. Evolving Systems was also a standout performer for the full year with a gain of 230.6%, but Subex (up nearly 350%) and Tecnotree (up slightly more than 180%) were also stellar performers. Sub sector multiples are slightly higher than they were a year ago and ended the period at 2.2x revenue and 11.0x EBITDA. Both of these compare favorably to multiples at this time last year of 2.0x revenue and 10.5x EBITDA.

## IP Networking

The IP Networking sub sector fell just short of a 20% increase, coming in at a three-month gain of 19.7%. All three companies in the index delivered positive returns, led by Allot Communications (up 49.1%) and Ribbon Communications (up 25.9%). The sub sector also looks strong when measured over the 12-month period with a total gain of 65.0%. In this case, Ribbon Communications made the biggest contribution with a year-over-year increase of 167.5%. The sub sector revenue multiple has increased significantly over the past year, moving from 1.5x a year ago to 2.4x currently. However, the sub sector EBITDA multiple actually declined from 15.6x a year ago to 13.9x at the end of the current reporting period.

## Wireline Access and Transport

The Wireline Access and Transport sub sector roared back into positive territory this reporting period as it jumped up 24.5%. Some of the largest gains were at access vendors such as Calix (up 66.8%), ADTRAN (up 33.3%) and DASAN Zhong Solutions (up 29.3%). However, sub sector performance was strong across the board, and every single company in the index enjoyed a double digit gain this period. The sub sector was also up more than 60% for the full year period, including four companies that more than doubled their stock price. Even with these gains, sub sector multiple performance was mixed. The sub sector revenue multiple moved up sharply from 1.3x to 2.1x, but the sub sector EBITDA multiple fell slightly from 17.3x to 16.8x.

## Cable and Video

The Cable and Video sub sector was the top performing sub sector in the CFTTI this period with an increase of 33.4%. Performance was strong across the board with gains ranging from 18.6% on the low end (for Harmonic) to 54.6% on the high end (for Casa Systems). Full year performance was not as strong relative to the rest of the CFTTI, but was nevertheless still impressive with a year-over-year gain of 45.9%. Casa Systems was the leading stock in the index over this time period as well with a 12-month gain of 150.3%. Over the past year, the sub sector revenue multiple increased from 1.6x to 2.0x and the sub sector EBITDA multiple expanded from 28.8x to 31.2x.

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## Broadband Wireless

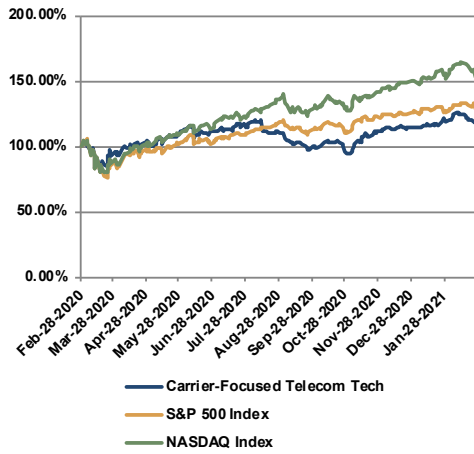
The Broadband Wireless sub sector fell just short of leading the CFTTI for the second straight reporting period, but was still able to earn a silver medal with a three-month gain of 30.6%. While Ubiquiti Networks tuned in a strong gain of 28.5%, it was actually one of the sub sector's weaker performers for the period. Aviat Networks, Cambium Networks and Ceragon Networks all performed better. Though it may have been beat out this period, Broadband Wireless is still the top-performing sub sector over the past 12 months with a gain of 144.8%. Aviat Networks (up more than 400%) and Cambium Networks (up nearly 600%) were particularly impressive over this time frame. Sub sector multiples ended the period at 9.2x revenue and 30.7x EBITDA. Both of these represent substantial increases from multiples at this time last year of 4.8x revenue and 19.9x EBITDA.

## Test and Measurement

While it enjoyed a three-month gain of 4.4%, the Test and Measurement sub sector was still the second worst performing sub sector in the CFTTI this reporting period. EXFO and Viavi both performed well with gains of 46.4% and 19.5%, respectively. However, these were largely counterbalanced by declines at Anritsu and Spirent. Even with the relatively modest gain this period, the sub sector is still up nearly 25% for the full year. Sub sector multiples are also higher than they were a year ago. The sub sector revenue multiple increased from 2.3x to 2.8x, and the sub sector EBITDA multiple increased from 13.1x to 13.7x.

