

Westell® | Nano Power DAS Platform

General Information

Westell's Nano Power distributed antenna system is an extremely flexible platform, simultaneously capable of supporting different technology standards across multiple network operators' bands with various power configurations to address any venue. The NP supports 4 x 3GPP bands across a wideband software defined remote unit.

The NP platform provides a Wi-Fi style approach to deployment of cellular coverage by adopting structured cabling including Power over Ethernet between the floor riser and antenna location. An ideal solution for the Enterprise.

Product Highlights

- 15dBm Output Power per Band
- Integrated IP Transport
- Optical (AU to EU-E) & Copper (EU-E to RU) Connectivity
- 4 x 3GPP Band per Remote
- 700 to 2700MHz Range
- Up to 80MHz per Band

Frequency Range

- 700MHz - 2700MHz



Nano Power CF31 Series Remote Unit

CF31-1-4x2 Model Shown

System Components



CF11 Series AU - Access Unit

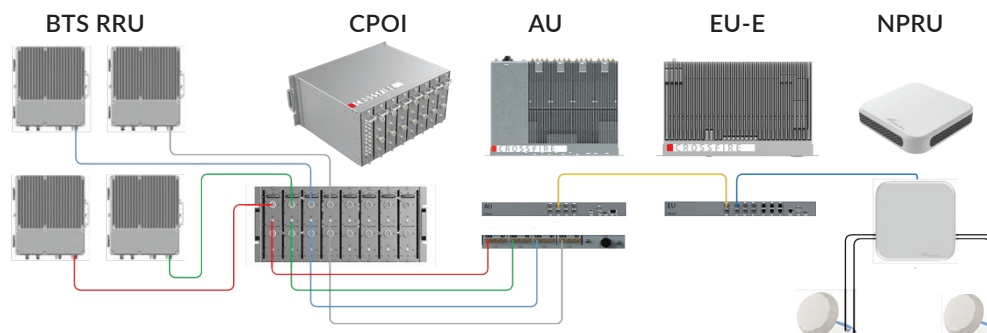
CF11-AC-GHZZ Model Shown



CF21 Series EU-E
Ethernet Expansion Unit

CF21-12E-1920 Model Shown

Block Diagram



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Specifications



System	
Maximum RF Bands per Access Unit	4
Maximum RF Bands per Remote Unit	4
Maximum RF Bands per System	8
Maximum Access Units per System	3 (1 x Master / 2 x Slaves)
Maximum EUs per Master AU	8
Maximum RUs per EU	12
Maximum EUs cascaded	5
Maximum RUs cascaded	0
Frequency Range (Non-Contiguous)	700MHz - 2700MHz
Bandwidth per Channel (Downlink & Uplink)	≤80MHz (Contiguous)
Digital Bandwidth per Channel (Downlink & Uplink)	40 or 80 MHz
Bandwidth per System (Downlink & Uplink)	≤320MHz + 100MB/s IP
MIMO	2x2: 1 x RU (x2) 4x4: 2 x RU (x2) 8x8: 4 x RU (x2)
IP Transmission Rate per RU	100MB/s
Maximum IP Connections per EU	12
Maximum IP Connections per RU	1
System Delay Adjustment	Up to 80.00μs (automatic)
Forward Path (Downlink)	
Output Power per Carrier	Number of Carriers 1 2 4 8
	All Technologies (dBm) 15 12 9 6
Gain	15 ± 3dB
Maximum Input Power	+15dBm (with AGC operating) / 0dBm (without AGC operating)
Error Vector Magnitude	<3.5% @ 256 QAM
Ripple	3dB Typical
Manual Attenuation Control	35dB @ 1dB/step (AU:20dB, RU:15dB)
System Delay (AU+EU+RU)	9μs
Reverse Path (Uplink)	
Maximum Output Power per Band	-15dBm
Gain	15 ± 3dB
Maximum Input Power	0dBm
Ripple	3dB Typical
Gain Control	35dB @ 1dB/step (AU:20dB, RU:15dB)
System Delay (AU+EU+RU)	9μs
Noise Figure	20dB Typical @ Maximum Gain



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Specifications



Interfaces	
Antenna Interface (All bands)	QMA Female
Access Unit RF Interface	QMA Female
Transmission Connector Type	SFP+, Standard LC (AU – EU) / RJ45 (EU – RU)
Transmission Rate	9.8304Gbps
Optical Fiber Length	1.4km / 0.87mi 10km / 6.21mi 30km / 18.64mi
Twisted Pair Copper Length	Cat6A: 100m @ 10GB/s Cat5E: 100m @ 5GB/s
Physical Alarms	DB9, Female (4x in, 4x out)
Maintenance Interface	Ethernet RJ45 / USB
Electrical	
Electromagnetic Compatibility/Interference (EMC/EMI)	3GPP TS36.113 3GPP TS25.113
Maximum Power Consumption (AU/EU-O/RU)	80W / 100W / 65W (EU-E Max Load: 800W)
AC Power	AU: 100-240V AC, 50/60Hz
DC Power	EU-E: -56VDC RU: PoE from EU-E
Environmental	
Mean Time Between Failure (MTBF)	>100,000 hours
Operating Temperature (AU/EU)	-10°C to +50°C / 14°F to +122°F
Operating Temperature (RU)	-10°C to +40°C / 14°F to +104°F
Storage Temperature	-40°C to +70°C / -40°F to +158°F
Humidity	5% to 85% (Non-Condensing)
Cooling	Passive (AU, EU-E & RU) / Active (EU-E PSU Only)
Installation	AU/EU: Wall or 19" Rack RU: Ceiling or Wall
Ingress Protection Rating	IP30 (Indoor)
Mechanical	
AU (Width / Height / Depth / Weight)	440mm / 44mm / 329mm / 8.0kg 17.32in / 1.73in / 12.95in / 17.64lb
EU-E (Width / Height / Depth / Weight)	440mm / 66mm / 220mm / 8.0kg 17.32in / 2.60in / 8.66in / 17.64lb
EU-E PSU (Width / Height / Depth / Weight)	440mm / 44mm / 249mm / 7.0kg 17.32in / 1.73in / 9.80in / 15.43lb
RU (Width / Height / Depth / Weight)	300mm / 60mm / 300mm / 3.5kg 11.81in / 2.36in / 11.81in / 7.71lb
Element Management	
OMT (Operations and Maintenance Terminal)	Yes. Access via AU, EU or RU (Web Based)
LMS (Local Management System)	Yes (Ordered separately)
NMS (Network Management System)	Yes (Ordered separately)

