Telecom & Networking Equipment
Jefferies Corporate Access Day Takeaways
(ARRS, CALX, COMM, GLW, HLIT, MSI)

Key Takeaway
ARRIS and CommScope remain among our favorite long ideas within our Communications Infrastructure research group.

Event: The Jefferies Semiconductors, Hardware & Communications Infrastructure Summit in Chicago provided a number of interesting data points and insights for Communications Infrastructure investors. Within our research group, presenting companies included: ARRIS, Calix, CommScope, Corning, Harmonic, and Motorola Solutions. We’ve detailed our main takeaways below.

ARRIS – Network Infrastructure Investment Cycle... New CEO Bruce McClelland discussed his views on the significant demand drivers in the business right now – especially on the Transmission piece of the Network & Cloud division. We’re currently in front of a significant upgrade cycle as MSOs are driving fiber deeper into the network and performing node splits to enable smaller service groups. Our regular review of the capex spending of among North America Cable MSOs confirms the newfound strength.

CommScope – Don’t Rule Out Additional BNS Synergy Opportunities... To be clear, they’re still guiding for $200 million in annual BNS synergies to be realized in the third year after deal-close (they’ve raised this figure twice already). It’s still possible they may find additional opportunities to drive merger synergies above the $200 million figure.

Corning – Interesting Tid-Bit on the Auto Glass Opportunity... The company mentioned that Gorilla Glass is now down to $2-4 dollars per pound of weight savings. In the parlance of the auto makers, this now runs at parity with the other weight-reduction options they have (such as taking a pound of weight out by moving to aluminum for some parts). We think it’s important as auto maker should be looking at Gorilla Glass in the context of all the other potential weight savings programs they have. Looking forward, they still hope to break into some higher volume automobile models.

Motorola Solutions – We Still Think They’re Positioned Well on FirstNet... From their point of view, it would to be hard for FirstNet to reach their user adoption goals without MSI involved with the customer acquisition. Understandably, MSI is limited in the detail they can provide given the FirstNet RFP is in the evaluation period. As of the latest Board Meeting on August 26, FirstNet is still on track to announce the winning Offeror team by November 2016.

George C. Notter *
Equity Analyst
(415) 229-1522 gnotter@jefferies.com

Norah Kennedy *
Equity Associate
(415) 229-1520 nkennedy@jefferies.com

Kyle McNealy *
Equity Associate
(415) 229-1528 kmcnealy@jefferies.com

* Jefferies LLC

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Details:

ARRIS (ARRS, $28.26, Buy)... Network Infrastructure Investment Cycle...
Incoming CEO Bruce McClelland, CFO Dave Potts, and Head of Investor Relations Bob Puccini focused on the CEO transition and the positive trends driving growth for ARRIS.

*A Smooth CEO Transition...* This is a very smooth CEO transition. In our view, there isn’t anything significant to read from the management change other than this was the right time given the Pace integration is largely completed. The company conducted an executive search and they considered a number of internal and external options. We think McClelland is a great choice to run the company and has an excellent track record as the head of the Network & Cloud division. He comes from an engineering background and has been with ARRIS for 17 years. Also, he has served in roles on both sides of the business (Network & Cloud and CPE). McClelland doesn’t intend to make any significant changes to ARRIS’ strategic direction in the near term — there isn’t anything he’d like to do that he hasn’t already influenced as the head of the Network & Cloud division. He’s confident in the investments they’ve made to position ARRIS to benefit from technology transitions taking place in cable networks. Bob Stanzione will remain with the company full-time as Executive Chairman. He’ll also be responsible for Strategic Planning and Customer Engagement. Stanzione’s continued involvement gives us confidence that there won’t be any business disruption associated with the transition.

*Network Infrastructure Investment Cycle...* McClelland discussed his views on the significant demand drivers in the business right now — especially on the Transmission piece of the Network & Cloud division. We note that this business accounts for roughly one-third of the Network & Cloud business with close to half of the division’s profitability. McClelland pointed to the investment cycle that is currently underway in network infrastructure among Cable MSOs. The increasingly competitive environment and focus on faster speeds and advanced video services is supporting new spending cycles among operators. We’re currently in front of a significant upgrade cycle as MSOs are driving fiber deeper into the network and performing node splits to enable smaller service groups. Our regular review of the capex spending of among North America Cable MSOs confirms the newfound strength...