# Carrier-Focused Telecom Technology: Public Market Summary

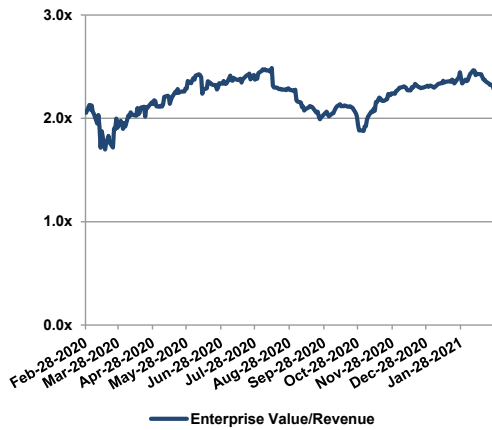
## Twelve Month Index Returns



## Sector and Sub Sector Returns

	12 Month	3 Month
Carrier-Focused Telecom Tech	17.8%	5.7%
Large Cap	11.2%	2.8%
OSS/BSS	17.0%	14.4%
IP Networking	65.0%	19.7%
Wireline Access and Transport	61.7%	24.5%
Cable and Video	45.9%	33.4%
Broadband Wireless	144.8%	30.6%
Test and Measurement	24.9%	4.4%
S&P 500	29.0%	5.2%
NASDAQ	54.0%	8.2%

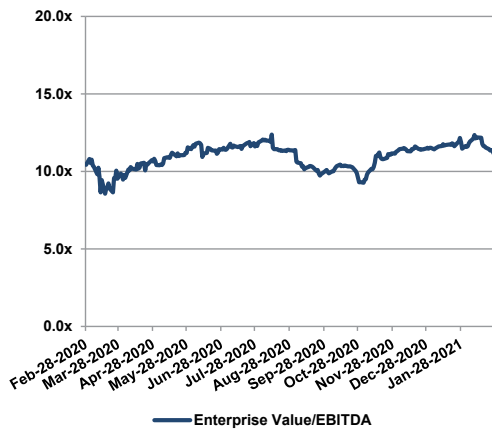
## Revenue Multiple Trends



## Sector and Sub Sector Revenue Multiples

	2/28/2021	2/29/2020
Carrier-Focused Telecom Tech	2.3x	2.1x
Large Cap	2.2x	2.1x
OSS/BSS	2.2x	2.0x
IP Networking	2.4x	1.5x
Wireline Access and Transport	2.1x	1.3x
Cable and Video	2.0x	1.6x
Broadband Wireless	9.2x	4.8x
Test and Measurement	2.8x	2.3x

## EBITDA Multiple Trends



## Sector and Sub Sector EBITDA Multiples

	2/28/2021	2/29/2020
Carrier-Focused Telecom Tech	11.2x	10.4x
Large Cap	10.3x	10.0x
OSS/BSS	11.0x	10.5x
IP Networking	13.9x	15.6x
Wireline Access and Transport	16.8x	17.3x
Cable and Video	31.2x	28.8x
Broadband Wireless	30.7x	19.9x
Test and Measurement	13.7x	13.1x

Source: Capital IQ

# M&A Summary Comments

## M&A

We saw a slight increase in the number of deals in the Carrier-Focused Telecom Technology sector compared to our winter report with a total of 15 transactions in these past three months. This most recent period was also relatively strong from the standpoint of total announced transaction dollar volume with a total of \$985 million. Looking back on 2020, the year was relatively “middle of the pack” when compared to the last five years. With 53 total transactions, 2020 certainly represented an uptick compared to the 40 transactions in 2019, and in fact trailed only 2018 when measured by the total number of announced deals. However, total announced transaction dollar volume remained low at slightly more than \$1.2 billion for the year. While this figure was higher than what we saw in 2019, it still trails 2017 and 2018 by a fairly wide margin.

## OSS/BSS Software

Activity in the OSS/BSS Software sub sector spiked with a total of ten transactions in the past three months. This included the Cisco acquisition of mobile messaging software provider IMI Mobile for \$752.8 million, the largest transaction in the Carrier-Focused Telecom Technology sector this period. In a second transaction in the mobile messaging space, Kaleyra acquired mGage for \$215 million. We also noted a new private equity-backed telecom software platform as Alpine Investors purchased Innovative Systems, a provider of OSS/BSS solutions to Tier 2

and 3 operators. The remaining three transactions that we will specifically highlight all involved companies that help operators plan and manage fiber networks. These were the acquisition of OSP Insight by IQGeo, the acquisition of 3-GIS by SSP Innovations and the acquisition of Bulb Technologies by Meritus Ulaganja.

## IP Networking

In the IP Networking sub sector, Turnium acquired Multplied Networks. Multplied sells an SD-WAN platform for use by Telecom service providers.

## Wireline Access and Transport

In the lone transaction in the Wireline Access and Transport sub sector, DASAN Zhone Solutions acquired packet optical transport hardware vendor Optelian.

## Cable and Video

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

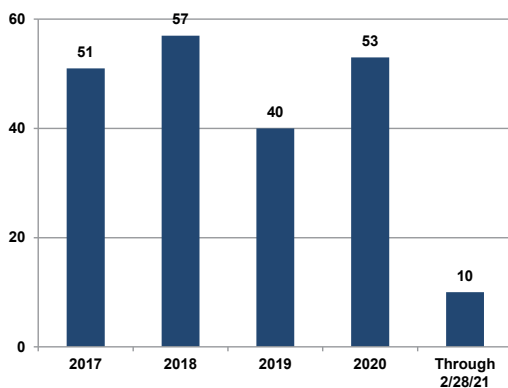
## Broadband Wireless

In another sub sector with only a single transaction for the period, Conbuzz acquired wireless repeater company RF Window.

