MERGERS & ACQUISITIONS

M&A activity in the cable network equipment industry has increased substantially since the recessionary period of 2008-2009. Since then, activity has risen more than 30%, and the number of transactions have remained elevated since 2012. Activity has continued to be robust in 2014; Capstone’s research indicates that 45 transactions were closed through the end of August.

The cable network equipment industry is highly competitive and fragmented. M&A activity and consolidation is driven by larger players seeking attractive acquisition targets to strengthen their product portfolio, add important customers and expand their geographic footprint. In addition, as cable operators prefer fewer suppliers, mid-tier players are also seeking acquisitions to gain critical scale and bolster their offerings as well as overall competitiveness. Industry growth, driven by the need by cable operators for expanded and improved networks, is also supporting M&A activity.

Capstone foresees healthy M&A activity in the cable network equipment industry. Buyers are expected to continue to rely on acquisitions to add high-margin business lines and new products, gain access to new customers, expand into new geographic markets, improve their service capability and build their manufacturing and R&D expertise. In addition, recent interest by private equity funds has driven multiples higher and brought new attention to the sector.
INDUSTRY GROWTH SPURS M&A ACTIVITY

The cable network equipment industry is large and diverse. It consists of manufacturers of a wide variety of products including amplifiers, receivers, connectors, head-end and hub equipment, node electronics, network test and management systems, power conversion and power supply equipment, DOCSIS devices, optical devices, VOD and VOIP devices, fiber optic and coaxial cable, set-top terminals and other customer premise equipment, among other items. Manufacturers of these products make up a large and growing industry that supplies its cumulatively broad portfolio of headend, access and connected home products to cable operators who use the equipment to build sophisticated networks over which they provide a variety of communications services to businesses and consumers.

Such equipment makes up the cable industry’s infrastructure, upon which the industry spends billions of dollars each year for expansion and improvement. Since 1996, the industry has invested over $213 billion in its networks and it continues to spend more than $13 billion each year on network expansion, maintenance and upgrades. In the past five years, the industry’s investment in cable networks increased at a 7.8% compound annual growth rate from 2008 through 2013, as shown in the following chart.

![Cable Industry: Cumulative Investment in Networks](chart)

Source: National Cable & Telecommunications Association

The industry’s capital expenditures reflect several types of activity, including system repairs and maintenance, upgrades to increase capacity and support new services, new construction to extend services to customers in new geographic markets, and the purchase of customer premise equipment such as digital set–top boxes, cable modems, and telephone network interface units.

The cable industry is capital intensive by nature, and its focus on upgrading the network infrastructure and deploying new services that require new technologies has necessitated consistently large capital expenditures over the years. Following the passage of the Telecommunications Act of 1996, the industry undertook a massive infrastructure upgrade in the late 1990s and early 2000s that allowed it to effectively compete in telecommunications. Since then, the capital commitment has continued, with recent investment driven by the introduction of innovative services and the high cost of advanced technologies that are in increasing demand by subscribers.
**CABLE’S SERVICE EXPANSION DRIVES NETWORK INVESTMENT**

Consumers are rapidly adopting new and more data-intensive services, while demanding enhanced performance from their existing cable services. At the same time, consumers are interfacing with the network via new mobile and smart devices. These dynamics are driving an exponential demand for greater bandwidth capacity in homes, causing broadband cable operators, telecommunications operators and satellite broadband providers to try to attract more subscribers with the provision of new services and ever-increasing bandwidth, data speeds and service levels. Such industry dynamics are causing broadband cable operators to invest in their existing legacy networks and increase the range of services and content available. The industry has succeeded in expanding its offering to include the following services:

**Television:** The cable industry’s innovation has greatly improved the television services available to consumers, and the industry delivers service to more than 56 million subscribers in the U.S. alone. Most cable homes subscribe to digital cable service, which allows them access to advanced services such as video-on-demand (VOD) programming, digital video recording (DVR) capabilities, high-definition television (HDTV), and TV Everywhere, which allows programmers to make content available on multiple platforms such as PCs, laptops, tablets and smartphones, all streamed by cable operators.

