

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS**

COMMSCOPE TECHNOLOGIES LLC)	
)	
Plaintiff,)	No. _____
)	
v.)	Jury Trial Demanded
)	
SOLiD Gear, Inc. and SOLiD, Inc.)	
)	
Defendants.)	
)	

Complaint for Patent Infringement

Plaintiff CommScope Technologies LLC (“CommScope”) brings this action against Defendants SOLiD Gear, Inc., (“SOLiD U.S.”) and SOLiD, Inc. (“SOLiD Korea”) (collectively “SOLiD” or “Defendants”) and alleges as follows:

Nature of the Case

1. This is an action for patent infringement of four patents: (1) United States Patent No. 7,639,982 (“the ‘982 patent”); (2) United States Patent No. 8,326,218 (“the ‘218 patent”); (3) United States Patent No. 8,577,286 (“the ‘286 patent”); and (4) United States Patent No. 9,332,402 (“the ‘402 patent”). These patents (“patents-in-suit”) relate to digital distributed antenna systems.

2. Defendants have been making, using, importing, selling and/or offering for sale the SOLiD Genesis digital distributed antenna system (digital DAS) that infringes the patents-in-suit. Plaintiff CommScope seeks damages and an injunction against any further infringement of its patents by Defendants.

Parties

3. CommScope, formerly known as Andrew LLC, is a Delaware company, headquartered in Hickory, North Carolina, with a regional place of business in this district in Richardson Texas. Together with its affiliated companies, CommScope designs, manufactures, and sells telecommunications products and equipment around the world. CommScope's innovative products are used to build network infrastructures that enable wired and wireless communications. For example, CommScope designs and manufactures a range of distributed antenna systems to support wireless communications, such as cellular telephone communications. CommScope's DAS products can be found in large buildings, venues and outdoor spaces; in data centers and buildings of all shapes, sizes and complexity; at wireless sites; in telecom central offices and cable headends; in FTTx deployments; and in airports, trains and train stations, and in tunnels. CommScope protects its investment in research and development of innovative antenna systems by filing and obtaining patents on its innovations, including the patents-in-suit.

4. Upon information and belief, Defendant SOLiD U.S. is a Delaware company and has a place of business at 800 Klein Road, Plano, TX 75074.

5. Upon information and belief, Defendant SOLiD Korea is a corporation formed under the laws of South Korea (the Republic of Korea) and has a place of business at Seongnam, Gyeonggi-do, South Korea. Upon information and belief, SOLiD U.S. is wholly owned by SOLiD Korea.

Jurisdiction and Venue

6. This action arises under the Patent Act, 35 U.S.C. § 271 et seq.

7. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

8. The parties have consented to jurisdiction and venue in this district.

Background and Patents-in-Suit

9. The subject matter of this complaint relates to distributed antenna systems, commonly referred to as DAS, DAS networks, DAS products, or DAS systems.

Distributed antenna systems are typically used to extend or improve wireless communications coverage in areas that are difficult for signals from traditional communications towers and antennas to reach. For example, signals from distant communications towers may not penetrate inside buildings or into tunnels, or may not reach other blind spots blocked or covered by geographic features such as hills, buildings or valleys. Distributed antenna systems are deployed inside these blind spots to provide coverage for users.

10. Distributed antenna systems typically receive communication signals from a base station (or cellular tower), distribute these signals using cable to a collection of smaller antennas that have been distributed inside the building or targeted coverage area, and rebroadcast the wireless signals into the targeted area to wireless units such as customers' mobile phones. The systems also transport communication signals in the opposite direction. That is, they receive wireless communications from, for example, mobile phones within the targeted coverage area and transport those signals over the cabling back to the communications tower or base station.

11. CommScope's wholly-owned subsidiary, CommScope Connectivity LLC, formerly known as ADC Telecommunications, Inc. ("ADC"), was the original assignee of the patents-in-suit.

12. CommScope is the owner of the entire right, title and interest in and to the '982 patent, which duly and legally issued on December 29, 2009. The '982 patent is entitled "Point-to-Multipoint Digital Radio Frequency Transport." A copy of the '982 patent is attached as Exhibit A.

13. CommScope is the owner of the entire right, title, and interest in and to the '218 patent, which duly and legally issued on December 4, 2012. The '218 patent is entitled "Point-to-Multipoint Digital Radio Frequency Transport." A copy of the '218 patent is attached as Exhibit B.

14. CommScope is the owner of the entire right, title, and interest in and to the '286 patent, which duly and legally issued on November 5, 2013. The '286 patent is entitled "Point-to-Multipoint Digital Radio Frequency Transport." A copy of the '286 patent is attached as Exhibit C.

15. CommScope is the owner of the entire right, title, and interest in and to the '402 patent, which duly and legally issued on May 3, 2016. The '402 patent is entitled "Point-to-Multipoint Digital Radio Frequency Transport." A copy of the '402 patent is attached as Exhibit D.