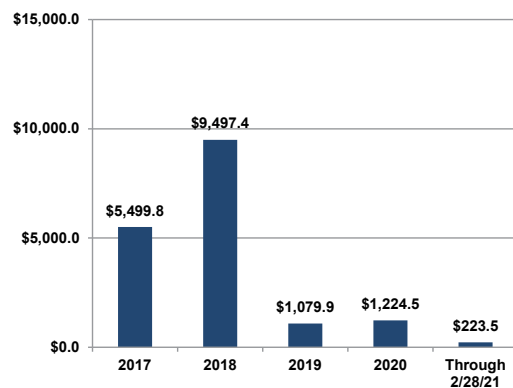
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## Carrier-Focused Telecom Technology: M&A Summary

M&A Activity: Number of Transactions



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





## Test and Measurement

We counted two transactions in the Test and Measurement sub sector this period. In the first, Keysight Technologies purchased Sanjole, a company that makes test and measurement equipment for wireless networks. In the sub sector's second transaction, private equity company LDC purchased network troubleshooting and application performance monitoring company Phoenix Technologies.

## Transactions with Multiples

This period had two transactions with announced multiples, both of which were in the OSS/BSS Software space. The period's highest multiple transaction was the Cisco acquisition of IMImobile. Multiples for this transaction were 3.5x revenue and 34.9x EBTDA. The period's other transaction with an announced multiple, the IQGeo acquisition of OSPInsight, weighed in at lower (but still respectable) multiples of 2.2x revenue and 17.5x EBITDA.

## M&A Announced Transactions (12/1/20 – 2/28/21)

Acquiror	Target	Sector	Date Announced	Purchase Price	Description
LDC	Phoenix Technologies	Test and Measurement	2/26/21	NA	Network troubleshooting, testing and network and application performance monitoring and management systems.
Keysight Technologies	Sanjole	Test and Measurement	2/22/21	NA	Wireless network testing and measurement systems that identify and resolve problems between devices and the network being tested.
Accedo Broadband	Hibox Systems	OSS/BSS Software	2/21/21	NA	Provides IPTV systems and related middleware, software and services for telecommunications, media and other businesses.
Kaleyra	mGage	OSS/BSS Software	2/19/21	\$215.0	Cloud-based enterprise mobile messaging platform that supports SMS, MMS and RCS communications.
Centre Lane Partners	Synacor	OSS/BSS Software	2/11/21	NA	White-label online content delivery SaaS for satellite, telecommunication, and cable operators.
Meritus Ulaganja	Bulb Technologies	OSS/BSS Software	2/9/21	\$8.5	Broadband service management software for fixed, cable and mobile communication service providers in Europe.
Lumine Group	VAS-X	OSS/BSS Software	1/28/21	NA	Billing, customer management, recharge, credit management and fulfillment solutions for communications services providers.
DASAN Zhone Solutions	Optelian	Wireline Access and Transport	1/20/21	NA	Packet optical transport hardware and software for communications service providers and network operators.
Alpine Investors	Innovative Systems	OSS/BSS Software	1/12/21	NA	Software solutions that include a BSS/OSS platform, a cable television solution suite and a VoIP platform.
SSP Innovations	3-GIS	OSS/BSS Software	1/4/21	NA	Suite of products that allow telecom operators to plan, design, construct and manage their networks.
Conbuzz	RF Window	Broadband Wireless	12/21/20	NA	Offers wireless network repeaters and a network management system for controlling and monitoring repeaters.
Palmetto Rural Telephone Cooperative	Communications Data Group	OSS/BSS Software	12/17/20	NA	Billing and operational support solutions for voice, video and data for retail and wholesale communications service providers.
Turnium	Multipplied Networks	IP Networking	12/16/20	NA	SD-WAN software for use by communications service providers.
Cisco Systems	IMImobile	OSS/BSS Software	12/6/20	\$752.8	CRM content distribution and management and mobile messaging software and related services for wireless carriers and enterprises.
IQGeo	OSPInsight	OSS/BSS Software	12/1/20	\$8.8	Fiber optic network management software solution.

