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ZYXEL

ZoneDAS

Quad-Band/Quad-Channel Active CAT5 DAS

Benefits

Low Total Cost of Ownership (TCO)

Zyxel's ZoneDAS totally changes the economic equation of DAS deployment while improving everything else. Succeeding where others fail, it achieves multiple breakthroughs by replacing troublesome, costly coaxial cables with inexpensive, easy-to-deploy CAT-5 cabling. These inexpensive twisted-pair cables can be installed by networking novices, thus sidestepping licensed electricians – a costly necessity in traditional DAS deployment. Using CAT-5 also allows ZoneDAS to power its entire system with PoE and just one power supply, significantly shortening system deployment time. Zyxel even adds real-time software selectable antennas that, together with its flexible design, enable trouble-free, low cost re-deployment when layout changes arise. Last but not least, its low input-power requirement (0 – 24 dBm) enables the use of cheaper, smaller BTS units and help system integrators lower overall deployment CAPEX.

Take advantage of simple maintenance and management

Traditional DAS products do not offer end-to-end monitoring and management. Signals just quietly pass through RF cables and building owners don't know about issues until complaints arise. Zyxel's active ZoneDAS solves the problem with its support for end-to-end system monitoring and management, enabling IT staff to manage everything from the RF source to the antenna point via VLAN, Open VPN, SNMPv2/v3, EMS, and remote Syslogs.

- Supports mutliple vendors, technologies, bands and carriers
- High SNR, low noise
- 4 x SISO, 2 x MIMO, or 2 x SISO + 1 x MIMO, all with LTE and Inter/ Intraband CA support
- Pattern-configurable omni and directional antennas
- Supports proactive alarms, EMS, and tracking logs

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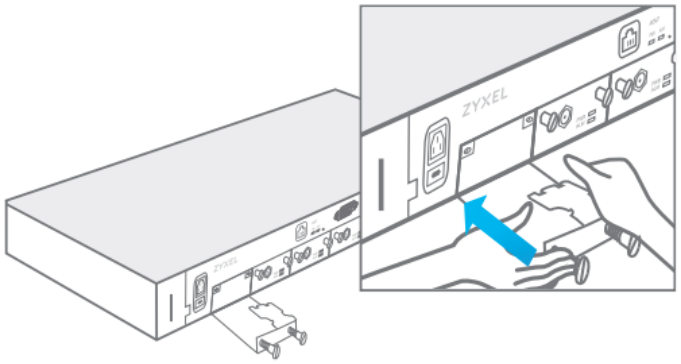
Ensure high flexibility and performance