SOLiD's Infringing Products and Activities

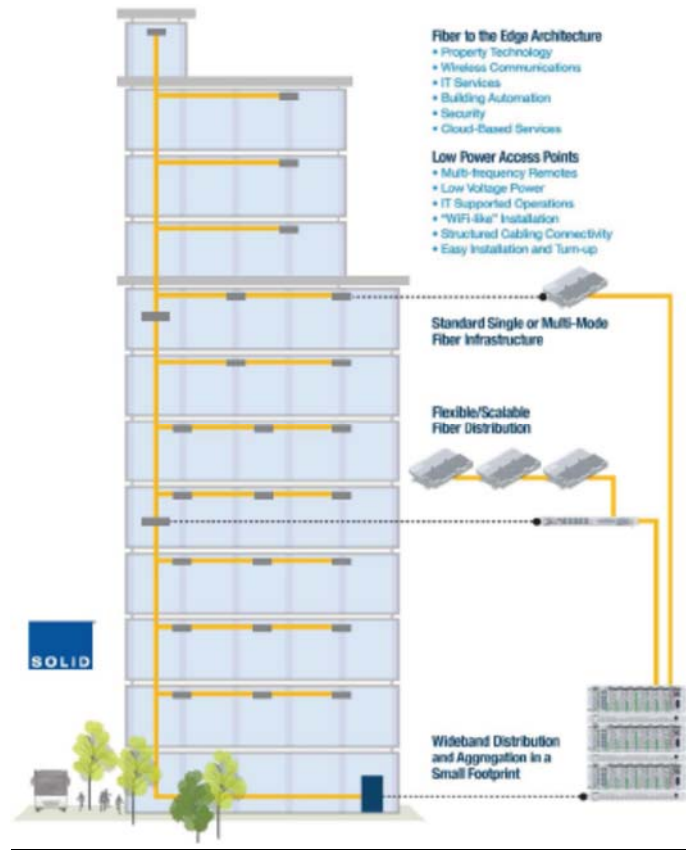
16. Recently, SOLiD has committed acts of patent infringement by offering for sale a new digital distributed antenna system called the "Genesis" system. SOLiD may

additionally be committing further act of patent infringement by selling, making using, and/or importing this system.

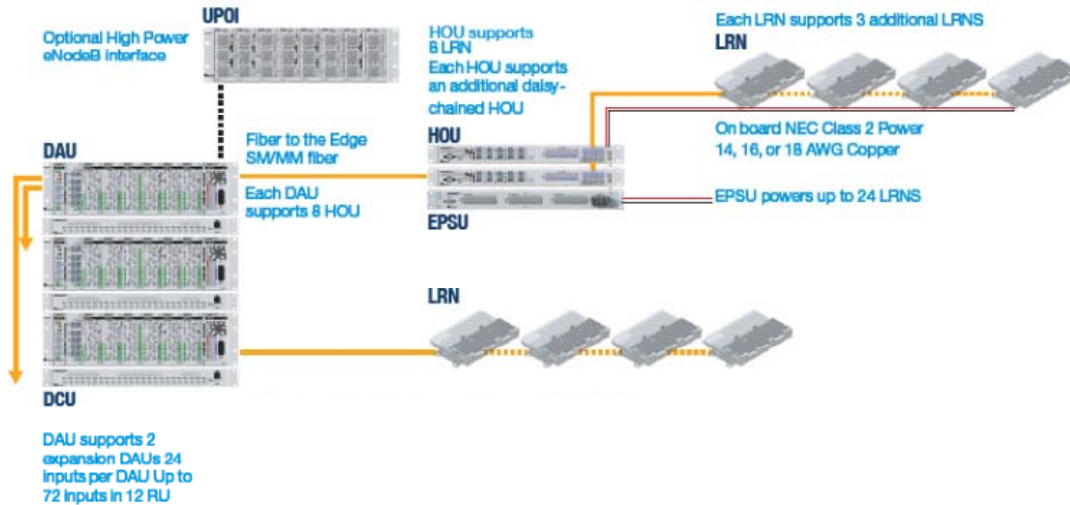
17. SOLiD's infringing Genesis DAS includes at least host units, remote units and expansion units. SOLiD's infringing Genesis host units are marketed under the product name Distribution and Aggregation Unit (DAU). SOLiD's infringing Genesis remote units are marketed under the name Low Power Remote Node (LRN). SOLiD's infringing Genesis expansion units are marketed under the name Hub Optical Unit (HOU).

18. Attached as Exhibits E and F are copies of SOLiD's literature describing its Genesis DAS. Exhibit E is a brochure titled "SOLiD GENESIS DAS" obtained from its U.S. website. Exhibit F is a document titled "GENESIS DAS Installation and Maintenance" that, upon information and belief, was supplied to the U.S. Federal Communications Commission ("FCC") by SOLiD and made available to the public by the FCC.

19. SOLiD's Genesis DAS is a digital-over-fiber distributed antenna system that delivers mobile coverage and capacity for voice and high speed data wireless networks. In Exhibit E, SOLiD describes that the Genesis system is particularly useful for "middleprise" locations, for which the conventional DAS approaches that are successfully employed in large venues such as stadiums, airports and the like, are too complex and expensive. SOLiD illustrates deployment of the Genesis system in a building as an exemplary "middleprise" location, as follows:



20. Typical configurations of SOLiD's Genesis system include a host unit connected to multiple remote units. The host unit is referred to by SOLiD as a DAU (distribution and aggregation unit), and the remote units are referred to as LRNs (low power remote units). SOLiD also provides an expansion unit, referred to as an HOU (hub optical unit) to increase the number of LRNs connected to the DAU. A typical configuration, as shown in Exhibit E, includes a host unit (DAU) connected to multiple remote units (LRNs), as shown below.