**Broadband:** Made possible by its substantial infrastructure investment, the cable industry has led the development of broadband Internet service in the U.S. By making broadband widely available, the industry has maintained its leadership in the delivery of high-speed Internet service, and has more than quadrupled its customer base over the past 10 years. For most U.S. homes, cable companies provide the fastest broadband speeds available, with standard speeds ranging from 10 Mbps to 20 Mbps and many homes with access to speeds of 50 Mbps or greater. Global data usage has doubled every two years as a result of insatiable consumer demand for data-intensive services, coupled with a shift towards the use of handheld networked devices. This requires broadband cable operators to continually upgrade their networks in order to keep up with this rapidly growing demand.

**Digital Voice Services:** With regard to telephone services, the FCC and Congress recognized the importance of creating a competitive market with the passage of the Telecommunications Act. However, it has only been since the cable industry’s aggressive commitment to telephony (starting in 2001), that true residential competition has emerged. The cable industry is now the primary source of competition to the incumbent telephone companies in the local telephone market, and the number of digital phone customers served by the industry has grown from just over 2.5 million at the end of 2002 to more than 28 million today. The largest cable television providers now rank among the nation’s largest telephone companies, cable operators make up five of the top 10 residential phone companies in the U.S. and cable companies are also well-entrenched in the telecoms business in Europe.

As consumer demand for additional, technologically advanced services and faster broadband continues, cable companies will need to ramp up their speeds and bring the next generation of technologies online, resulting in additional and continuous improvements to their infrastructure.
KEY GROWTH DRIVERS

To attract and retain subscribers in a highly competitive market, cable operators need to provide fast and reliable broadband services. The following trends are expected to continue to drive the need for infrastructure expansion and upgrades.

- **Growing broadband requirements:** Personal data usage is rapidly increasing as consumers demand more and more data-intensive services, in part driven by increased use of networked devices such as smartphones and tablets. The demand for bandwidth hungry content is also being driven by internet video traffic, and technologies such as HD and 3DTV, and multi-screen and multi-room, all of which require significant bandwidth. With consumers and enterprises demanding uninterrupted and fast connectivity solutions, global IP traffic growth is expected to increase at a compound annual growth rate of 21% from 2013 to 2018, while North America is expected to experience a 20% growth rate over the same period. Growth in Western Europe is forecast at 18% compounded annually over the period, with Central and Eastern Europe expected to post a 23% CAGR.

  ![IP Traffic Growth (Petabytes/Month)](image)

- **Competition Among Cable Providers:** The cable industry is highly competitive and operators are making a strong push to “own the subscriber” by offering a full range of communication & media services and converting “single play” customers to double- or triple-play customers who are buying bundled services from the operator such as digital telephony, and television services. This strategy has a huge impact on straining the operators’ network capacity, requiring additional bandwidth and more sophisticated equipment to accommodate the demand load.

- **Technology Upgrades:** The analog to digital switchover is required in order to offer enhanced services to the subscriber base. This conversion is nearly complete in the U.S. and is being rapidly adopted in Europe. The switch requires significant investment in the existing networks and is helping to boost capital expenditures. New service delivery technologies, such as DOCSIS and the evolution towards deep fiber are also being adopted by cable operators, requiring additional infrastructure investments.
GROWTH OF CABLE

The growth of the cable market will continue to drive demand for capital expenditures related to infrastructure, resulting in a healthy market for cable network equipment. The global broadcasting and cable TV market has experienced strong growth and is expected to continue to grow through the forecast period of 2018. The industry had total global revenues of $435.8 billion in 2013, representing a compound annual growth rate of 5.7% between 2009 and 2013. In comparison, the U.S. and European markets grew at a CAGR of 6.1% and 2.7% over the same period, to reach $172.7 billion and $108.4 billion, respectively. The industry’s growth is forecast to slow somewhat, with an anticipated CAGR of 4.4% for the five-year period 2013-2018, at which time the market is projected to reach a value of $541.6 billion. Comparatively, the U.S. and European markets are projected to grow 2.6% and 3.8% compounded annually over the same period, to reach $196.2 billion and $130.9 billion respectively.

Broadcast and Cable TV Market

Demand for cable television is expected to rise in the next five years with the continued introduction of new services, as well as rising living standards, increased demand for entertainment, and improving economies around the world that are resulting in more disposable income to spend on entertainment. Although the industry will continue to see a shift in services towards more broadband subscribers than video subscribers, cable operators appear to be embracing this changing landscape, and shoring up their position as broadband providers while trying to adapt to changes in video consumption habits of consumers. As a result, a number of initiatives are underway, including DOCSIS 3.1, fiber deployments and potential virtualization of some network functionality. Furthermore, cable operators and Over-The-Top (OTT) service providers like Netflix now appear to be willing to work with each other, as cable maintains a dominant position in the living room. Other initiatives include cloud-based Digital-Video-Recorders (DVR) and evolving Reference-Design-Kit (RDK) based platforms.

