



## **DATA SHEET**



- CCSI indoor DAS deployment services include the installation, integration, test and commissioning of all DAS components including all fiber and RF cabling, antennas and all main and remote fiber distribution hubs.
- Based on the customer's requirements we can also install and integrate the RF source equipment including repeaters, roof mounted antennas and small cells.
- This service can be combined with our DAS design and optimization services to provide a complete end-to-end turnkey service.
- Prior to installation CCSI's technicians will conduct a site survey along with property management personnel to develop an approach for installation that will meet all of the property owners requirements and all building codes.
- During the initial site survey we will collect current RF data in order to provide benchmark data for optimization and as a before snapshot.
- CCSI's skilled technicians are certified for all of the major manufacturers of fiber DAS equipment and with hundreds of site installations already performed they have the experience necessary to install, integrate and commission the system efficiently and correctly.
- Our robust testing includes sweep and Passive InterModulation (PIM) testing
  of all coaxial cable as well as OTDR, insertion loss and connection
  verification of all fiber cable.
- CCSI's excellent logistics support which utilizes our regional warehouse resources enables us to keep inventory of customer equipment and to deliver it to the work site.
- CCSI technical resources provide expertise throughout the project from RF engineering through installation, commissioning and optimization.
- Industry leading project management support provides reporting on key milestones and project completion.
- Ability to quickly deploy multiple crews of experienced DAS technicians and engineers provides quick ramp up on our customer's critical projects.
- Best in class closeout documentation includes all required test results and robust photo documentation of installed equipment as well data upload to the customers selected repository.
- At CCSI safety, quality and on-time delivery are our top priorities and all of our processes procedures are designed with these metrics in mind allowing us to deploy quickly, accurately and safely.
- With multiple locations throughout North America CCSI has the ability to support the wireless carrier in large national or regional roll outs.
- CCSI has vast experience with the equipment supplied by all of the major DAS, radio and antenna manufacturers ensuring that multi-vendor solutions are installed and integrated in a timely manner.



#### **SPECIFICATIONS**

# DAS & In Building Services

## Indoor DAS Deployment

#### Overview

As more people rely on their mobile devices to manage their daily activities and to access their business critical services, the need for these devices to work everywhere has become paramount. CCI Services (CCSI) is a key partner with the wireless carriers who are investing in new capacity in densely populated areas. In addition, often the worst coverage for these devices can be in the very offices, factories and other facilities where people spend most of their work day. CCSI is helping the carriers to meet this coverage demand by designing, installing and optimizing Indoor Distributed Antenna Systems (IDAS).

CCI Services (CCSI) delivers complete DAS deployment from installation to commissioning and final test, including repeater and small cell installation services as required. Our team of highly trained technicians will bring their DAS expertise to your project delivering a highly reliable in-building system on time and on budget with our superior expertise.

CCSI is capable of providing DAS installation and integration services throughout North America. CCSI continues to provide both national and regional services supporting several of the major carriers for their DAS and cell site rollouts. We've have become a trusted partner and CCSI can always be expected to deliver high quality services, safely and on time.

### Deliverables

- Perform pre-installation site survey with property management personnel and collect benchmark RF data.
- Inventory customer equipment and deliver to site for integration.
- Install all coaxial and fiber cabling, antennas as well as main and remote fiber hubs. Tie the equipment into existing power, install all RF interconnects to designated equipment and perform power up testing.
- As required install and commission the RF source equipment including repeaters and small cells.
- Test all fiber and coaxial cable.
- Commission and optimize the DAS system to customers' requirements.
- Perform final RF walk test to ensure that coverage levels meet or exceed customers requirement.
- Dedicated project and construction managers provide timely progress reporting and project tracking.
- Comprehensive closeout documentation includes all test results and complete photo documentation of installed equipment and includes digital upload services.
- As needed provide RF engineering a troubleshooting resources.