21. Each DAU has eight optical interfaces that can be connected to LRNs so, if no HOU is used, the DAU can support up to eight fibers that are directly connected to the DAU via optical interfaces (SFPs). Each fiber can connect to multiple LRNs when arranged in a daisy-chain configuration, as shown at two places in the figure of the previous paragraph. To increase the number of LRNs connected to the DAU, HOUs can be coupled to each one of the eight optical interfaces. Each HOU can support up to eight separate daisy chains of up to four LRNs each. Furthermore, each HOU that is directly connected to a DAU can support an additional two HOUs connected in daisy chain fashion, and these additional HOUs can each support further daisy chains of LRNs. According to Exhibit E, one DAU can support up to 512 LRNs.

The '982 Patent

22. By its activities related to at least offering for sale in the United States as well as any making, using, selling, and/or importing in or into the United States its Genesis DAS, SOLiD has infringed and continues to infringe claim 1 and other claims of the '982 patent.

Claim 1

23. SOLiD's Genesis DAS is a digital radio frequency transport system. As stated in Exhibit F, the Genesis system "is a coverage system for indoor and outdoor services delivering voice and data in high quality and...seamlessly. As a distributed antenna system, it provides analog and digital phone systems that are served in multiple bands...The GENESIS system supports communication standards and public interface protocols in worldwide use."

24. SOLiD's DAU satisfies the limitation of the "digital host unit" recited in Claim 1 of the '982 patent.

25. SOLiD's LRN satisfies the limitations of the "digital remote units" recited in Claim 1 of the '982 patent.

26. As shown, for example under paragraphs 19-20 above, a typical network configuration for SOLiD's DAS includes at least two LRNs coupled to the DAU via fiber optic cables.

27. The DAU includes shared circuitry that performs bi-directional simultaneous digital radio frequency distribution of digitized radio frequency signals between itself and its remote antenna units. Exhibit F states that the DAU interfaces with analog base stations and converts analog RF to digital and digital to analog RF signals, and the DAU distributes digital signals to LRNs and HOU's via optical fiber. The analog to digital converters in the DAU are examples of downstream circuitry that is shared by multiple remote units. Likewise, the digital to analog converters in the DAU are examples of upstream circuitry that is shared by multiple remote units. The shared

circuitry described above operates to support both upstream and downstream communications at the same time.

28. The DAU digitally sums the digitized radio frequency signals received at the DAU and converts the summed digital signals to analog form. The DAU includes digital electronic circuitry that digitally sums the digitized radio frequency signals received at the DAU.

The '218 Patent

29. By its activities related to at least offering for sale in the United States as well as any making, using, selling, and/or importing in or into the United States its Genesis DAS, SOLiD has infringed and continues to infringe claim 1 and other claims of the '218 patent.

30. As shown above, SOLiD's Genesis DAS is a system for wireless radio frequency signal distribution within a coverage area in which one or more wireless units wirelessly transmit in an upstream wireless radio frequency spectrum. The figures from Exhibit E shown under paragraphs 19 and 20 illustrate how remote units in SOLiD's Genesis system may be distributed within and associated with a coverage area (e.g. a building) for receiving radio frequency transmissions from wireless units such as cell phones in the coverage area. As stated in Exhibit F, the Genesis system "is a coverage system for indoor and outdoor services delivering voice and data in high quality and...seamlessly. As a distributed antenna system, it provides analog and digital phone systems that are served in multiple bands...The GENESIS system supports communication standards and public interface protocols in worldwide use."

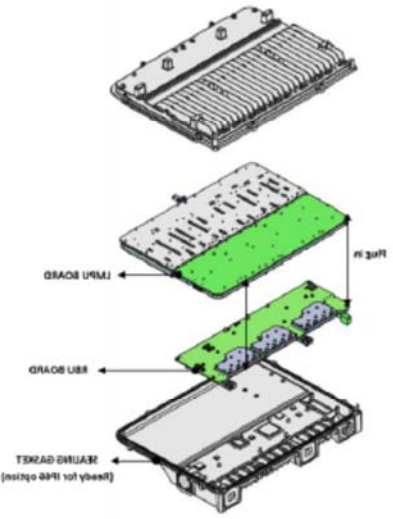
31. SOLiD's DAU satisfies the limitation of the "digital host unit" recited in Claim 1 of the '218 patent.

32. SOLiD's LRN satisfies the limitations of the "digital remote units" recited in Claim 1 of the '218 patent.

33. The DAU and LRNs are communicatively coupled via a communication medium, e.g., as described using fiber optic cables. Under a section titled "LRN Optical Fiber Cabling" in Exhibit F, SOLiD states that the "LRN has two SFP ports, one SFP port...is for HOU and the other SFP port...is for daisy chain the LRN."

34. As shown, for example in the figure of paragraphs 19-20 above, a typical network configuration for SOLiD's DAS includes at least two LRNs coupled to the DAU via fiber optic cables.

35. In Exhibit F, SOLiD describes components of the LRN, namely, the RBU and LPMU as follows:

Part	Unit	Description	Qty
	RBU	<ul style="list-style-type: none"> Support (1) SFP port for interfacing with HOU via optical cable Support 6 bands Convert digital signal into downlink RF signal Convert uplink RF signal into digital with digital filtering technology Control and monitoring system status 	1ea
	LPMU	<ul style="list-style-type: none"> Amplify downlink RF signal and then filter the signal Filter and amplify uplink RF signal Support external antenna port 	1ea

36. In use, each of the LRNs receives a respective original upstream analog wireless signal comprising upstream radio frequency radio spectrum and any upstream transmissions from any of the wireless units that are within the portion of the coverage area associated with that LRN. As shown above, the component of the LRN referred to as the RBU is specifically described as “Supporting 6 bands.” These bands are examples of respective original upstream analog wireless signals comprising upstream radio frequency radio spectrum and any upstream transmissions from any of the wireless units that are within the portion of the coverage area associated with that LRN.