For more than a decade, cable operators have been active in network consolidation; investment in DOCSIS for next generation broadband, delivery of digital TV as a core service, investment in multiscreen delivery, and Wi-Fi network roll-out for entertainment and data on the move. These advances have positioned cable as a formidable full-service entertainment & communication supplier and as a result, the outlook for the industry is positive.
VALUE-DRIVERS

The value of a cable network equipment company is influenced by several key factors. Capstone has identified the following attributes of cable network equipment companies that are likely to attract potential acquirers and result in premium valuations.

- **Technically Superior Products**: Buyers are interested in target companies that provide technically superior products and have developed strong brand names that are well-accepted in the cable industry. Because operators function with a high cost of failure, they seek quality products from known and trusted supply partners. Companies with reliable, proven products and the ability to develop new solutions that improve network performance are in demand.

- **Cost Effective Products**: Cable operators work on thin margins and look to their suppliers to provide products that help to lower operator costs by reducing the frequency of equipment failures that require on-site maintenance and service calls. It is also important that the equipment maximizes infrastructure capacity and performance, allowing cable companies to gradually and incrementally invest in their networks.

- **Strong Product Design and R&D Capabilities**: Spurred by constant demand for new service introductions and increasing speeds and capacity, cable operators are pressuring equipment manufacturers for new and improved products. As a result, the cable network equipment market is undergoing rapid technological change and there is a constant push for new products that offer improved network performance. Continuous product development and strong in-house R&D expertise is attractive to buyers, especially if these efforts result in proprietary products backed by a strong portfolio of patents and IPRs.

- **Complementary Products**: Buyers seek targets with products that complement their existing product lineup and help to position them as a single source supplier to cable operators. To improve economies of scale, cable operators are reducing the number of suppliers they use, and in some cases are allowing key suppliers to manage their supply chain. As a result, buyers are looking for companies that can contribute a strong product line that will help to better position the acquirer with its customers.

- **Product Design or Customer Overlap**: Equipment manufacturers allocate their R&D resources to first engineering and designing their products, then customizing them to fit their specific customers’ networks. The customization aspect makes for an expensive process, and R&D/engineering resources tend to be scarce. As a result, buyers will often pay a premium for targets that have product design or customer knowledge overlap, which results in economies of scale during the design and engineering stage. This allows the buyer to free up valuable R&D resources to allocate to additional projects.
VALUE-DRIVERS (CONTINUED)

▶ **Trusted Supplier Status:** Equipment providers have become important partners to cable operators, who entrust them to improve the operators’ network quality, reduce operational costs and make the most of operators’ capital expenditures and network upgrades. Buyers are attracted to equipment companies that are well-entrenched among cable operators, with long-standing relationships that embed them in the customer’s supply chain. Multiple customers and contracts with top operators are also key. To the extent that these customer relationships are supported by framework agreements, master purchase agreements and long term contracts, they will be of higher value to the buyer. Many of the cable operators have extensive customer approval and accreditation requirements that also increase the value of these accounts. Furthermore, customers are conservative and averse to changing suppliers, making a long history of trust and success a significant barrier to entry for a supplier’s competitors.

▶ **Long-Standing Customer Relationships and Recurring Sales:** All broadband cable operators require their suppliers to pass stringent performance, reliability and environmental related tests and accreditations. This investment in establishing qualified suppliers, combined with the “engineered-in” nature of many products, makes it difficult for cable operators to change product suppliers. As a result, entrenched suppliers often enjoy a high level of recurring sales, driven by the operators’ constant network enhancements and expansions. These relationships and repeat sales are valuable to industry acquirers.

▶ **Scale/Geographic Coverage:** Companies that sell products in multiple geographic markets are generally perceived better, in part due to the multiple international technical standards that must be met. As cable operators extend their networks across geographical boundaries, they continue to seek suppliers that can provide equipment across the network, making such suppliers more valuable to both cable operators and industry acquirers.

▶ **Local Sales and Support:** Equipment suppliers who maintain sales and service teams that operate in close proximity to their customers are at an advantage, especially as networks become more widely dispersed. Sales and support teams are expected to troubleshoot local issues and provide innovative solutions based on decades of expertise and proprietary knowledge.