June was a big quarter for network infrastructure spending among these operators. Within MSOs’ larger capex budgets, the “Network” portion of capex grew 28% Y/Y in the quarter. Network Infrastructure spending consists of scalable infrastructure (CMTS, CCAP, etc.), line extensions (optical nodes, RF amplifiers), and upgrades/rebuilds. Our capex model includes Comcast, Charter/Time Warner/Bright House, Cablevision, Suddenlink, and Shaw. One caveat here: Bright House Networks’ capex is now consolidated into Charter’s results beginning in Q2’16. Given that Bright House’s capex accounts for 10% of Charter’s combined capex spending, the Y/Y growth rate for Q2 (ex-Bright House) was 21%. These are significant growth rates in our view. Further, we note there has been positive Y/Y growth in Network Infrastructure spending among North American MSOs in 18 of the last 20 quarters.

*DOCSIS 3.1 Update...* The roll-out of DOCSIS 3.1 will support the continuation of the investment cycle in MSO Network Infrastructure although the revenue benefit will be more gradual for ARRIS (i.e., not a step function). McClelland explained that not all operators will be as aggressive with the 3.1
upgrade as the early movers. Also, operators will take a success based/opportunistic approach with DOCSIS 3.1 and deploy it where customers opt for higher tier services. ARRIS saw DOCSIS 3.1 revenue on the Network side in Q2 as operators started to enable DOCSIS 3.1 spectrum in the plant but it may take some time before CPE sales follow.

ARRIS still sees the DOCSIS 3.1 upgrade cycle on the CPE side to be a 2017 event as operators ramp up their deployment efforts. Separately, we were encouraged by the ASP discussion. DOCSIS 3.1 products will have a “meaningful” ASP difference versus 3.0 equivalents. Precision is difficult here – the products haven’t yet been shipped at volume in the market. However, ARRIS expects DOCSIS 3.1 products to sell at a “greater than single digits” premium to DOCSIS 3.0 equivalents. As with previous DOCSIS iterations, the ASP premium will converge over time as production scales and the technology matures. Keep in mind, with the greater spectral efficiency and higher theoretical data rates of DOCSIS 3.1 products the ASP premium will not directly translate to ASP premium per bit transferred. Nonetheless, the ASP discussion is encouraging.

*FCC Rulemaking – Still Not a Big Driver for ARRIS...* McClelland provided an update on the status of the FCC’s NPRM for Set-Top Boxes. From their point of view, the FCC is trying to solve a problem that’s already being solved through Cable’s movement toward all-IP video distribution. Software applications that enable Pay TV services on third party boxes (i.e., Roku, Tablets, Smart TVs, etc.) are already prevalent in the market. The FCC consulted ARRIS and others when determining the direction they would take with the NPRM. Regulators eventually found more complexity than they originally expected when requirements around broadcast rights, privacy, content security, and service theft are layered in.

There are three possible scenarios ARRIS sees playing out: 1) the Final Rule is largely based on the NPRM (content streams based approach); 2) the Final Rule is issued as a revised version of the NPRM incorporating suggestions from the Cable industry (Apps based approach); and 3) no action. ARRIS believes no action is the most probable scenario, but there is also a chance that the Apps-based approach is adopted. However, rules around the Apps-based approach won’t be much different than the way the market already operates.

In our view, the probability that the Final Rule reflects the original language of the NPRM is quite low. At the Congressional Committee Hearing for Oversight of the FCC in July, lawmakers asked the commissioners if the NPRM had “serious flaws” and should not be adopted as originally drafted. The response was almost unanimous that the NPRM requires some modification from its original form. Industry participants have had significant traction in steering lawmakers and FCC commissioners toward taking a less disruptive approach. In aggregate, this is a good outcome for ARRIS, in our view.

**Calix (CALX, $7.50, Hold)... Investing in the Business...** CFO William Atkins and Head of Investor Relations Tom Dinges discussed their Verizon NG-PON2 trial, other Tier 1 carrier opportunities, and their level of investment in the business looking forward.

**The Verizon NG-PON2 Opportunity...** We now understand that the telco has committed – to the city of Boston – that they’ll begin the rollout of their FTTP infrastructure by year-end. The fast timetable works in Calix’s favor of
course – a longer timetable might allow other competitors (such as Alcatel-Lucent) some additional time to catch up technology-wise. As announced previously, the carrier plans to deploy the technology initially in 2017 for Business services with Residential services thereafter as the “technology matures” and the “market demands” it (we presume that any Boston rollout would also include Residential from early on). Additionally, we understand that Ericsson – Calix’s OEM partner for the project – would be doing the OSS/BSS integration work for Verizon (assuming they win the project). Also, we understand that Verizon will likely select two vendors – a typical split might be in the range of 80/20 or 90/10. Finally, we understand that the Boston project has the opportunity to get bigger. Verizon is likely planning to upgrade their first generation (and very old) BPON-based FTTP technology to NG-PON2. One of the drivers of the initiative – and their selection of NG-PON2 technology – is their need to layer Wireless and Enterprise backhaul onto the same broadband FTTP infrastructure. Regarding timing, any revenue for Calix could start to materialize in 2H’17 with meaningful revenues beginning in 2018 (of course, this assumes they win a piece of the deal).