37. In use, each of the LRNs in SOLiD’s Genesis system generates respective upstream digital RF samples indicative of the respective original upstream analog wireless signal received at the remote unit. As shown above, the component of the LRN

referred to as the RBU is specifically described as converting “uplink RF signal into digital with digital filtering technology.”

38. In use, each of the LRNs in SOLiD’s Genesis system communicates the respective upstream digital RF samples generated by that remote unit to the DAU. As shown above, SOLiD’s LRNs each communicate digitized signals indicative of their received radio frequency signals to the DAU via the communication medium, i.e. fiber optic cables.

39. SOLiD’s DAU digitally sums the corresponding upstream digital RF samples received from the plurality of LRNs to produce summed upstream digital RF samples and converts the summed digital signals to analog form. The DAU includes digital electronic circuitry that digitally sums the corresponding upstream digital RF samples received from the plurality of LRNs to produce summed upstream digital RF samples.

40. Exhibit F contains another exemplary Genesis system configuration shown below:

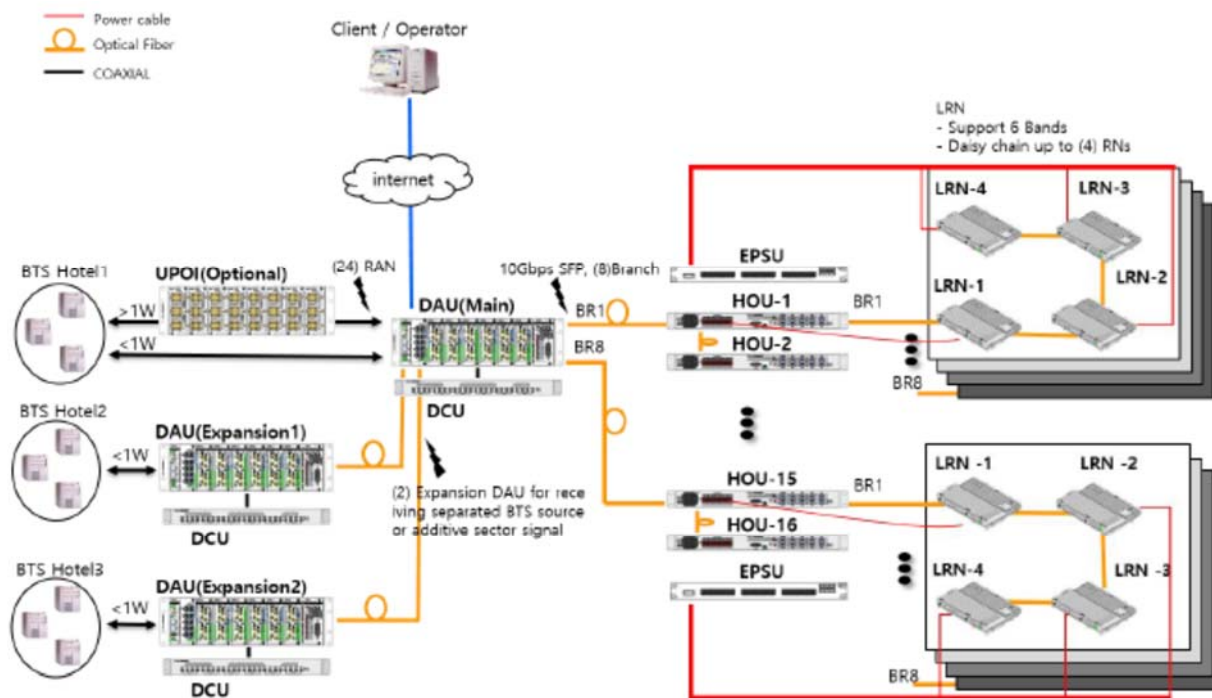


Figure 2.1 GENESIS™ Network Topology

41. Exhibit F also shows that the DAU provides an interface with the base transceiver station (BTS), as is illustrated in the figure with the double-headed arrow between the DAU and the BTS Hotel. Furthermore Exhibit F states that the DAU converts digital signals into RF signals. The DAU includes digital-to-analog converters that convert upstream signals from digital to analog form. Therefore, the DAU is configured to convert the summed digital RF samples to a replicated upstream analog wireless radio frequency signal.

The '286 Patent

42. By its activities related to at least offering for sale in the United States as well as any making, using, selling, and/or importing in or into the United States its

Genesis DAS, SOLiD has infringed and continues to infringe claim 1 and other claims of the '286 patent.

43. SOLiD's Genesis DAS is a system for use with a coverage area in which one or more wireless units wirelessly transmit using a wireless radio frequency spectrum. The figures from Exhibit E shown under paragraphs 19-20 illustrate how remote units in SOLiD's Genesis system may be distributed within and associated with a coverage area (e.g. a building) for receiving radio frequency transmissions from wireless units such as cell phones in the coverage area. As stated in Exhibit F, the Genesis system "is a coverage system for indoor and outdoor services delivering voice and data in high quality and...seamlessly. As a distributed antenna system, it provides analog and digital phone systems that are served in multiple bands...The GENESIS system supports communication standards and public interface protocols in worldwide use."