▶ **Robust Organization and Healthy Financial Profile:** Equipment suppliers that have built well-developed management teams and robust organizations are attractive to industry buyers. This is particularly true for those organizations that boast management teams with a proven track record of success and R&D teams with demonstrated technical expertise and a reputation for successful product introductions and best-in-class product solutions. A strong financial performance is also important, including recurring revenue streams, revenue growth that is resilient to economic downturns and healthy EBITDA margins that can be the result of high-margin products, cost-effective outsourced manufacturing operations and other operating advantages.
# SELECTED M&A ACTIVITY AND TRANSACTION VALUATIONS

<table>
<thead>
<tr>
<th>Date</th>
<th>Target</th>
<th>Acquirer</th>
<th>Target Business Description</th>
<th>Transaction Value (mm)</th>
<th>TV / LTM Revenue</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug-14</td>
<td>Connector Optics LLC</td>
<td>JSC OKB-Planeta</td>
<td>Manufactures optical components for high speed data transmission through optical fiber networks.</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Jul-14</td>
<td>FLAMAR CAVI ETLETICI S.R.L.</td>
<td>Molex Incorporated</td>
<td>Manufactures cables for broadcast audio/video, telecommunications and other applications.</td>
<td>-</td>
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<tr>
<td>May-14</td>
<td>Castle Microwave Limited</td>
<td>Wright Industries Ltd.</td>
<td>Distributes a wide variety of radio frequency and microwave products for telecommunications systems.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-14</td>
<td>Clarke Telecom Limited</td>
<td>Renew Holdings plc (AIM:RNWH)</td>
<td>Offers wireless telecommunication network infrastructure services.</td>
<td>$28.6</td>
<td>0.5x</td>
<td>-</td>
</tr>
<tr>
<td>May-14</td>
<td>Raycore Fiber Optic Solutions AB</td>
<td>Melbye Skandinavias AS</td>
<td>Provides fiber optic solutions, network installations and other fiber optic products for CATV.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-14</td>
<td>nPulse Technologies, Inc.</td>
<td>FireEye, Inc. (NasdaqGS:FEYE)</td>
<td>Develops network sensors and network security solutions for telecommunications companies.</td>
<td>$70.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-14</td>
<td>Keragis Corporation</td>
<td>Hittite Microwave Corporation</td>
<td>Manufactures electronic products RF and microwave components and subsystems.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>May-14</td>
<td>UpdateLogic, Inc.</td>
<td>Silicon Image, Inc. (NasdaqGS:SIMG)</td>
<td>Provides device management solutions to control, maintain and support Internet-connected digital home products.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Apr-14</td>
<td>FIBERNOVA Systems, S.L.</td>
<td>FIBERNET, S.L.</td>
<td>Develops photonic products for optical interconnect based devices and sub-systems for the telecommunication and datacom markets.</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Apr-14</td>
<td>SeaWell Networks Inc.</td>
<td>ARRIS Group, Inc. (NasdaqGS:ARRS)</td>
<td>Provides online video delivery solutions for network operators to manage streaming video to various devices or platforms.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Mar-14</td>
<td>B3 Cable Solutions Spain, S.L.</td>
<td>Südkabel GmbH</td>
<td>Manufactures copper cables for telecommunications applications.</td>
<td>$19.6</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Feb-14</td>
<td>Mier Comunicaciones, S.A.</td>
<td>Tryo Technologies</td>
<td>Manufactures radio frequency transmission equipment for television, digital radio and DTT broadcasting networks.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Feb-14</td>
<td>Cirprotec, S.L.</td>
<td>Mersen S.A. (ENXTPA:MRN)</td>
<td>Manufactures lightning and surge protection devices for use in telecom and signaling networks.</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Feb-14</td>
<td>Xstream A/S</td>
<td>Capidea Management ApS</td>
<td>Provides an online video management solution for OTT and TV everywhere.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Feb-14</td>
<td>Capewell Components Company, LLC</td>
<td>CapitalWorks, LLC</td>
<td>Designs and manufactures components for the CATV and other industries.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jan-14</td>
<td>Adams Global Communications, LLC</td>
<td>Adams Cable Equipment Inc.</td>
<td>Provides headend digital, network monitoring &amp; management, transmission and other equipment for the cable industry.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Jan-14</td>