*Other Tier 1 Opportunities in the Pipeline...* We understand that Calix is pursuing deals with a number of Tier 1 operators – not just Verizon. Moreover, the company is noting that their progress in some of these customer situations is as advanced (or more advanced than) the Verizon project. Potential deals exist within accounts such as AT&T, Bell Canada, Rogers, Telus, Cox, and Telmex. One common denominator among these customers – they’re all in the midst of transitions to new technologies for either Fiber (FTTP) or Copper (G.Fast). Naturally, market share can often change during these types of technology transitions in this space. Additionally, these operators are feeling additional pressures in the business – particularly for Broadband services. The company is noting that – for the five years ended 2015 – roughly 85% of all Broadband subscriber additions were won by the Cable MSOs.

*Investing in the Business...* The elevated Operating Expenses will be driven by a number of factors: 1) the extra week in Q4; 2) the Calix User Group conference, which falls in the December quarter; 3) additional R&D & Sales investments associated with Verizon and their other larger carrier opportunities; and 4) additional investments in Professional Services. Separately, we understand the company is now limiting their investments in (i.e., no longer growing) their broader International sales effort. International expansion, of course, has been a focus for the company in recent years. We suspect the decision to instead focus on a targeted group of Tier 1 customer opportunities was initiated several quarters ago. We continue to rate Calix shares a Hold.

**CommScope (COMM, $29.80, Buy) – Don’t Rule Out Additional BNS Synergy Opportunities...** CFO Mark Olson focused on their plans for adding fiber manufacturing capacity, BNS merger synergies, and Wireless spending trends.

**Timing Updates on ION-E and OneCell...** The company mentioned that their One Cell solution – the primary motivation for the Airvana acquisition back in October – is on track. They’re currently in trials with the solution at major wireless operators in both the U.S. and Europe. They expect the solution to generate initial revenue in the first part of next year. Separately, the ION-E platform has now been approved for deployment at all of the major wireless operators in the U.S. and Europe. The solution, of course, was designed for direct sale to enterprises. Naturally, enterprises won’t install the system until...
their carrier has tested that it will work with their network. The ION-E, of course, supports multiple carriers and multiple frequencies, which appeals to service providers and enterprises alike. Many of CommScope’s competitors have focused on a single tenant solution, which is not ideal for any office or residential building with multiple tenants served by different carriers.

*FTTX Capacity Additions Underway...* The company continues to work hard to expand their manufacturing capacity on the Fiber Connectivity side of the business. Many of these products are currently shipping on extended lead times right now. They currently expect to be able to match customer demand requirements by year-end. The process of expanding capacity is a bit more complicated for CommScope on this side of the business—it’s not like Wireless antennas, for example, where the inputs are very labor focused. For Fiber Connectivity products, they also have to add manufacturing equipment (i.e., spend additional capex) in addition to the labor components. At the same time, they’re also working to integrate the BNS acquisition from a manufacturing perspective. Overall, they remain very encouraged by the outlook for FTTX-related spending going forward. The company believes we’re in the early innings of a multi-year wave of Fiber investments. AT&T, with their 12.5 million line mandate to deploy FTTP over their network, is one example. The NBN project in Australia is another. The long term secular demand potentially offsets the risk of an inventory correction in this area. Also, management noted that FTTx product pricing could look stable this year given all the demand they have right now. Typically, pricing erosion—for all of CommScope’s products—run in the 2% annual erosion range.

*No Change in the Wireless Discussion...* The company’s commentary on the Wireless front didn’t change versus our expectation post the Q2 EPS call. In North America, they’re still looking for mid-single digit growth for the full year with much of that growth front-end loaded in 1H’16. Europe remains a bit challenging. The improvement in their business within India will be a 2017 event as spectrum auctions there have been delayed until October.

*Don’t Rule Out Additional BNS Synergy Opportunities...* To be clear, they’re still guiding for $200 million in annual BNS synergies to be realized in the third year after deal-close (they’re raised this figure twice from the original $150 million guidance). At this point—one year after the close of the BNS deal—they’re still in execution mode. Moreover, it’s possible they may find additional opportunities to drive merger synergies above the $200 million figure. One example—the IT systems integration between the companies will happen later this year. It may help them identify additional back-office synergies. While this was partly contemplated in the recent synergy forecast, there may be some additional cost/efficiency savings they pick up through the process. Of course, the company—in their normal course of running the business—also strives to remove 2-3% of their costs annually. Those efforts remain a work in process. We continue to rate CommScope shares a Buy.