44. SOLiD's DAU satisfies the limitation of the "first unit" recited in Claim 1 of the '286 patent.

45. SOLiD's LRN satisfies the limitations of the "second units" recited in Claim 1 of the '286 patent.

46. Typical configurations of the Genesis system include a DAU and LRNs that are communicatively coupled via a communication medium, e.g., as described using fiber optic cables, and each LRN is associated with a portion of the coverage area (e.g. a floor of a multi-story building).

47. In use, each of the LRNs receives a respective analog wireless signal comprising upstream radio frequency spectrum and any upstream transmissions from any

of the wireless units that are within the portion of the coverage area associated with that LRN. The component of the LRN referred to as the RBU is specifically described as “Supporting 6 bands.” These bands are examples of respective analog wireless signals comprising upstream radio frequency spectrum and any upstream transmissions from any of the wireless units that are within the portion of the coverage area associated with that LRN.

48. In use, each of the LRNs in SOLiD’s Genesis system generates respective upstream digital RF samples indicative of the respective analog wireless signal received at that LRN. As shown above, the component of the LRN referred to as the RBU is specifically described as converting “uplink RF signal into digital with digital filtering technology.”

49. In use, each of the LRNs in SOLiD’s Genesis system communicates the respective digital RF samples generated by the LRN to the DAU using the communication medium, e.g. fiber optic cables.

50. SOLiD’s DAU digitally sums corresponding digital RF samples received from the plurality of LRNs to produce summed digital RF samples. The DAU includes digital electronic circuitry that digitally sums corresponding digital RF samples received from the plurality of LRNs to produce summed digital RF samples.

51. As described above, the DAU is configured to derive an input used for base station processing from the resulting summed digital RF samples. As seen, for example, in Figure 2.1 above, the upstream signal of the DAU is used as an input to a base station

for base station processing. Exhibit F further states “The head-end unit must always be connected to the Base Station using a direct cabled connection.”

The ‘402 Patent

52. By its activities related to at least offering for sale in the United States as well as any making, using, selling, and/or importing in or into the United States its Genesis DAS, SOLiD has infringed and continues to infringe claim 1 and other claims of the ‘402 patent.

53. SOLiD’s Genesis DAS is a system for digital transport of a wireless spectrum. The figures from Exhibit E shown under paragraphs 17 and 18 illustrate how remote units in SOLiD’s Genesis system may be distributed within and associated with a coverage area (e.g. a building) for receiving radio frequency transmissions from wireless units such as cell phones in the coverage area. As stated in Exhibit F, the Genesis system “is a coverage system for indoor and outdoor services delivering voice and data in high quality and...seamlessly. As a distributed antenna system, it provides analog and digital phone systems that are served in multiple bands...The GENESIS system supports communication standards and public interface protocols in worldwide use.”

54. SOLiD’s DAU satisfies the limitation of the “first unit” recited in Claim 1 of the ‘402 patent.

55. SOLiD’s LRN satisfies the limitations of the “second units” recited in Claim 1 of the ‘402 patent.

56. Typical configurations of the Genesis system include a DAU and LRNs that are communicatively coupled via a wired communication medium, e.g., as described using fiber optic cables, and each LRN is remotely located from the DAU.

57. In use, each of the LRNs receives a respective analog wireless signal comprising upstream wireless spectrum and any transmission from any wireless units within a respective coverage area associated with that LRN. The component of the LRN referred to as the RBU is specifically described as “Supporting 6 bands.” These bands are examples of respective analog wireless signals comprising upstream wireless spectrum and any transmission from any wireless units within a respective coverage area associated with that LRN.

58. In use, each of the LRNs in SOLiD’s Genesis system generates respective digital samples indicative of at least a portion of the wireless spectrum of the respective analog wireless signal received at that LRN. As shown above, the component of the LRN referred to as the RBU is specifically described as converting “uplink RF signal into digital with digital filtering technology.”

59. In use, each of the LRNs in SOLiD’s Genesis system is configured to communicate the respective digital samples generated by that LRN to the DAU using the wired communication link, e.g. fiber optic cables.

60. SOLiD’s DAU is configured to digitally sum corresponding digital samples derived from the digital samples received from the plurality of LRNs to produce summed digital samples. The DAU includes digital electronic circuitry that is configured to

digitally sum corresponding digital samples derived from the digital samples received from the plurality of LRNs to produce summed digital samples.

61. As described above, the DAU is configured to derive an input used for base station processing from the resulting summed digital samples. As seen, for example, in Figure 2.1 in paragraph 40 above, the upstream signal of the DAU is used as an input to a base station for base station processing. Exhibit F further states “The head-end unit must always be connected to the Base Station using a direct cabled connection.”

SOLiD’s Knowledge of the Patents-in-Suit

62. Upon information and belief, SOLiD knew about the patents-in-suit prior to the filing of this complaint, or was willfully blind to them.

63. CommScope’s digital DAS patent portfolio is well-known in the industry. Indeed, CommScope has publicized to the industry the existence of this valuable digital DAS patent portfolio. See, e.g., <https://www.commscope.com/press-releases/2017/commscope-and-kathrein-sign-extensive-cross-license-agreement/>.

CommScope’s predecessor-in-interest for the patents-in-suit, ADC Telecommunication, was well-known in the industry as the pioneer of digital DAS.

64. SOLiD itself is well aware of CommScope’s digital DAS patent portfolio. This is shown, for example, by testimony in a recent lawsuit where CommScope successfully enforced its digital DAS patent portfolio. At trial, the CEO of the defendant (Dali Wireless) testified that SOLiD previously mentioned to the defendant that SOLiD was concerned about the ADC patents, i.e., the patent portfolio now owned by CommScope on digital DAS.