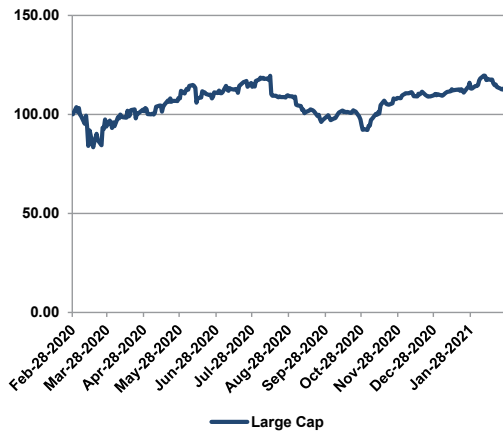
## M&A Announced Transactions with Revenue Multiples (3/1/20 – 2/28/21)

Acquiror	Target	Sector	Date Announced	Purchase Price	Revenue Multiple	EBITDA Multiple	Description
Cisco Systems	IMImobile	OSS/BSS Software	12/6/20	\$752.8	3.5 x	34.9 x	CRM content distribution and management and mobile messaging software and related services for wireless carriers and enterprises.
IQGeo	OSPInsight	OSS/BSS Software	12/1/20	\$8.8	2.2 x	17.5 x	Fiber optic network management software solution.
Sterlite Technologies	OPTOTEC	Wireline Access and Transport	11/2/20	\$33.7	1.4 x	NA	Fiber-to-the-home network products.
Agile Content	Edgware	Cable and Video	10/30/20	\$17.9	0.9 x	NM	Solutions that enable telecom and cable operators as well as broadcasters to distribute TV and video content over the Internet.
ATEME	Anevia	Cable and Video	10/6/20	\$25.7	1.5 x	NA	Provides OTT and IPTV encoding and streaming content delivery software for broadcasters, pay-tv operators and other businesses.
ENEA	Aptilo Networks	OSS/BSS Software	10/1/20	\$16.6	1.8 x	NA	Provides integrated Wi-Fi service management software for telecom operators, ISPs and other service providers.
Amdocs	Openet	OSS/BSS Software	7/23/20	\$180.0	2.6 x	NA	Provider of 5G charging, policy and cloud technologies.
L&T Technology Services	Orchestra Technology	OSS/BSS Software	7/16/20	\$11.0	0.7 x	NA	Network performance management SaaS that measures, analyzes and manages devices, services and network KPIs.
S&T	Iskratel	Wireline Access and Transport	6/30/20	\$42.2	0.3 x	NA	Broadband access and optical network equipment, VoIP gateways and modems for telecom, railway, energy and public safety markets.
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.



# Sub Sector Analysis: Large Cap

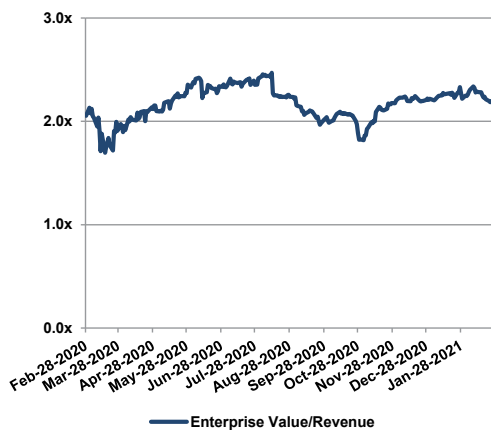
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
Large Cap Index	11.2%	2.8%
Cisco	12.4%	4.3%
Ericsson	55.8%	2.4%
Juniper	9.7%	6.9%
Nokia	5.4%	-0.2%
ZTE	-31.4%	-7.1%

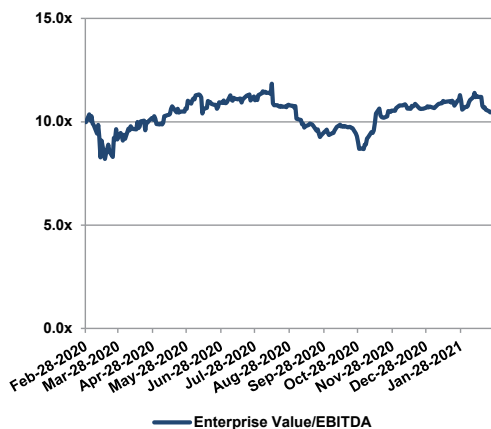
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
Large Cap Index	2.2x	2.1x
Cisco	3.6x	3.1x
Ericsson	1.4x	1.1x
Juniper	1.8x	1.6x
Nokia	0.8x	0.8x
ZTE	1.4x	2.5x

## EBITDA Multiple Trends



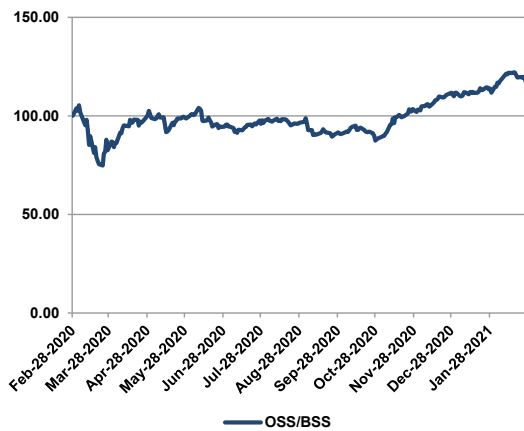
## Company EBITDA Multiples

	2/28/2021	2/29/2020
Large Cap Index	10.3x	10.0x
Cisco	11.5x	9.8x
Ericsson	9.6x	9.1x
Juniper	12.6x	9.7x
Nokia	6.4x	6.8x
ZTE	20.1x	31.9x

