Westell® | Nano Power
N2RU Remote Unit

General Information

Westell's N2 is a flexible platform supporting cellular, GigE IP and public safety technologies on fiber optic cable using the CPRI protocol. The N2 supports up to 8 bands with a combined EiRP value of almost 1 Watt utilizing integrated antennas for cellular and Bluetooth beaconing, plus integrated Wi-Fi as an option.

The N2 is part of the CrossFire™ platform capable of supporting 5G technology from 360MHz to 3.8GHz, plus future RAN virtualization.

Product Highlights

• 20dBm Output Power per Band

• Integrated IP Transport

• Integrated or External Antenna

• Integrated WIFI Option

• Optical Connectivity

• Up to 8 bands per remote

• Up to 100MHz per Band

Frequency Range

• 360MHz – 3800MHz

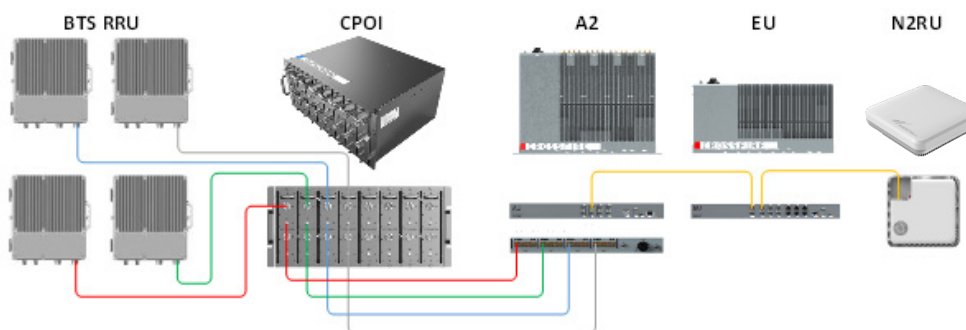CF32 model shown

System Components

CF12-AC model shown   CF23 model shown

Block Diagram

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Specifications

System	
Maximum RF Bands per Access Unit	4
Maximum RF Bands per Remote Unit	8 (6 with integrated Wi-Fi)
Maximum RF Bands per System	12
Maximum Access Units per System	3 (1 x Master / 2 x Slaves)
Maximum EUs per Master AU	8
Maximum EUs cascaded	5
Maximum RUs cascaded	0
Frequency Range (Non-Contiguous)	360MHz – 3800MHz
Bandwidth per Channel (Downlink & Uplink)	≤100MHz (Contiguous)
Digital Bandwidth per Channel (Downlink & Uplink)	20 / 30 / 40 / 50 / 60 / 80 / 100 MHz
Bandwidth per System (Downlink & Uplink)	≤360MHz + 1GB/s IP (100MB/s if >360MHz RF Bandwidth) ≤400MHz Maximum
MIMO Support	2x2: 1 x RU (x4) | 4x4: 1 x RU (x2) | 8x8: 1 x RU
IP Transmission Rate per RU	1GB/s (100MB/s if >360MHz RF Bandwidth)
Maximum IP Connections per EU	6
Maximum IP Connections per RU	1
System Delay Adjustment	Up to 80.00µs

Forward Path (Downlink)					
Output Power per Carrier	Number of Carriers	1	2	4	8
	Frequency higher than 1GHz	20	17	14	11
	Frequency lower than 1GHz	17	14	11	8
Output Power Accuracy	± 2dB				
Maximum Gain	20 ± 3dB for frequency higher than 1GHz 17 ± 3dB for frequency lower than 1GHz				
Maximum Input Power	+15dBm (with AGC operating) / 0dBm (without AGC operating)				
Error Vector Magnitude	<3.5% @ 256 QAM				
Ripple	4dB Typical				
Manual Attenuation Control	30dB @ 1dB/step (AU:20dB, RU:10dB)				
System Delay (AU+EU+RU)	8µS				

Reverse Path (Uplink)	
Maximum Output Power per Band	-20dBm
Output Power Accuracy	± 2dB
Maximum Gain	20 ± 3dB
Maximum Input Power	-25dBm
Ripple	4dB Typical
Manual Gain Control	30dB @ 1dB/step (AU:20dB, RU:10dB)
System Delay (AU+EU+RU)	8µS
Noise Figure	10dB Typical @ Maximum Gain

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Specifications

Interfaces	
Antenna Interface (All bands)	QMA Female (External Antenna version)
Access Unit RF Interface	QMA Female
Transmission Connector Type	SFP+, Standard LC
Transmission Rate	10.1376GB/s
Optical Fiber Length	1.4km / 10km / 30km 0.87mi / 6.21mi / 18.64mi
Physical Alarms	DB9, Female (4x in, 4x out)
Maintenance Interface	Ethernet RJ45 / Wi-Fi / USB
Electrical	
Electromagnetic Compatibility/Interference (EMC/EMI)	3GPP TS36.113 | 3GPP TS25.113
Maximum Power Consumption (AU/EU-O/RU)	80W / 50W / 98W
AC Power	100-240v AC, 50/60Hz (AU & EU-O)
DC Power	48VDC ± 20% (AU, EU-O and RU)
Environmental	
Mean Time Between Failure (MTBF)	>80,000 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-O) / Active (RU 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-O (Width / Height / Depth / Weight)	440mm / 44mm / 220mm / 5.0kg 17.32in / 1.73in / 8.66in / 11.02lb
RU(N2RU-I-Cove) (Width / Height / Depth / Weight)	220mm / 55mm / 220mm / 2.6kg 8.66in / 2.16in / 8.66in / 5.73lb
RU(N2RU-X-Cove) (Width / Height / Depth / Weight)	220mm / 65mm / 220mm / 3.1kg 8.66in / 2.56in / 8.66in / 6.83lb
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)

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