65. As part of SOLiD's knowledge of CommScope's digital DAS patent portfolio, upon information and belief, SOLiD knew about the specific patents-in-suit prior to this lawsuit. The specific patent family asserted in this lawsuit is a well-known part of CommScope's digital DAS patent portfolio. SOLiD disclosed this patent family to the Patent Office when prosecuting its own patent application on a distributed antenna system. This is shown by Exhibit G, which is an Information Disclosure Statement filed by SOLiD that discloses the '982 patent from this patent family. Further, CommScope successfully enforced the specific patent family asserted in this lawsuit in a well-publicized, long running earlier patent lawsuit against Dali. Upon information and belief, SOLiD knew about this lawsuit and through this knowledge knew about or was willfully blind to the patents-in-suit. SOLiD itself was the subject of testimony in the lawsuit against Dali, testimony which disclosed that SOLiD had discussions with the defendant in the lawsuit regarding patent issues.

66. In view of the wide publicity of CommScope's digital DAS patents, CommScope's lawsuit with Dali based on the patents, SOLiD's comments that were testified to regarding CommScope's patents, and the fact that SOLiD identified one of the patents-in-suit to the Patent Office, SOLiD knew about the patents-in-suit prior to the filing of this complaint, or was willfully blind to them.

Count 1

Claim for Patent Infringement of U.S. Patent No. 7,639,982

67. CommScope incorporates by reference each of the paragraphs above as if fully stated herein

68. SOLiD directly infringes, literally and under the doctrine of equivalents, claims of the '982 patent including, for example and without limitation, claim 1, through offering for sale its digital distributed antenna systems including the Genesis distributed antenna system as well as any making, using, selling, and/or importing in or into the United States such systems. The infringing Genesis system includes the DAU host unit and the remote antenna units that operate with the DAU including, without limitation, the LRN remote units.

69. SOLiD also indirectly infringes claims of the '982 patent including, for example and without limitation, claim 1. Operators of SOLiD's Genesis distributed antenna system directly infringe at least some claims of the '982 patent including, without limitation, claim 1. Upon information and belief, SOLiD knows its products are especially made or especially adapted for use in an infringement. As stated above, upon information and belief, SOLiD knew about the '982 patent prior to this complaint, and SOLiD indisputably knows about this '982 patent as of receipt of this complaint. Further, SOLiD knows its products are made to be used in distributed antenna systems that result in infringement.

70. SOLiD's products include features that are not staple articles of commerce suitable for non-infringing uses. For example, there is no substantial use for the optical ports on the DAU and LRNs other than to communicatively couple each remote using a communication medium (optical fiber). In addition, there is no substantial non-infringing use for the analog-to-digital feature of the LRN than to produce digitized radio frequency signals for transmission to the DAU. The intended, normal use of such features results in

infringement. Such features, and SOLiD's products are a material part of the invention of the '982 patent. Upon information and belief, SOLiD's products are also offered for sale, sold, imported, and/or used in configurations that do not have substantial non-infringing uses.

71. SOLiD is actively inducing others, including its customers, to infringe claims of the '982 patent including, but not limited to, claim 1. For example, through SOLiD's product literature for its Genesis distributed antenna system, examples of which are attached as Exhibits E-F, SOLiD has instructed and encouraged its customers and the operators of its Genesis distributed to build and use the Genesis system by coupling SOLiD's DAU host units to SOLiD's remote antenna units, such as the LRN units, using optical fiber cables in a manner that results in direct infringement of the '982 patent. There is no other substantial use for these units other than to be coupled to each other using optical fiber cables. SOLiD's product literature encourages its customers to arrange LRN remote units with the DAU in an arrangement that results in digital summation in the DAU host in a manner that directly infringes the '982 patent. As set out above, SOLiD has knowledge of the patents-in-suit, and SOLiD gives instructions and encouragement to its customers to assemble and use its Genesis distributed antenna system using optical fiber cabling, with the specific intent, knowledge or willful blindness to the fact that doing so would constitute direct infringement of the '982 patent.

72. SOLiD's infringement is willful. There is an objectively high likelihood that SOLiD's actions constitute infringement of the '982 patent. There is not a substantial defense in this case, and the '982 patent is presumed to be valid. The high

likelihood was known, or should have been known, to SOLiD. SOLiD is a patent-aware company. As set forth above, SOLiD knew or should have known about the '982 patent and that its products have the same subject matter covered by the '982 patent. The likelihood of infringement was particularly apparent because SOLiD entered the digital DAS market well after the invention of the '982 patent, and SOLiD knew or should have known that the '982 patent is presumed valid.

73. CommScope has been damaged by SOLiD's infringement of the '982 patent and will continue to be damaged in the future unless SOLiD is enjoined from infringing the '982 patent

74. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

Count 2

Claim for Patent Infringement of U.S. Patent No. 8,326,218

75. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

76. SOLiD directly infringes, literally and under the doctrine of equivalents, claims of the '218 patent including, for example and without limitation, claim 1, through offering for sale its digital distributed antenna systems including the Genesis distributed antenna system as well as any making, using, selling, and/or importing in or into the United States such systems. The infringing Genesis system includes the DAU host unit and the remote antenna units that operate with the DAU including, without limitation, the LRN remote units.