Source: Capital IQ

# Sub Sector Analysis: OSS/BSS Software

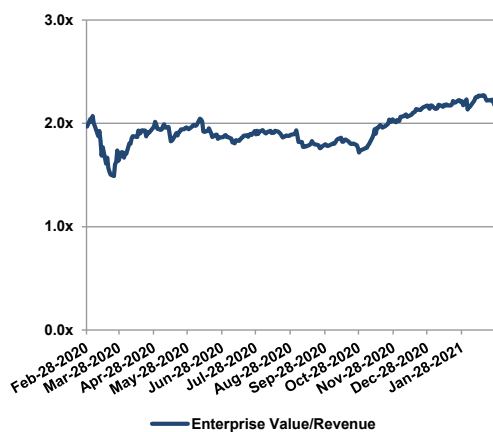
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
OSS/BSS Index	17.0%	14.4%
Amdocs	18.9%	15.2%
CSG Systems	4.3%	6.4%
Evolving Systems	230.6%	70.3%
NetScout	9.8%	20.5%
Optiva	-22.7%	-30.0%
Pareteum	-5.4%	38.4%
Radcom	17.1%	7.6%
Subex	349.9%	21.1%
Synchronoss	-10.0%	49.7%
Tecnotree	180.6%	1.2%

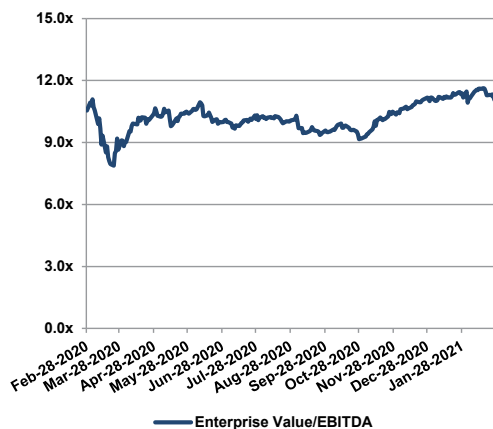
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
OSS/BSS Index	2.2x	2.0x
Amdocs	2.3x	2.0x
CSG Systems	1.7x	1.7x
Evolving Systems	1.2x	0.4x
NetScout Systems	2.5x	2.3x
Optiva	2.5x	1.9x
Pareteum	1.5x	1.5x
Radcom	1.9x	1.6x
Subex	2.7x	0.8x
Synchronoss	1.5x	1.5x
Tecnotree	3.1x	1.5x

## EBITDA Multiple Trends



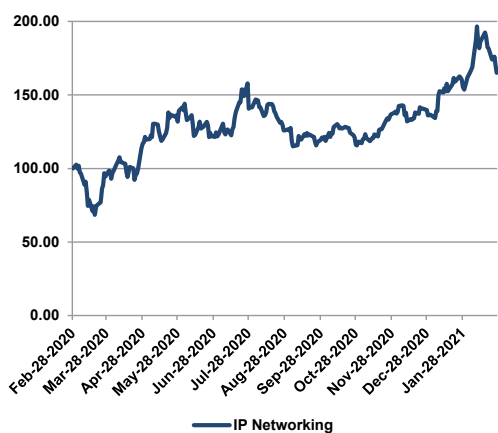
## Company EBITDA Multiples

	2/28/2021	2/29/2020
OSS/BSS Index	11.0x	10.5x
Amdocs	11.8x	10.7x
CSG Systems	10.1x	10.3x
Evolving Systems	19.0x	NM
NetScout Systems	14.7x	13.5x
Optiva	217.0	15.5x
Pareteum	NM	NM
Radcom	NM	NM
Subex	10.2x	3.6x
Synchronoss	115.4x	NM
Tecnotree	8.8x	5.2x

Source: Capital IQ

# Sub Sector Analysis: IP Networking

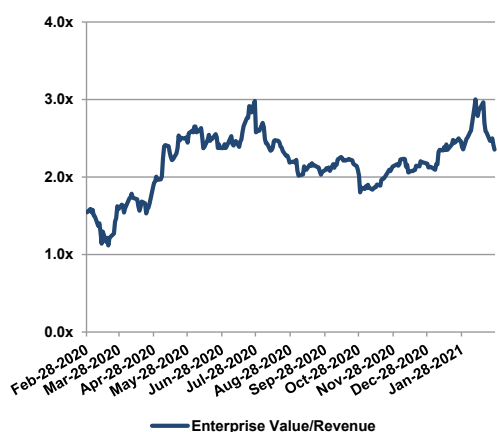
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
IP Networking Index	65.0%	19.7%
Allot Communications	34.1%	49.1%
Audiocodes	27.1%	1.9%
Ribbon Communications	167.5%	25.9%