<td>Aurora Networks, Inc.</td>
<td>Pace plc (LSE:PIC)</td>
<td>Manufactures optical transport and access systems for broadband networks that support the convergence of video, data and voice.</td>
<td>$323.0</td>
<td>1.5x</td>
<td>10.8x</td>
</tr>
<tr>
<td>Dec-13</td>
<td>Volex plc (LSE:VLX)</td>
<td>Private Investors</td>
<td>Manufactures interconnect and cable assembly products for telecommunications, datacoms/data-centers and others.</td>
<td>$150.2</td>
<td>0.4x</td>
<td>12.6x</td>
</tr>
<tr>
<td>Nov-13</td>
<td>Consetex Technology Enablers Limited</td>
<td>Gooch &amp; Housego plc (AIM:GHH)</td>
<td>Designs and manufactures optical fiber amplifiers and lasers for telecoms, sensing and defense applications.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nov-13</td>
<td>Symmetricom Inc.</td>
<td>Microsemi Corporation (NasdaqGS:MSCC)</td>
<td>Provides timekeeping technologies, instruments and solutions for networks that enable data, voice, mobile and video services.</td>
<td>$243.3</td>
<td>1.2x</td>
<td>33.3x</td>
</tr>
<tr>
<td>Nov-13</td>
<td>Haverhill Cable and Mfg. Corporation</td>
<td>Winchester Electronics Corporation</td>
<td>Manufactures semi-rigid and flexible coaxial cables and assemblies for microwave, military and telecommunications.</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Nov-13</td>
<td>ELCON Systemtechnik GmbH</td>
<td>Private Investor</td>
<td>Manufactures and supplies optimized network access equipment for cable and telecommunication network operators in Europe.</td>
<td>$29.5</td>
<td>0.7x</td>
<td>5.6x</td>
</tr>
<tr>
<td>Oct-13</td>
<td>Custom Cable, Inc.</td>
<td>MF Lightwave, Inc.</td>
<td>Offers structured network equipment connectivity products for the telecommunication and other industries.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oct-13</td>
<td>I.N.F.R.A Engineering</td>
<td>Marshall Capital Partners</td>
<td>Provides design, construction, engineering and equipment for cable TV operators and other markets.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oct-13</td>
<td>Purcell Systems Incorporated</td>
<td>Enersys Capital, Inc.</td>
<td>Manufactures modular outdoor electronic equipment enclosure solutions used by the cable/MSG industry and others.</td>
<td>$115.0</td>
<td>1.2x</td>
<td>-</td>
</tr>
<tr>
<td>Oct-13</td>
<td>FiberLink, LLC</td>
<td>Zayo Group, LLC</td>
<td>Owns fiber optic transmission assets serving cable TV companies and other industries.</td>
<td>$43.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Oct-13</td>
<td>Net Access Sweden AB</td>
<td>Ahlsell AB</td>
<td>Operates as a distributor of passive and active components for electricity, data and telecommunication applications.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sep-13</td>
<td>DEV Systemtechnik GmbH &amp; Co. KG</td>
<td>Quintech Electronics and Communications Inc.</td>
<td>Produces products and systems for the optical and electrical transmission of radio frequency signals via coaxial cable or fiber.</td>
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<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Capstone Partners LLC research and Capital IQ
CAPSTONE PARTNERS: SELECTED TRANSACTIONS

Capstone Partners has completed several transactions within the connectivity industry. These transactions included companies in telecom equipment and services, cabling, connectivity components and antennas. In some instances the transactions encompassed the sale of 100% of the company. In others, they included the sale of only certain assets or they involved recapitalizations by private equity groups. Capstone’s experience in the industry provides us with insight into the valuable attributes and likely valuation of a target company, the active buyers in the industry and the nuances of transactions in this sector.
### ABOUT CAPSTONE PARTNERS

Capstone Partners LLC is a premier investment banking firm dedicated to serving the corporate finance needs of middle market business owners, investors and creditors. The firm provides corporate sale & divestiture, merger & acquisition, private placement, corporate restructuring, valuation and financial advisory services. Capstone maintains various industry specialties including one in Technology & Telecom. The firm also has a merchant banking capability to actively co-invest in transactions. Headquartered in Boston, Capstone has offices in Chicago, London, Los Angeles, Philadelphia, San Diego, Silicon Valley and Tampa.

For more information about our expertise, please visit [www.capstonellc.com](http://www.capstonellc.com)

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