**Corning (GLW, $22.71, Hold)...** Head of Investor Relations Ann Nicholson and Treasury Guru Stephen Fowler focused on their Hedging program, strong demand in the Telecom business, and their Gorilla Auto Glass opportunity among other topics.

*Interesting Tid-Bit on the Auto Glass Opportunity...* Perhaps the most interesting piece of this—the company mentioned that Gorilla Glass is now
down to $2-4 dollars per pound of weight savings. In the parlance of the auto makers, this now runs at parity with the other weight-reduction options they have (such as taking a pound of weight out by moving to aluminum for some parts). We think it’s important as auto maker should be looking at Gorilla Glass in the context of all the other potential weight savings programs they have. Further, the company hopes to differentiate their glass product by offering better break/crack resistance and better reflectivity for heads-up displays. Hence, it’s not just a cost play. As a side note, they commented that this is another formulation of Gorilla Glass. It’s not the same product they sell into cover glass applications. They’re now in 5-6 automobile designs and generating some small initial revenue. This is unchanged versus our last update. Looking forward, they still hope to break into some higher volume automobile models. The initial volumes in this business could be accommodated without any additional capital investments as they have spare tank capacity in the core Glass business. Per their corporate view on new business opportunities, they hope to bring Gorilla Glass to the auto market at gross margins that are at or above corporate average profitability.

*More on the Fiber Opportunity…*  Corning discussed their Telecom business at length. They continue to work to keep up with product manufacturing for Fiber and Fiber Connectivity products. On Fiber, we’ve been told by industry contacts that lead times are out past 30 weeks. This lead time figure is likely for unforecasted demand from smaller customers. We believe that larger customers probably aren’t having the same issues with long lead times. Also, we understand that the company has been allocating their supply to more profitable regions. Their Optical/Telecom business, of course, is split up with roughly 25% of sales coming from Enterprise applications (largely Data Centers). The other three-quarters of the business is based on Carrier applications. This includes FTTH. Competitively, they’re best positioned in metro/FTTP-types of applications. Here, they’ve been successful selling a “solutions” sale to telcos, which includes integrated Fiber and Fiber Connectivity products. Corning’s ability to deliver their highly bendable ClearCurve fiber is particularly important in these applications. We understand that only one other manufacturer currently makes bendable fiber. Moreover, it can’t bend to the same tight bend radiiuses as ClearCurve without signal loss.

*The Hedging Program…*  With the Yen now at 99-100, Corning may look to add to its Yen hedges for 2018-2022. The company, of course, hedged all of their Display Glass Net Income in 2016 and 2017 at a blended 99 Yen/USD rate. They subsequently hedged 60% of their anticipated 2018-2022 Display Income at a higher exchange rate. That brought the blended Yen/USD rate – for the full program – to 106. Now, with the Yen at 99-100, they may be looking to put some additional hedges in place. We expect that we could hear more on this front over the next 1-2 quarters.

*No Change on their Perspectives for the LCD Glass Business…*  One data point we did pick up – they noted that the OLED TV market accounts for 1% of the overall LCD Glass end market right now. Otherwise, their commentary mirrored prior views. We continue to rate Corning shares a Hold.

**Harmonic (HLIT, 54.45, Hold)**  CFO Hal Covert and Head of Investor Relations Blair King outlined their opportunity in the Video and Cable Edge Business lines.
**The Cable OS Initiative Still Looking Good...** The company continues to be very enthusiastic about their Cable OS initiative. They now have 5-6 customer Cable MSO engagements with the product, two of which are deep in the process. Of course, these are the same two customers that Harmonic has previously referenced for the solution. The company’s confidence in effort is driven by the significant investment in time and resources that their potential customers are making in Harmonic (well beyond the usual types of tire-kicking exercises on new technologies). Looking ahead to Q4, they still expect to generate initial revenue with the product (with their primary Cable OS customer). We expect them to formally announce the product strategy and architecture at the SCTE trade show in late September. A more meaningful revenue ramp would occur in 2017.

**TVN Integration Slightly More Back-end Loaded....Still $22M in Synergies...** CFO Hal Covert noted that the TVN deal is tracking slightly behind their internal plan for merger synergies. They continue to look for $22 million in aggregate synergies with $5 million realized this year and the balance in 2017. At this point, their efforts to trim some headcount in France are progressing a tad more slowly than expected as they work through the work council requirements there. As such, they’ll likely get all their synergy actions executed at Q4-end rather than the beginning of the quarter. They still expect to get $5 million in savings this year (no upside) with the full $22 million realized in 2017.