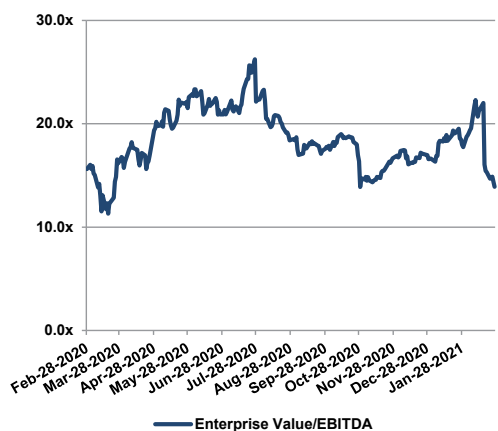
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
IP Networking Index	2.4x	1.5x
Allot Communications	3.1x	2.7x
Audiocodes	3.6x	3.2x
Ribbon Communications	1.9x	0.7x

## EBITDA Multiple Trends



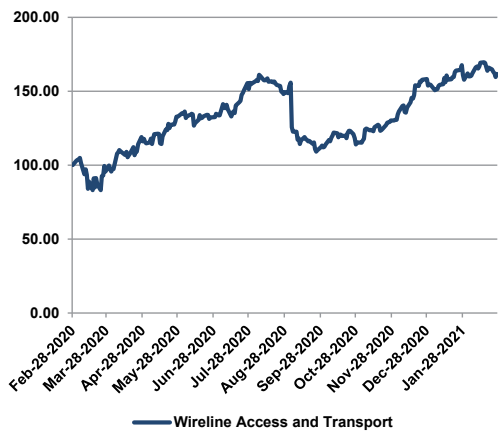
## Company EBITDA Multiples

	2/28/2021	2/29/2020
IP Networking Index	13.9x	15.6x
Allot Communications	NM	NM
Audiocodes	19.4x	25.8x
Ribbon Communications	14.1x	6.4x

Source: Capital IQ

# Sub Sector Analysis: Wireline Access and Transport

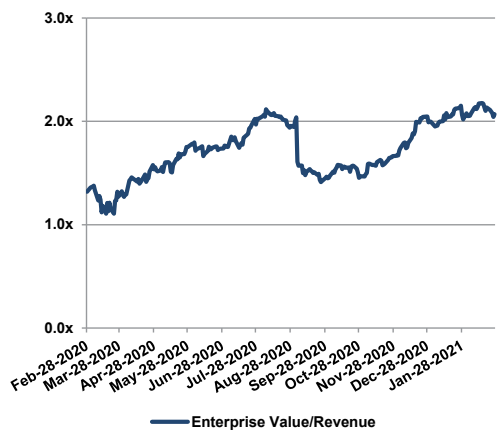
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
Wireline Access & Transport Index	61.7%	24.5%
ADTRAN	109.3%	33.3%
ADVA	67.7%	31.1%
BATM	134.4%	22.0%
Calix	339.0%	66.8%
CIENA	35.7%	16.5%
Communications Systems	-7.0%	22.7%
Dasan Zhone Solutions	118.1%	29.3%
Infinera	44.5%	16.1%
Net Insight	32.9%	33.9%

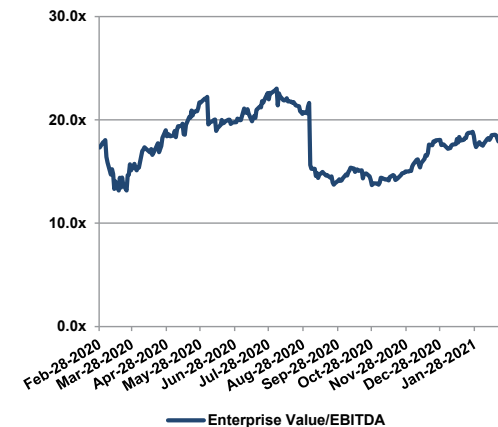
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
Wireline Access & Transport Index	2.1x	1.3x
ADTRAN	1.5x	0.6x
ADVA	0.8x	0.6x
BATM	3.1x	2.1x
Calix	4.3x	1.2x
CIENA	2.2x	1.6x
Communications Systems	0.8x	0.7x
DASAN Zhone Solutions	1.5x	0.6x
Infinera	1.7x	1.2x
Net Insight	1.4x	1.5x

