Simple | Easy | Flexible | SOLiD

SOLiD GENESIS™ Sub-3 DAS

The most advanced, flexible, easy-to-deploy DAS available

SOLiD GENESIS™ Sub-3 DAS is a new wireless coverage platform, designed to meet the evolving requirements of all scales, from small to large venues.

The GENESIS Sub-3 DAS approach incorporates innovative software and hardware features that simplify installation and configuration, delivers 100% user control, and increases flexibility for all verticals and applications.

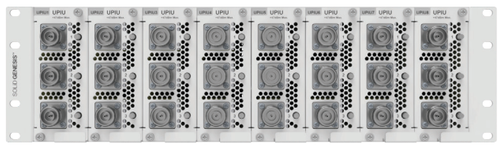
SOLiD GENESIS™ Sub-3 DAS

Distributed Antenna Systems (DAS) is a proven technology, reliably delivering increased wireless coverage and capacity in stadiums, subways, airports, tunnels, places where the macro network falls short. Everyday around the world, millions of cellular users connect to a SOLiD DAS. Unfortunately for most, their connected experience ends once they enter a building. For the billions of square feet of buildings and other facilities, the complexity and economics of traditional DAS was a major issue.

SOLiD GENESIS™ DAS is a robust, flexible, expandable, and customizable cellular coverage solution for multiple operators and technologies as universal platform. SOLiD's unique linearization method maximizes system power efficiency and saves the total cost of ownership (TCO).

Pure modular structure of the headend and remote units (DAU, LRN, MRN, and HRN) gives flexibility of upgrading/adding/changing service band without ripping or replacing of the system which is cost saving in the future.

UPOI Universal Point of Interface

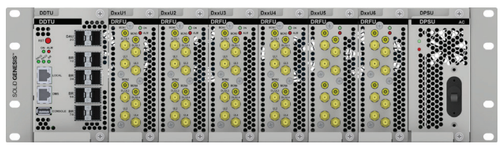


Functions & Features
- Passive, low PIM attenuator
- The wideband module supports 600–3800 MHz
- The number of ports matches the number of ports in the DAU

DMS3000 DAS Management System 3000

Functions & Features
- Provides an all-in-one DAS management platform with intuitive user interface over HTTPS
- Supports multiple SOLiD GENESIS™ DAS and various scales of network branches at a glance
- A complete set of alarm management and performance monitoring for efficient operation

DAU Distribution & Aggregation Unit



Functions & Features
- Interfaces with 1 to 24 signal source inputs
- Each DAU supports up to 512 LRNs or 128 H/MRNs
- Supports two expansion DAUs, local or remote, for more sectors
- Provides local management program for commissioning

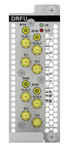
HCU Hub Copper Unit

Functions & Features
- Supports 8 LRNc per HCU via Cat 6A with PoE
- Supports daisy chain HCU connection up to 8 HCUs
- Power to each LRNc is controlled and monitored

LRNc/o Low-power Remote Node

Functions & Features
- Two types of LRN availability by interface type: Cat 6A or optical fiber
- Supports SISO and MIMO
- 4 Bands (20 dBm per band)
- Easy above/below ceiling or surface mount installation
- Internal antenna or external antenna port(s)

DRFU DAU RF Unit



Functions & Features
- 4T4R interfaces, 4 simplex or 4 duplex ports
- Discrete RF inputs per carrier per band
- Maximum DL handling power 1 W

DCU Decode Unit

Functions & Features
- T-Sync generation for TDD synchronization with DAU
- Supports up to 8 main DAUs with T-Sync split kit

HOU Hub Optic Unit

Functions & Features
- Supports 8 LRNo per HOU via optical cable with DC power
- Supports daisy chain HOU connection up to 8 HOUs

gLRN OCT Low-power Remote Node 8 Bands

Functions & Features
- 8 bands with 2G/3G/4G and 5G in a single enclosure
- Flexible MIMO configuration up to 2T2R per 4G and 4T4R for 5G
- 400/800 MHz bandwidth over single or dual Cat 6A or optic interface
- Output power is above 20/23 dBm per band
  - Low frequency band: 20 dBm (< 1 GHz)
  - High frequency band: 23 dBm (> 1 GHz)
- Internal antenna (external antenna optional)

