



# CrossFire™ Digital DAS Product Guide

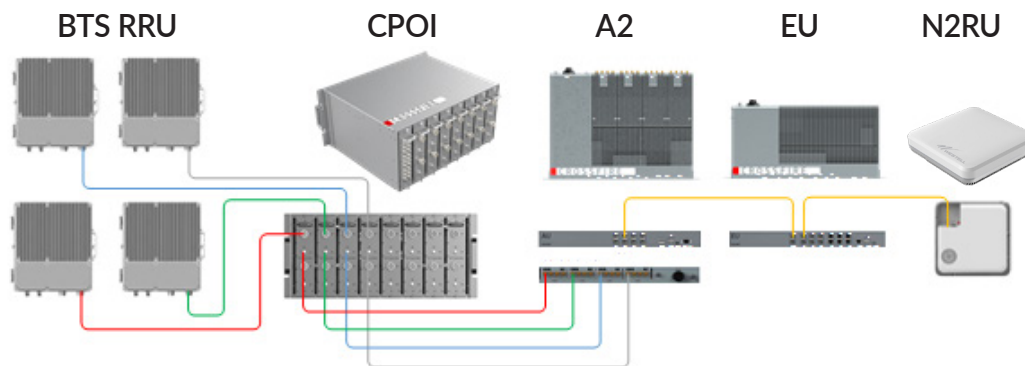


CrossFire is a digital transport platform supporting cellular, GigE IP, Wi-Fi, and public safety technologies over fiber optic cable. The CrossFire platform is one of the most versatile Distributed Antenna Systems on the market with 3 distinct platforms:

- Traditional hybrid fiber/coax
- Fiber to the antenna
- Cat5/6 to the antenna.

Each designed to fit the environment being covered and to satisfy the requirements of the building owner, tenants, and cellular operators.

The N2 platform is part of the CrossFire 2.0 generation capable of supporting 5G technology from 360MHz to 3.8GHz, plus future RAN virtualization. With remote units from NP and HP Series supporting from 15dBm to 43dBm per band, CrossFire from Westell can support your application.



# Core Components

## Head-End Interface Unit (AU/A2)

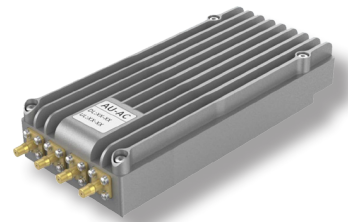
The AU/A2 is the heart and brain of the CrossFire digital DAS system. It receives the analog RF or CPRI signals from the cellular operators and converts to digital for transport over fiber optic cable to the expansion units or remotes. Super compact at only 1RU reduces head-end space requirements by a factor of 10x over competitor's equipment.

- Wideband support (360 - 3800MHz)
- 4 x active combiner modules (AU - AC) per chassis
- Up to 12 bands on 1 fiber core (using 2 x child A2)
- 8 x 10GBps SFP+ interfaces
  - 6-8 x Optical connections to EU or remotes
  - 2 x Optical connections to child A2
- Integrated OMT and SNMP
- DB9 dry contact alarm
- Converts analog RF to digital optical & vice versa
- Passively cooled



## Active Combiner Module (AU-AC)

- 4 x Duplex Input ports per module (QMA female)
- Full 3GPP Band per module (up to 100MHz)
- 0dBm to +15dBm input power range per port
- Modular fitting in the access unit chassis
- Automatic gain control
- Power offset (for Multi-Carrier power sharing)



## Expansion Chassis (EU-O/EU-E)

The EU-O provides IP backhaul connection to all RUs, enabling WiFi integration and other Gigabit Ethernet services deployed in a HetNet environment. The EU allows for easy expansion via the fiber interconnect from the AU/A2 to provide 8 optical or RJ45 ports to feed additional remotes.

- Cascade up to 5 x EU per AU/A2 optical connection
- 8 x 10 GBps SFP+ interfaces
  - 6 x optical connections to NP or HP remotes or 8x Ethernet ports to NP remotes
  - 1 x optical connections to parent AU/A2 or EU
  - 1 x optical connections to child EU
- 6 x 1 GBps RJ-45 ports
- 1 x Gigabit Ethernet service per connection
  - Supports backhaul for IP services or Small Cell (S1)
- Passively cooled





# Remote Units

## N2RU

The N2RU Remote unit is an ultra-compact fiber-to-the-antenna module supporting up to 8 bands from 360MHz to 3800MHz at 20dBm per band. At only 8" x 8" x 2" it blends seamlessly into almost any environment yet has the power to handle the new 5G requirements.

- Wideband support (360MHz - 3800MHz)
- 8 x 20 dBm RF modules per remote
- Up to 100MHz of RF spectrum per RF module
- 10 Gbps SFP+ interface to/from parent unit
- RJ45 socket for Gigabit Ethernet service
  - Supports backhaul for IP services or Small Cell (S1)
- Integrated OMT and SNMP, via WiFi
- Integrated Bluetooth Beacon (for indoor LBS applications)
- Integrated or external antenna options
- Supports up to 240 remotes per sector



## NPRU

Westell's Nano Power (NP) distributed antenna system is an extremely flexible platform utilizing new or existing Cat5/6 infrastructure, simultaneously capable of supporting different technology standards across multiple network operators' bands with various power configurations to address any venue.

- Wideband support (700MHz - 2700MHz)
- 4 x 15 dBm RF modules per remote
- Up to 80MHz of RF bandwidth per module
- RJ45 socket for Gigabit Ethernet service
  - Supports backhaul for IP services or Small Cell (S1)
- Integrated OMT and SNMP, via WiFi
- 2 x 2 MIMO supported in a single remote
- Supports up to 480 remotes per sector



## HPRU

Westell's High Power (HP) distributed antenna system is an excellent complement to the Nano series to fill larger spaces or to more economically address coverage requirements over a coaxial cable network. The different platforms can be mixed and matched to form seamless coverage across any environment.

- Wideband support (600MHz - 2700MHz)
- 2 x 43dBm RF modules per remote
- Up to 100MHz of RF bandwidth per module
- Supports daisy chaining of remotes for expanded coverage or adding frequency bands
- IP67 rated for tough environments
- RJ45 socket for Gigabit Ethernet service
  - Supports backhaul for IP services or Small Cell (S1)
- Integrated OMT and SNMP, via WiFi
- 2 x 2 MIMO supported in a single remote





## About Westell

Westell Technologies, Inc., headquartered in Aurora, Illinois, is a leading provider of in-building wireless, intelligent site management, cell site optimization, and communications network solutions focused on innovation and differentiation at the edge of telecommunication networks, where end users connect. The Company's comprehensive set of products and solutions enable telecommunication service providers, cell tower operators, and other network operators to reduce operating costs and improve network performance. Westell is a trusted partner for transforming networks into high quality, reliable systems.

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