## EBITDA Multiple Trends



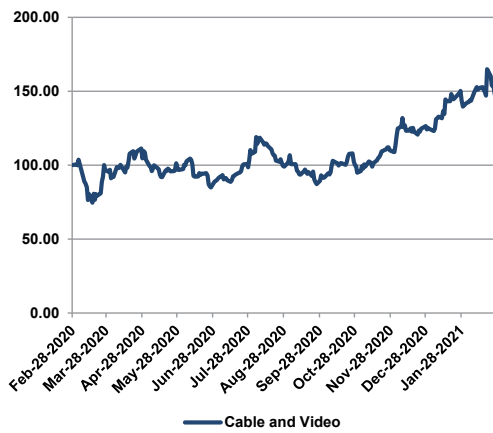
## Company EBITDA Multiples

	2/28/2021	2/29/2020
Wireline Access & Transport Index	16.8x	17.3x
ADTRAN	55.1x	NM
ADVA	9.8x	9.0x
BATM	34.6x	983.5x
Calix	41.4x	NM
CIENA	11.9x	10.6x
Communications Systems	459.1x	31.8x
DASAN Zhone Solutions	NM	50.6x
Infinera	NM	NM
Net Insight	23.5x	63.7x

Source: Capital IQ

# Sub Sector Analysis: Cable and Video

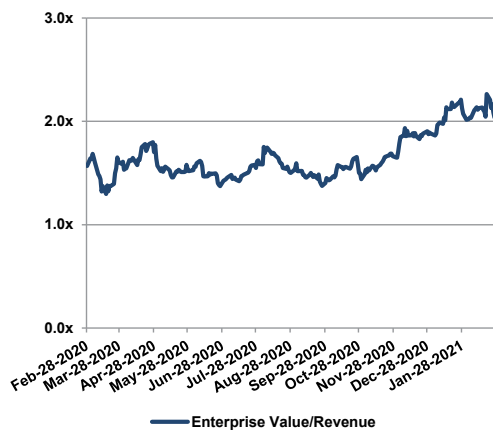
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
Cable and Video Index	45.9%	33.4%
Amino	28.7%	36.0%
Casa Systems	150.3%	54.6%
Harmonic	26.1%	18.6%
NetGem	38.3%	36.2%
SeaChange	-67.8%	22.2%

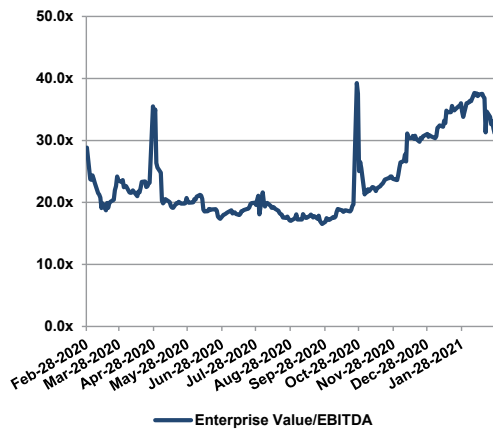
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
Cable and Video Index	2.0x	1.6x
Amino	1.8x	1.6x
Casa Systems	2.1x	1.6x
Harmonic	2.1x	1.5x
NetGem	1.3x	1.0x
SeaChange	1.3x	1.8x

## EBITDA Multiple Trends



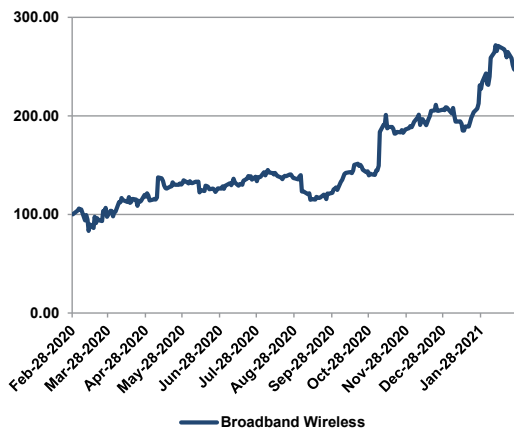
## Company EBITDA Multiples

	2/28/2021	2/29/2020
Cable and Video Index	31.2x	28.8x
Amino	19.0x	16.4x
Casa Systems	19.5x	62.3x
Harmonic	18.4x	16.7x
NetGem	3.4x	26.2x
SeaChange	NM	59.6x

Source: Capital IQ

# Sub Sector Analysis: Broadband Wireless

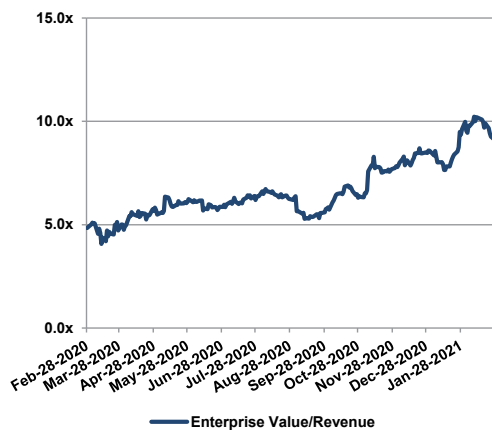
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
Broadband Wireless Index	144.8%	30.6%
Aviat Networks	411.1%	69.8%
Cambium Networks	576.6%	56.3%
Ceragon Networks	160.4%	63.0%
Redline Communications	-47.6%	25.9%
Ubiquiti Networks	135.1%	28.5%