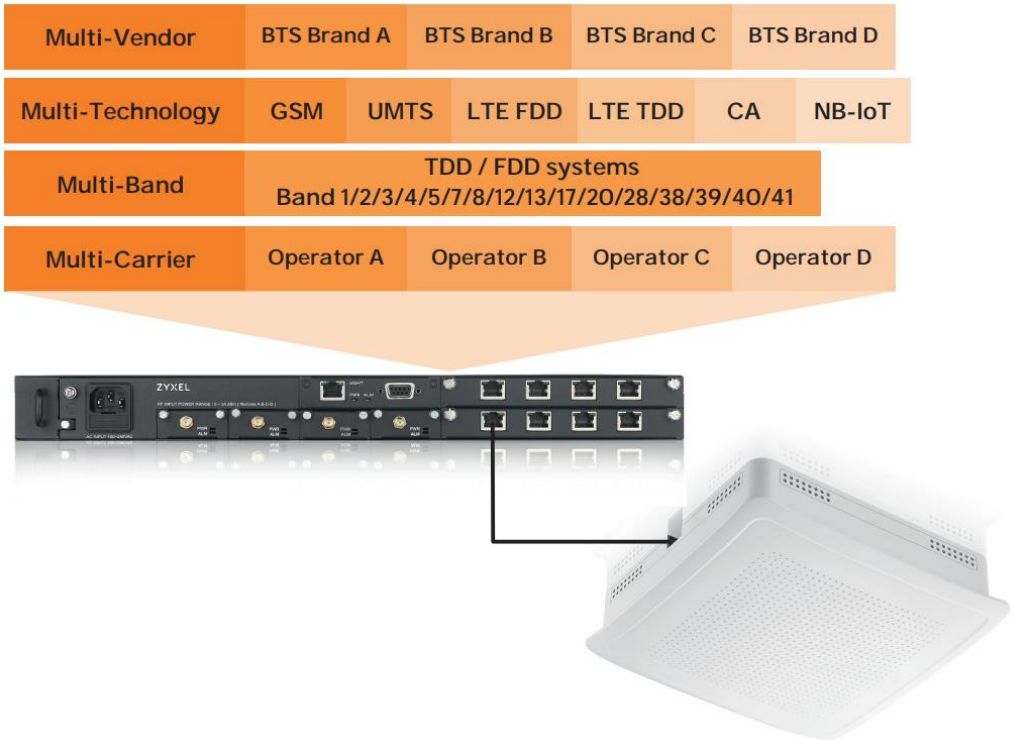
With ZoneDAS and ist totally modular design, output power level can be individually adjusted for each RF module of each Remote Unit. Being able to add RF modules also means easy upgrade to MIMO service or additional carrier support. ZoneDAS remote units feature built-in pattern-configurable antennae in each module, through which users can choose directional or omni output and optimize coverage. ZoneDAS even features input auto-levelling algorithms that adaptively optimize system gain to ensure optimal overall performance. For GSM900 systems, ZoneDAS's Uplink-Time- Slot-Mutely mechanism serves to avoid uplink channel blocking from near-by GSM handsets



All modules – RF, SD, and fan – are easily hot swappable

BTS source independent

Business models for in-building wireless services typically rely on carrier, neutral-host, or enterprise-pays-for-DAS scenarios. Since all carriers provide wired RF signals through Base Transceiver Stations (BTS), compatibility with various BTS systems becomes key when adopting DAS. Zyxel's ZoneDAS is BTS source independent and accepts the low 0 to 24 dBm input power range provided by macro, micro, and picocell stations. It accepts RF signals from up to four individual BTS units, in 2G, 3G or 4G LTE, and offers versatile input combinations like 2 x MIMO, 4 x SISO, and 1 x MIMO + 2 x SISO, with each supporting inter/intra-band carrier aggregation. For off-air operation, each RF port can also accept signal from a ZoneDAS Off-Air Kit or Zyxel SymmRepeater. By eliminating technical restrictions, ZoneDAS helps operators focus on system upgrades and capacity expansions, both essential to achieving higher ROI and making the right investments.



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Eigenschaften

Base Unit

Remote Unit

BU (Base Unit) Chassis

- 1U, 19'' rack mount
- 2 x SD module slots
- 4 x RF module slots, allowing configurations such as :
  - 4 x SISO
  - 2 x MIMO
  - 1 x MIMO + 2 x SISO

  all with available inter/intra-band CA and LTE support
- Management interface : one 10/100 RJ-45 port
- AC power input, 100 – 240V AC
- Max. power consumption : 450W (full configuration and max. output power)

BU-RF (Radio Frequency) Module

- Band Selectable
  - B1/2/3/4/5/7/8/12/13/17
  - B20/28/38/39/40/41
- Input source. BTS or Off-Air Kit
- BTS input power range : 0 – 24 dBm
- Off-Air Kit input power range : -75 - -30 dBm
- ALC protection range : 24 dBm – 30 dBm
- Continuous 20 MHz channel
- SMA connector
- Input Auto-leveling Algorithm

SD (Signal Distribution) Module

- 4 x RJ-45 ports (connect up to 4 x RUs)
- Each connects up to 100m of CAT5e cabling
- PoE feeds power to RUs
- Each port can carry 4 separate 20 MHz (FDD or TDD) RF channels