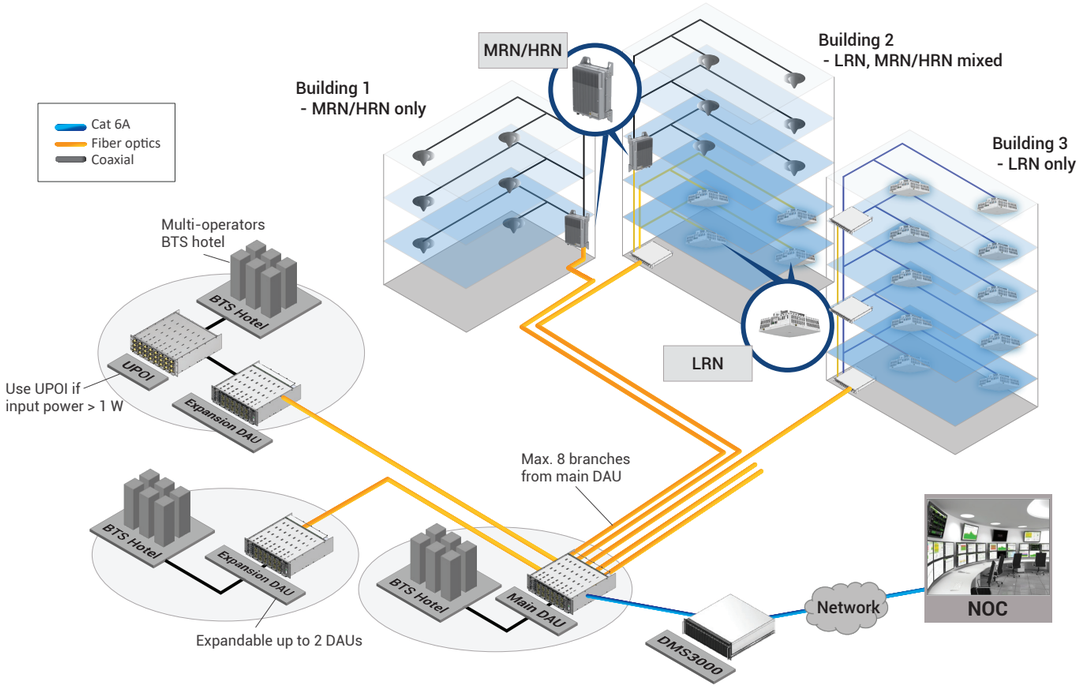
MRN Medium-power Remote Node

Functions & Features
- For outdoor and indoor service with max. 4 bands in a single enclosure
- Integrated multiplexer to combine all bands into one/two antenna(s)
- Supports one expansion MRN and daisy chain wired up to 8 MRNs
- MRN output power
  - Low frequency band: 30 dBm
  - High frequency band: 33 dBm

HRN High-power Remote Node

Functions & Features
- For outdoor and indoor service with max. 4 bands in a single enclosure
- Integrated multiplexer to combine all bands into one antenna
- Supports one expansion HRN and daisy chain wired up to 8 HRNs
- HRN output power
  - Low frequency band: 43 dBm
  - High frequency band: 46 dBm

Flexible Ethernet to the Edge Architecture



Make DAS Easy, Keep it SOLiD.

SOLiD GENESIS™ approach is clear. Create a single platform that is easier to install, with simple-to-use tools to commission and manage the network yet powerful enough to meet the demands of the most challenging wireless coverage environments. In short, make it SOLiD.

Software Driven - Enhanced User Experience

SOLiD GENESIS™ provides a new level of wireless expertise and remote operational control via a simple and intuitive GUI: easy commissioning, performance monitoring, and sector management.