**Not Much for Revenue Dis-Synergies...** Coming into the deal, they expected some revenue dis-synergy associated with the combination of the TVN and Harmonic product lines. Naturally, there were some customers that were dual-sourcing products from each side of the organization (and could be expected to add a supplier following the TVN deal). At this point, they aren’t seeing that happen. We continue to rate Harmonic shares a Hold.

**Motorola Solutions (MSI, $76.80, Hold)... Still Looking For Growth in 2H’16...**

Head of Investor Relations Chris Kutsor focused on factors that support their confidence for future revenue growth.

**Reiterating Confidence Second Half Organic Growth...** Motorola Solutions continues to reiterate confidence in their outlook for organic growth the second half of 2016. This follows a difficult first half on the Product side of the business. Of course, Product sales declined 7% and 8% Y/Y for Q1 and Q2, respectively. Product sales have been hampered by a number of items: 1) softness in a number of International markets including China, parts of Eastern Europe, and Latin America; 2) difficult comps from a year-ago, which features some sizable North American and Norway projects that rolled off (North America grew 5% Y/Y in Q2’15); and 3) currency has been a minor Y/Y headwind as well. The FX headwind totaled $22 million in Q1 and $8 million in Q2.

Looking forward, the outlook is driven by an improved Product Backlog exiting Q2 (+5% Y/Y and +7% Q/Q) as well as the pipeline of business they see going forward. This visibility includes the sizable (and lumpy) North American deals they referenced on the Q2 earnings call (Kane County, Richmond, and State of Iowa). North America overall should be stronger. The region, of course, accounts for roughly two-thirds of the overall business. The company is getting some beneficial effect of the sales/sales channel reorganization and their Data Analytics efforts (which should help optimize their selling efforts). Also, we think
the company is getting incrementally more aggressive with customers in some cases – i.e., motivating additional product/network upgrades and Service contract attach rates. Another component of the better Y/Y comparisons – easy comps. We note that business trends in Latin America, Russia, and other Emerging market regions really fell off in 2H’15. Similarly, the company is lapping FX headwinds.

*We Still Think They’re Positioned Well on FirstNet...* We continue to believe that MSI is well-positioned to win a significant part of the FirstNet project. From their point of view, it would to be hard for FirstNet to reach their user adoption goals without MSI involved with the customer acquisition. Understandably, they’re limited in the detail they can provide given the FirstNet RFP is in the evaluation period. As of the latest Board Meeting on August 26, FirstNet is still on track to announce the winning Offeror team by November 2016.

The discussion around the customer acquisition part of the FirstNet project supports our prior view that this is likely to be a key differentiator for MSI. Of course, first responder user adoption is the third of FirstNet’s sixteen stated objectives as outlined in the RFP. Further, there are significant financial constraints tied to user adoption. If the consortium that wins the deal fails to meet the user adoption objectives as outlined in the RFP, they are required to make penalty payments to FirstNet. The RFP calls for the offeror to declare user adoption targets for each year of the contract. If the offeror fails to meet these targets, they are required to make “disincentive” payments to FirstNet based on the percentage deficient. The aggregate maximum disincentive payment for all states is $124 million for year one. The maximum gradually increases to $178 million in year 20 to account for inflation. In our view, Motorola Solutions’ 2,000-person sales force and 13,000 Professional Services professionals (internal and partner) with deep relationships with Public Safety users in the U.S. make them highly competitive – enabling FirstNet to meet user adoption goals. For more detail on MSI’s positioning on the FirstNet project, see our 1/19 note, “MSI: First Impressions From the FirstNet Final RFP.”
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Other Companies Mentioned in This Report

- ARRIS Group, Inc. (ARRS: $28.26, BUY)
- AT&T Inc. (T: $40.96, BUY)
- Calix Inc. (CALX: $7.50, HOLD)
- CenturyLink (CTL: $27.74, UNDERPERFORM)
- CommScope Holding Company Inc. (COMM: $29.80, BUY)
- Corning Inc. (GLW: $22.71, HOLD)
- Harmonic Inc. (HLIT: $4.45, HOLD)
- Motorola Solutions, Inc. (MSI: $76.80, HOLD)
- Verizon Communications Inc. (VZ: $52.56, HOLD)

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George C. Notter, Equity Analyst, (415) 229-1522, gnotter@jefferies.com

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