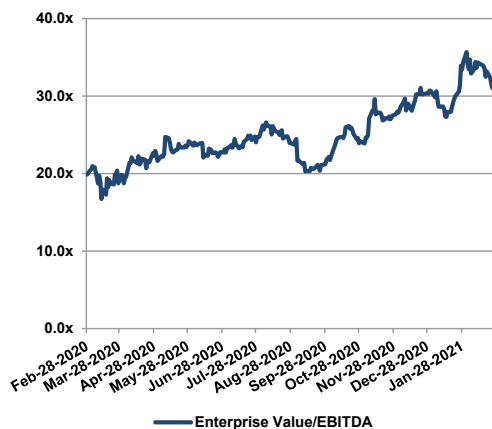
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
Broadband Wireless Index	9.2x	4.8x
Aviat Networks	1.2x	0.2x
Cambium Networks	3.9x	0.8x
Ceragon Networks	1.3x	0.4x
Redline Communications	0.2x	0.4x
Ubiquiti Networks	12.8x	7.8x

## EBITDA Multiple Trends



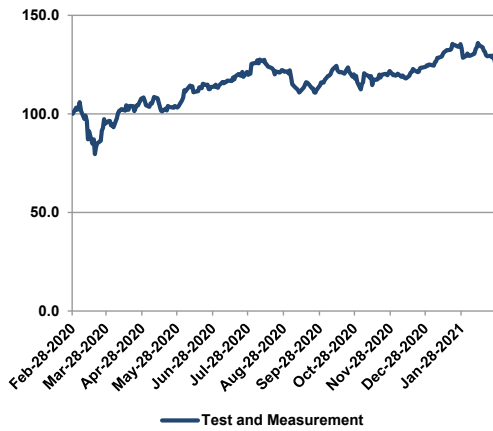
## Company EBITDA Multiples

	2/28/2021	2/29/2020
Broadband Wireless Index	30.7x	19.9x
Aviat Networks	12.0x	7.3x
Cambium Networks	36.8x	32.4x
Ceragon Networks	70.5x	7.6x
Redline Communications	NM	NM
Ubiquiti Networks	32.2x	21.1x

Source: Capital IQ

# Sub Sector Analysis: Test and Measurement

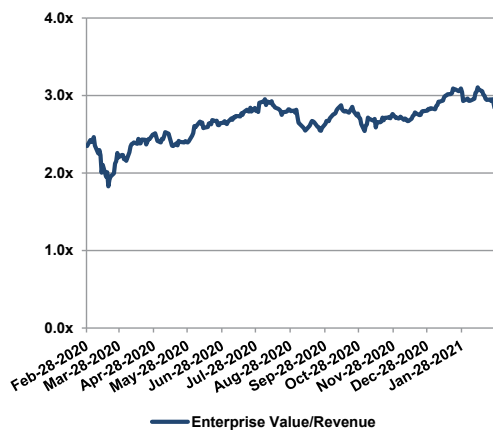
## Twelve Month Index Returns



## Company Returns

	12 Month	3 Month
Test and Measurement Index	24.9%	4.4%
Anritsu	30.2%	-6.5%
EXFO	21.0%	46.4%
Spirent	22.3%	-4.9%
Viavi	22.7%	19.5%

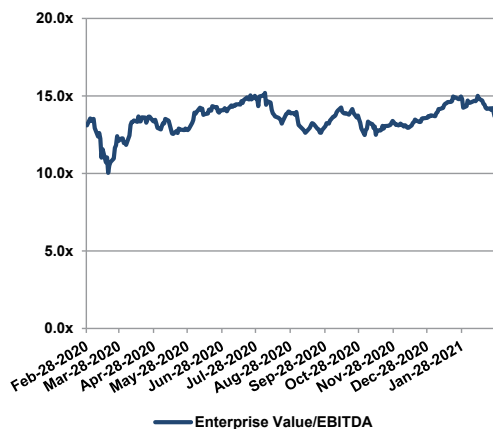
## Revenue Multiple Trends



## Company Revenue Multiples

	2/28/2021	2/29/2020
Test and Measurement Index	2.8x	2.3x
Anritsu	2.5x	2.0x
EXFO	1.0x	0.7x
Spirent	3.4x	3.0x
Viavi	3.4x	2.7x

## EBITDA Multiple Trends



## Company EBITDA Multiples

	2/28/2021	2/29/2020
Test and Measurement Index	13.7x	13.1x
Anritsu	10.4x	11.0x
EXFO	29.8x	8.1x
Spirent	15.8x	14.5x
Viavi	18.0x	15.7x

Source: Capital IQ



# FOCUS Telecom Technology and Services Team

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## **Richard H. Pierce**

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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.



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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.

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