GENESIS Sub-3 System Specifications

GENESIS Sub-3 General Specifications

Item	Specification								Remark
Frequency Band	700	800	900	1800	2100	2600	2300	2600	
Instantaneous Bandwidth	30 MHz	30 MHz	35 MHz	75 MHz	60 MHz	70 MHz	60 MHz	50 MHz	
Technology	LTE	LTE	GSM UMTS LTE	GSM UMTS LTE	UMTS LTE	LTE (FDD)	LTE (TDD)	LTE (TDD)	
Transmission Capacity	10 Gbps								
Transmission Distance	Up to 30 km E2E @ Optic, < 100 m @ twisted wire (Cat 6A)								
VSWR	< 1.4:1								
Frequency Error	±0.01 ppm								
System Delay	< 12 µsec, +1.0 µsec raise per node in daisy chain, E-DAU								

GENESIS Sub-3 Mechanical Specifications

Item	Dimensions (W x H x D)	Weight	Power Consumption	Power Connector Type
UPOI	19" x 3U x 475 mm	31 kg	25 W (with UPIUs fully loaded)	D-SUB 25P male
DAU	19" x 3U x 475 mm	17.5 kg	370 W (with DRFUs fully loaded, incl. UPOI)	IEC320/C14
DCU	19" x 1U x 420 mm	4.4 kg	36 W	IEC320/C14
HCU	19" x 1U x 450 mm	6.5 kg	820 W (with LRNs ports fully connected)	IEC320/C14
HOU	19" x 1U x 371.4 mm	4.4 kg	911 W (with LRNs ports fully connected)	IEC320/C20
LRNc/o	265 x 265 x 80 mm	4.6 kg	70 W (with LRFUs fully loaded)	RJ45 (LRNc), Terminal block (LRNo)
MRN	324 x 422 x 165 mm	22.5 kg	175 W (with MRFUs fully loaded)	Circular push pull connectors
HRN	460 x 650 x 252 mm	45 kg	850 W (with HRFUs fully loaded)	MIL-5015

GENESIS Sub-3 Connector Types, Cooling Fans and Noise Level Specifications

Item	Input Connector Type	Output Connector Type	Input Voltage	Cooling Fans	Noise Level
UPOI	24 x 4.3-10_F ports for RAN	24 x QMA_F ports for DAU	Powered by DAU	Yes	Max. 65 dBA
DAU	24 x DL/UL ports: QMA_F for RAN 24 x UL ports: QMA_F for RAN 24 x Monitoring ports: MCX_F for DCU	2 x Optic ports for E-DAU 8 x Optic ports for HCU/HOU/MRN and HRN	AC 110/220 V, DC -48 V	Yes	Max. 65 dBA
DCU	24 x QMA_F to DAU	2 x QMA_F ports for T-Sync.	AC 110/220 V, DC -48 V	No	N/A
HCU	1 x Optic port for DAU	1 x Optic port for HCU 8 x PoE ports: RJ-45 for LRNc	AC 110/220 V, DC -48 V	Yes	Max. 65 dBA
HOU	1 x Optic port for DAU	1 x Optic port for HOU 8 x Optic ports for LRNo 8 x DC power feeding for LRNo	AC 110/220 V, DC -48 V	Yes	Max. 65 dBA
LRNc	1 x PoE port: RJ45 for HCU	4 x SMA_F ports for Ext. ANTs	DC 57 V @ PoE from HCU	No	N/A
LRNo	1 Optical port for HOU 1 DC feed input port for HOU	4 x SMA_F ports for Ext. ANTs	DC 57 V from HOU	No	N/A
MRN	1 x Optic port for DAU	1 x Optic port for daisy-chained MRN 1 x Optic port for extended MRN 1 x 4.3-10_F for ANTs	AC 220 V	No	N/A
HRN	1 x Optic port for DAU	1 x Optic port for daisy-chained HRN 1 x Optic port for extended HRN 2 x 4.3-10_F for ANTs	AC 220 V	Yes	Max. 60 dBA

Connect with SOLiD

SOLiD helps people stay connected and safe in a rapidly changing world through a portfolio of the digital DAS for the various venues. SOLiD enables indoor and outdoor cellular and public-safety communications at some of the world's best-known and most challenging venues including leading hospitals; professional and college sports venues; government, university and Fortune corporate buildings and campuses; international airports and metropolitan subways.

For more information or complete technical specifications, please visit our website or contact us via email or phone.
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