77. SOLiD also indirectly infringes claims of the '218 patent including, for example and without limitation, claim 1. Operators of SOLiD's Genesis distributed antenna system directly infringe at least some claims of the '218 patent including, without limitation, claim 1. Upon information and belief, SOLiD knows its products are especially made or especially adapted for use in an infringement. As stated above, upon information and belief, SOLiD knew about the '218 patent prior to this complaint, and SOLiD indisputably knows about this '218 patent as of receipt of this complaint. Further, SOLiD knows its products are made to be used in distributed antenna systems that result in infringement.

78. SOLiD's products include features that are not staple articles of commerce suitable for non-infringing uses. For example, there is no substantial use for the optical ports on the DAU and LRNs other than to communicatively couple each LRN remote unit to a DAU host using a communication medium (optical fiber). In addition, there is no substantial non-infringing use for the analog-to-digital feature of the LRN than to product a digital RF sample for transmission to the DAU. The intended, normal use of such features results in infringement. Such features, and SOLiD's products are a material part of the invention of the '218 patent. Upon information and belief, SOLiD's products are also offered for sale, sold, imported, and/or used in configurations that do not have substantial non-infringing uses.

79. SOLiD is actively inducing others, including its customers, to infringe claims of the '218 patent including, but not limited to, claim 1. For example, through SOLiD's product literature for its Genesis distributed antenna system, examples of which

are attached as Exhibits E-F, SOLiD has instructed and encouraged its customers and the operators of its Genesis distributed to build and use the Genesis system by coupling SOLiD's DAU host units to SOLiD's remote antenna units, such as the LRN units, using optical fiber cables in a manner that results in direct infringement of the '218 patent. There is no other substantial use for these units other than to be coupled to each other using optical fiber cables. SOLiD's product literature encourages its customers to arrange LRN remote units with the DAU in an arrangement that results in digital summation in the DAU host in a manner that directly infringes the '218 patent. As set out above, SOLiD has knowledge of the patents-in-suit, and SOLiD gives instructions and encouragement to its customers to assemble and use its Genesis distributed antenna system using optical fiber cabling, with the specific intent, knowledge or willful blindness to the fact that doing so would constitute direct infringement of the '218 patent.

80. SOLiD's infringement is willful. There is an objectively high likelihood that SOLiD's actions constitute infringement of the '218 patent. There is not a substantial defense in this case, and the '218 patent is presumed to be valid. The high likelihood was known, or should have been known, to SOLiD. SOLiD is a patent-aware company. As set forth above, SOLiD knew or should have known about the '218 patent and that its products have the same subject matter covered by the '218 patent. The likelihood of infringement was particularly apparent because SOLiD entered the digital DAS market well after the invention of the '218 patent, and SOLiD knew or should have known that the '218 patent is presumed valid.

81. CommScope has been damaged by SOLiD's infringement of the '982 patent and will continue to be damaged in the future unless SOLiD is enjoined from infringing the '218 patent

82. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

Count 3

Claim for Patent Infringement of U.S. Patent No. 8,577,286

83. CommScope incorporates by reference each of the paragraphs above as if fully stated herein.

84. SOLiD directly infringes, literally and under the doctrine of equivalents, claims of the '286 patent including, for example and without limitation, claim 1, through offering for sale its digital distributed antenna systems including the Genesis distributed antenna system as well as any making, using, selling, and/or importing in or into the United States such systems. The infringing Genesis system includes the DAU host unit and the remote antenna units that operate with the DAU including, without limitation, the LRN remote units.

85. SOLiD also indirectly infringes claims of the '286 patent including, for example and without limitation, claim 1. Operators of SOLiD's Genesis distributed antenna system directly infringe at least some claims of the '286 patent including, without limitation, claim 1. Upon information and belief, SOLiD knows its products are especially made or especially adapted for use in an infringement. As stated above, upon information and belief, SOLiD knew about the '286 patent prior to this complaint, and

SOLiD indisputably knows about this '286 patent as of receipt of this complaint. Further, SOLiD knows its products are made to be used in distributed antenna systems that result in infringement.

86. SOLiD's products include features that are not staple articles of commerce suitable for non-infringing uses. For example, there is no substantial use for the optical ports on the DAU and LRNs other than to communicatively couple each remote using a communication medium (optical fiber). In addition, there is no substantial non-infringing use for the analog-to-digital feature of the LRN than to produce a digital RF sample for transmission to the DAU. The intended, normal use of such features results in infringement. Such features, and SOLiD's products are a material part of the invention of the '286 patent. Upon information and belief, SOLiD's products are also offered for sale, sold, imported, and/or used in configurations that do not have substantial non-infringing uses.

87. SOLiD is actively inducing others, including its customers, to infringe claims of the '286 patent including, but not limited to, claim 1. For example, through SOLiD's product literature for its Genesis distributed antenna system, examples of which are attached as Exhibits E-F, SOLiD has instructed and encouraged its customers and the operators of its Genesis distributed to build and use the Genesis system by coupling SOLiD's DAU host units to SOLiD's remote antenna units, such as the LRN units, using optical fiber cables in a manner that results in direct infringement of the '286 patent. There is no other substantial use for these units other than to be coupled to each other using optical fiber cables. SOLiD's product literature encourages its customers to

arrange LRN remote units with the DAU in an arrangement that results in digital summation in the DAU host in a manner that directly infringes the '286 patent. As set out above, SOLiD has knowledge of the patents-in-suit, and SOLiD gives instructions and encouragement to its customers to assemble and use its Genesis distributed antenna system using optical fiber cabling, with the specific intent, knowledge or willful blindness to the fact that doing so would constitute direct infringement of the '286 patent.

