

# 3000 Distributed Antenna System

## FEATURES

### 3000 Primary/Secondary Hub

- Frequency Range 136MHz – 2.7GHz
- Up to 8 optical or coaxial interfaces to secondary hubs or remote units
- Supports up to 4 wireless services connection interfaces
- Unique software programmable RF combiner architecture enabling flexible service routing
- MMF operating distances of at least 550m. SMF operating distances of at least 2km
- Web based network management and SNMP interface
- RJ-45 Ethernet and Serial management interface
- Local monitoring capabilities for hub and remote units via LEDs

### Remote Units

- Coaxial and Fibre connected versions
- 18-20 dBm wideband output power
- Remote powering
- Ceiling or wall mountable, can be located in roof space
- Multi-service capability from 136MHz to 2.7GHz for any service or number of services, irrespective of carrier frequency or protocol



The Zinwave 3000 Distributed Antenna System (DAS) comprises centrally located Primary Hub units (PH), distributed Secondary Hubs (SH), and Remote Units (RU) deployed to provide wireless coverage throughout a building. The Primary and Secondary Hubs have the same form factor. The Remote Units are designed for un-obtrusive deployment on building walls or within ceiling voids.

Single or dual-star configurations are supported. With up to 8 Remote Units from one Primary Hub, and up to 64 Remote Units from a single Primary Hub via 8 Secondary Hubs.

The Primary and Secondary Hubs are modular to provide full flexibility, each having 4 input modules and 8 output modules. A PH supports up to 4 service inputs.

The Primary and Secondary hubs are connected via fibre (SMF or MMF). Both coaxial and fibre RUs and RU drive modules are available thus allowing user choice on cabling to the Remote Units (Coax, SMF or MMF).

Zinwave's patented technology enables fibre agnostic transmission of multiple RF signals simultaneously, irrespective of frequency or protocol. The 3000 DAS enables any number or combination of multi-service distribution from 136 MHz – 2.7 GHz including GSM, CDMA, UMTS, LTE, TDMA, iDEN, WiFi, WiMAX, Tetra, PMR, LMR, SMR, DVB-H...

System RF Parameters		
System Bandwidth	136-2700 MHz	
System Gain	+ 25 dB max	Adjustable in 1 dB steps
Single Band gain flatness	±2 dB	In any 100 MHz band
Wideband gain flatness	±5 dB	Over full frequency range
Downlink		
RF input power	0 dBm Typ, +15 dBm max	Working input power
RF output power	+18 dBm for services approved to CE +20 dBm for services approved to FCC	
Wideband Spurious emissions	-115 dBm/Hz	At RU maximum output power
Uplink		
RF input sensitivity	-35 dBm	At maximum rated power
RF hub output power	-10 dBm	

Fibre Optic Specifications	
Number of Optical Ports	Up to 8 transceivers in modular format on hub; 1 transceiver on fibre RU; SC connectors
Wavelength	1310nm
Fibre types supported	Multimode (MM), both 50 m and 62.5 m and Singlemode (SM) cable 9/125 m
Fibre distance	At least 550m for MM cable and 2km for SM cable, dependent on fibre quality
Laser safety classification	Class 1

Connectivity	
Hub Unit	
<b>Service connection:</b> N-Type female connectors (back of unit)	
<b>Hub Interconnect:</b> Fibre SC Duplex connectors, patch cords are required and can be supplied with any required connector type	
<b>RU connect:</b> Fibre SC Duplex connector for fibre RU (patch cords are required and can be supplied with any required connector type) or 2 N-Type female connectors for coaxial RU	
Remote Unit - Fibre	
<b>Antenna connection:</b> 2 N-Type female connectors	
<b>Hub connection:</b> Fibre SC Duplex/power connector, patch cords are required and can be supplied with any required connector type	
Remote Unit - Coaxial	
<b>Antenna connection:</b> 2 N-Type female connectors	
<b>Hub connection:</b> 2 N-Type female connectors (powered via Hub)	

Physical, Electrical and Environmental Specifications		
Hub Unit	Remote Unit - Fibre	Remote Unit - Coaxial
443mm (W) x 125mm (H) x 435mm (D)	220mm(W)x 211mm(H)x 92mm(D)	220mm(W)x 211mm(H)x 92mm(D)
20.5 kg	2.7kg	2.7kg
110/230 Volts, 50/60 Hz 50-300 Watt (depending on No. RUs being driven)	Powered from a remote or a local power supply	Powered from the Hub via coaxial cable
Operating temperature (Ambient non-condensing)-5 to +45°C	45°C	45°C

Standards & Approvals	
EMC Regulatory & safety requirements	EN 55022/CISPR22, FCC Part 15 Class A, European EMC directive 89/336/EEC
Electrical safety	IEC 60950-1
Laser safety	BS EN 60825-1:2003 Safety of laser products