System Wide Specifications

- End-to-End Group Delay : max 1.5 microseconds
- Two-Tier architecture : BU → RU, max 8 RUs
- Three-Tier architecture : BU → Extender→RU, max 64 RUs

RU (Remote Unit) Box

- 4 x RF module slots
- RJ-45 interface (PoE)
- Power consumption: 6.5W (excluding RF modules)
- Antenna isolation between RF modules : 20dB
- Replaceable silent-fan module (Life Expectance (L10) : 80,000 hrs)
- Mounting kit for wall and ceiling

SD (Signal Distribution) Port

- Single RJ-45 port connects to BU via CAT5e cabling
- Supports cable lengths of up to 100m
- Powers the RU via PoE

RU-RF (Radio Frequency) Module

- Band Selectable
  - B1/2/3/4/5/7/8/12/13/17
  - B20/28/38/39/40/41
- Output power range : 14 – 23 dBm excluding antenna gain
- Built-in dual antennas, with software mode switching :
  - Omni antenna for ceiling mount, with 3 dBi gain
  - Panel antenna for wall mount, with 6 dBi gain
- Supports external antennas
- Supports individual module on/off switching
- Max. power consumption : 9W per module
- Uplink-Time-Slot-Mutely mechanism for GSM900

System Wide Features

- Schedulable automatic cable loss detection and automatic system recalibration
- Supports proacitve alarms, including cable error and overheat alarms
- Environment temperature overheat protection via output power decrease and automatic shutdown

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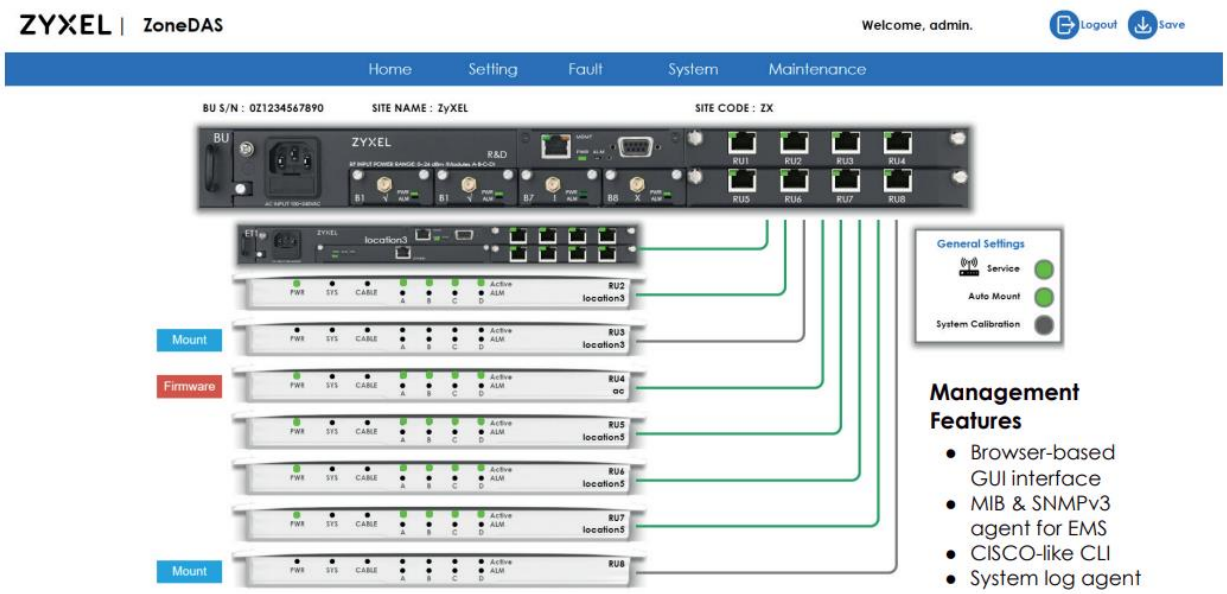
Management



Applications

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