88. SOLiD's infringement is willful. There is an objectively high likelihood that SOLiD's actions constitute infringement of the '286 patent. There is not a substantial defense in this case, and the '286 patent is presumed to be valid. The high likelihood was known, or should have been known, to SOLiD. SOLiD is a patent-aware company. As set forth above, SOLiD knew or should have known about the '286 patent and that its products have the same subject matter covered by the '286 patent. The likelihood of infringement was particularly apparent because SOLiD entered the digital DAS market well after the invention of the '286 patent, and SOLiD knew or should have known that the '286 patent is presumed valid.

89. CommScope has been damaged by SOLiD's infringement of the '286 patent and will continue to be damaged in the future unless SOLiD is enjoined from infringing the '286 patent

90. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

Count 4

Claim for Patent Infringement of U.S. Patent No. 9,332,402

91. CommScope incorporates by reference each of the paragraphs above as if fully stated herein

92. SOLiD directly infringes, literally and under the doctrine of equivalents, claims of the '402 patent including, for example and without limitation, claim 1, through offering for sale its digital distributed antenna systems including the Genesis distributed antenna system as well as any making, using, selling, and/or importing in or into the United States such systems. The infringing Genesis system includes the DAU host unit and the remote antenna units that operate with the DAU including, without limitation, the LRN remote units.

93. SOLiD also indirectly infringes claims of the '402 patent including, for example and without limitation, claim 1. Operators of SOLiD's Genesis distributed antenna system directly infringe at least some claims of the '402 patent including, without limitation, claim 1. Upon information and belief, SOLiD knows its products are especially made or especially adapted for use in an infringement. As stated above, upon information and belief, SOLiD knew about the '402 patent prior to this complaint, and SOLiD indisputably knows about this '402 patent as of receipt of this complaint. Further, SOLiD knows its products are made to be used in distributed antenna systems that result in infringement.

94. SOLiD's products include features that are not staple articles of commerce suitable for non-infringing uses. For example, there is no substantial use for the optical

ports on the DAU and LRNs other than to communicatively couple each remote using a communication medium (optical fiber). In addition, there is no substantial non-infringing use for the analog-to-digital feature of the LRN than to produce a digital RF sample for transmission to the DAU. The intended, normal use of such features results in infringement. Such features, and SOLiD's products are a material part of the invention of the '402 patent. Upon information and belief, SOLiD's products are also offered for sale, sold, imported, and/or used in configurations that do not have substantial non-infringing uses.

95. SOLiD is actively inducing others, including its customers, to infringe claims of the '402 patent including, but not limited to, claim 1. For example, through SOLiD's product literature for its Genesis distributed antenna system, examples of which are attached as Exhibits E-F, SOLiD has instructed and encouraged its customers and the operators of its Genesis distributed to build and use the Genesis system by coupling SOLiD's DAU host units to SOLiD's remote antenna units, such as the LRN units, using optical fiber cables in a manner that results in direct infringement of the '402 patent. There is no other substantial use for these units other than to be coupled to each other using optical fiber cables. SOLiD's product literature encourages its customers to arrange LRN remote units with the DAU in an arrangement that results in digital summation in the DAU host in a manner that directly infringes the '402 patent. As set out above, SOLiD has knowledge of the patents-in-suit, and SOLiD gives instructions and encouragement to its customers to assemble and use its Genesis distributed antenna

system using optical fiber cabling, with the specific intent, knowledge or willful blindness to the fact that doing so would constitute direct infringement of the '402 patent.

96. SOLiD's infringement is willful. There is an objectively high likelihood that SOLiD's actions constitute infringement of the '402 patent. There is not a substantial defense in this case, and the '402 patent is presumed to be valid. The high likelihood was known, or should have been known, to SOLiD. SOLiD is a patent-aware company. As set forth above, SOLiD knew or should have known about the '402 patent and that its products have the same subject matter covered by the '402 patent. The likelihood of infringement was particularly apparent because SOLiD entered the digital DAS market well after the invention of the '402 patent, and SOLiD knew or should have known that the '402 patent is presumed valid.

97. CommScope has been damaged by SOLiD's infringement of the '402 patent and will continue to be damaged in the future unless SOLiD is enjoined from infringing the '402 patent.

98. CommScope has satisfied the notice and/or marking provisions of 35 U.S.C. § 287.

Prayer for Relief

CommScope respectfully requests the following relief:

A. A judgement that SOLiD has infringed the '982 patent, the '218 patent, the '286 patent, and the '402 patent, and a judgement that such infringement was willful;

B. Both preliminary and permanent injunctions enjoining and restraining Defendants SOLiD U.S. and SOLiD Korea, their officers, directors, agents, servants,

employees, attorney, and all persons in active concert or participation with them from infringing the '982 patent, the '218 patent, the '286 patent and the '402 patent;

C. A judgment and order requiring Defendants to pay all appropriate damages under 35 U.S.C. § 284, including prejudgment and post-judgment interest, and including increased damages for willful infringement;

D. A judgment and order requiring Defendants to pay all costs of this action, including all disbursements and attorney fees, if this case is found to be exceptional as proved by 35 U.S.C. § 285; and

E. Such other and further relief that this Court may deem to be just and equitable.

Demand for a Jury Trial

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, CommScope demands a trial by jury of all issues so triable.

Respectfully submitted.

DANIEL J. SHEEHAN PLLC

DATE: May 18, 2020

By: /s/ DANIEL J. SHEEHAN

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