



Digital Repeater

Product Catalog



5G NR Single Band-adjustable Digital Pico Repeater

Model: 51711D (P/N: 51711D.78)

Product Features:

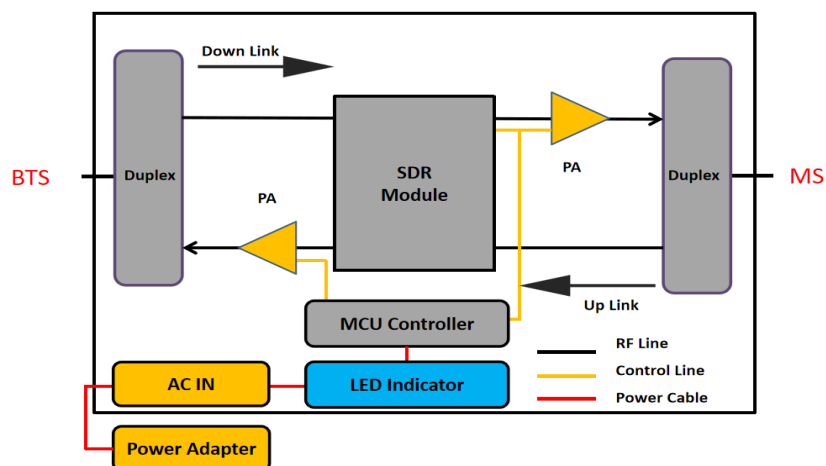
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:



Technical Specifications:

51711D.78		N78 (3500)
Frequency Range	Uplink	3300 - 4200 MHz (adjustable)
	Downlink	3300 - 4200 MHz (adjustable)
Number of Sub-bands		1
Bandwidth		≤ 100 MHz (adjustable)
Max. Gain	Uplink	$\geq 70 \pm 2$ dB
	Downlink	$\geq 70 \pm 2$ dB
Manual Gain Control		31 dB in step of 1 dB
Automatic Gain Control		≥ 20 dB
Gain Flatness (per sub-band)		$\leq \pm 3$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm
Output Power	Uplink	$\geq 17 \pm 1$ dBm
	Downlink	$\geq 17 \pm 1$ dBm
Out of Band Gain		Comply with 3GPP
Spurious Emission		Comply with 3GPP
ACRR		Comply with 3GPP
EVM		$\leq 3.5\%$
Frequency Stability		$\leq \pm 0.01$ ppm
Noise Figure		≤ 6 dB @ Max. Gain
VSWR		≤ 1.8
System Delay		≤ 3.5 μ s
RF Connector		N-Female
Impedance		50 Ω
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 12 V/ 3 A
Power Consumption		≤ 32 W
Dimensions		330*258*95 mm
Weight		≤ 3.5 kgs
IP Rating		IP40
Operating Temperature		-10 °C to 50 °C
Control & Monitoring	Local	Via RJ45
	Remote	Via Wireless Modem (optional)

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Pico Repeater

Model: 42312D (P/N: 42312D.13)

Product Features:

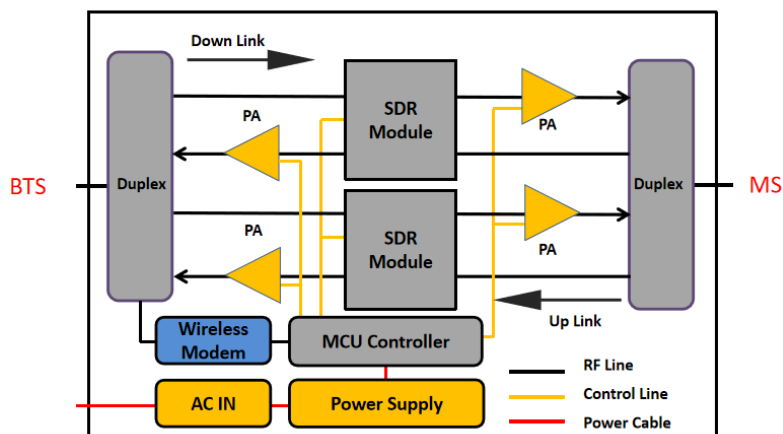
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42312D.13		B3 (1800)	B1 (2100)
Frequency Range	Uplink	1710 – 1785 MHz (adjustable)	1920 - 1980 MHz (adjustable)
	Downlink	1805 – 1880 MHz (adjustable)	2110 - 2170 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 75 MHz (adjustable)	≤ 60 MHz (adjustable)
Max. Gain	Uplink	≥ 80±2 dB	≥ 80±2 dB
	Downlink	≥ 85±2 dB	≥ 85±2 dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±3.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 20±2 dBm	≥ 20±2 dBm
	Downlink	≥ 23±2 dBm	≥ 23±2 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 8 dB @ Max. Gain	
VSWR		≤ 2.0	
System Delay		≤ 6 μs	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A	
Power Consumption		≤ 70 W	
Dimensions		330*258*95 mm	
Weight		≤ 7 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Pico Repeater

Model: 42312D (P/N: 42312D.24)

Product Features:

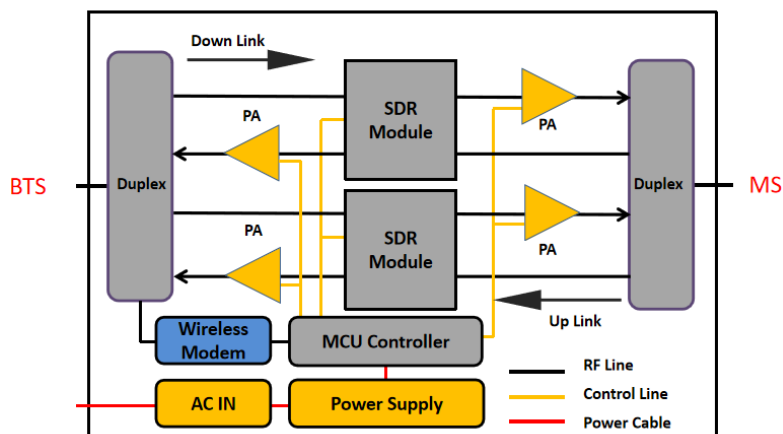
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42312D.24		B4 (1700)	B2 (1900)
Frequency Range	Uplink	1710-1755 MHz (adjustable)	1850-1910 MHz (adjustable)
	Downlink	2110-2155 MHz (adjustable)	1930-1990 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 45 MHz (adjustable)	≤ 60 MHz (adjustable)
Max. Gain	Uplink	≥ 80±2 dB	≥ 80±2 dB
	Downlink	≥ 85±2 dB	≥ 85±2 dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 20±2 dBm	≥ 20±2 dBm
	Downlink	≥ 23±2 dBm	≥ 23±2 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 7 dB @ Max. Gain	
VSWR		≤ 2.0	
System Delay		≤ 6 μs	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A	
Power Consumption		≤ 70 W	
Dimensions		330*258*95 mm	
Weight		≤ 7 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Pico Repeater

Model: 42312D (P/N: 42312D.38)

Product Features:

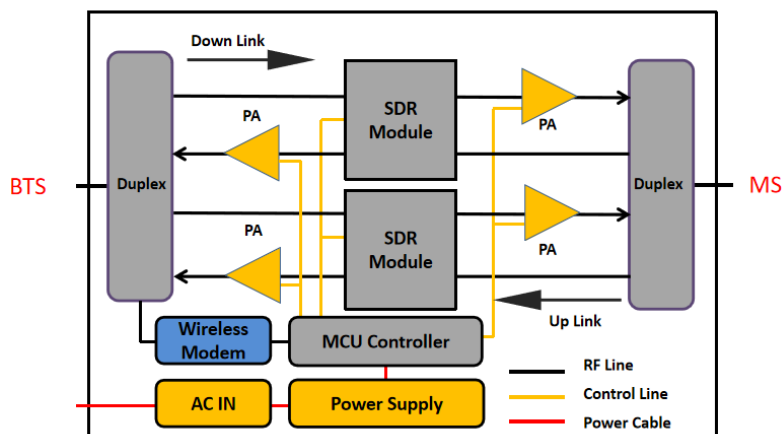
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42312D.38		B8 (900)	B3 (1800)
Frequency Range	Uplink	880 – 915 MHz (adjustable)	1710 – 1785 MHz (adjustable)
	Downlink	925 – 960 MHz (adjustable)	1805 – 1880 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 35 MHz (adjustable)	≤ 60 MHz (adjustable)
Max. Gain	Uplink	$\geq 80 \pm 2$ dB	$\geq 80 \pm 2$ dB
	Downlink	$\geq 85 \pm 2$ dB	$\geq 85 \pm 2$ dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		$\leq \pm 3.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	$\geq 20 \pm 2$ dBm	$\geq 20 \pm 2$ dBm
	Downlink	$\geq 23 \pm 2$ dBm	$\geq 23 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 8 dB @ Max. Gain	
VSWR		≤ 2.0	
System Delay		≤ 6 μ s	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A	
Power Consumption		≤ 70 W	
Dimensions		330*258*95 mm	
Weight		≤ 7 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Pico Repeater

Model: 42312D (P/N: 42312D.820)

Product Features:

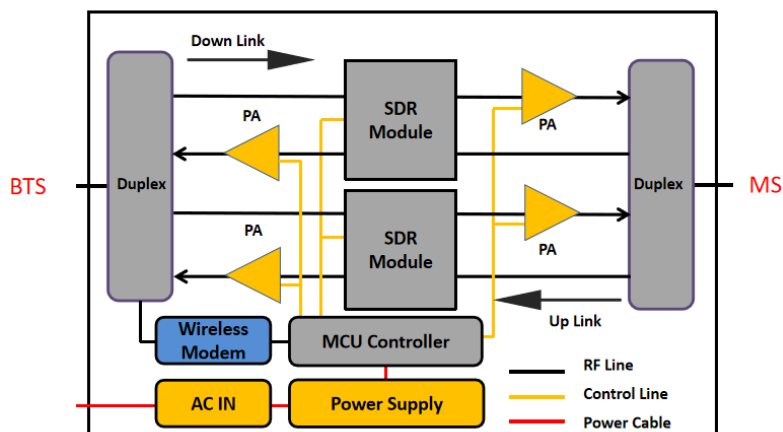
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42312D.820		B20 (800)	B8 (900)
Frequency Range	Uplink	832 – 862 MHz (adjustable)	880-915 MHz (adjustable)
	Downlink	791 – 821 MHz (adjustable)	925-960 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 30 MHz (adjustable)	≤ 35 MHz (adjustable)
Max. Gain	Uplink	≥ 80±2 dB	≥ 80±2 dB
	Downlink	≥ 85±2 dB	≥ 85±2 dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 20±2 dBm	≥ 20±2 dBm
	Downlink	≥ 23±2 dBm	≥ 23±2 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 8 dB @ Max. Gain	
VSWR		≤ 2.0	
System Delay		≤ 6 μs	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A	
Power Consumption		≤ 70 W	
Dimensions		330*258*95 mm	
Weight		≤ 7 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band ICS Pico Repeater

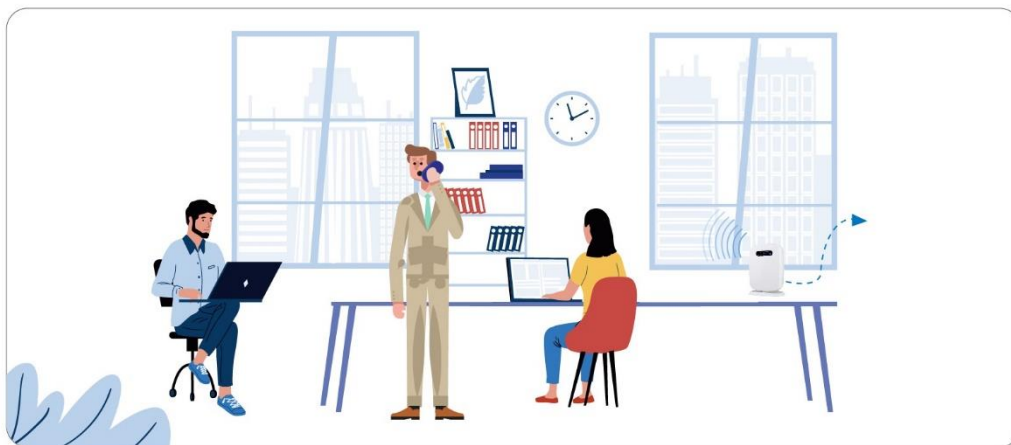
Model: 41512S (P/N: 41512S.38)

Product Features:

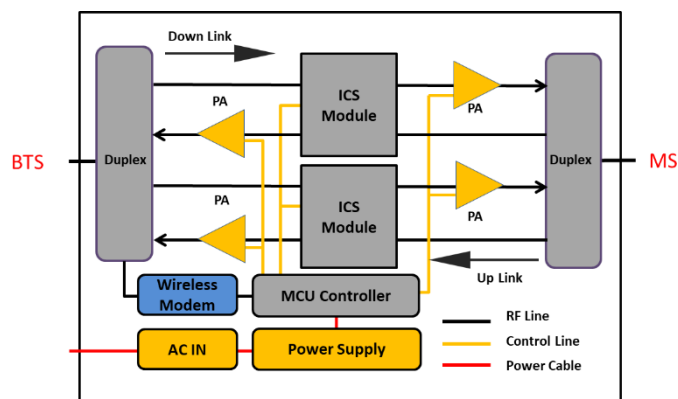
- Plug and play without cabling work.
- Built-in donor and service antennas.
- Uplink mute function.
- 30dB echo interference cancellation.
- 75dB gain with Auto Power Level Control.
- Compact design for easy installation and operation.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 41512S.38		B8 (900)	B3 (1800)
Frequency Range	Uplink	880 – 915 MHz (adjustable)	1710 – 1785 MHz (adjustable)
	Downlink	925 – 960 MHz (adjustable)	1805 – 1880 MHz (adjustable)
Number of Sub-bands		1-2	1-2
Bandwidth		35 MHz (adjustable)	60 MHz (adjustable)
Max. Gain	Uplink	≥ 75 dB	≥ 75 dB
	Downlink	≥ 75 dB	≥ 75 dB
Interference Cancellation		≥ 30 dB	
Manual Gain Control		30 dB in step of 1 dB	
Automatic Gain Control		≥ 25 dB	
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 3.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 15 dBm	≥ 15 dBm
	Downlink	≥ 15 dBm	≥ 15 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 8 dB @ Max. Gain	
VSWR		≤ 1.8	
System Delay		≤ 4.5 μ s	
RF Connector		SMA-Female	
Impedance		50 Ω	
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 12 V/ 3 A	
Power Consumption		≤ 25 W	
Dimensions		198*160*69 mm	
Weight		≤ 1.5 kgs	
IP Rating		IP40	
Operating Temperature		-10 °C to 50 °C	
Local Control		Via Micro USB	

Technical specification is subject to change without prior notice.



Triple Band-adjustable Digital Pico Repeater

Model: 42313D (P/N: 42313D.745)

Product Features:

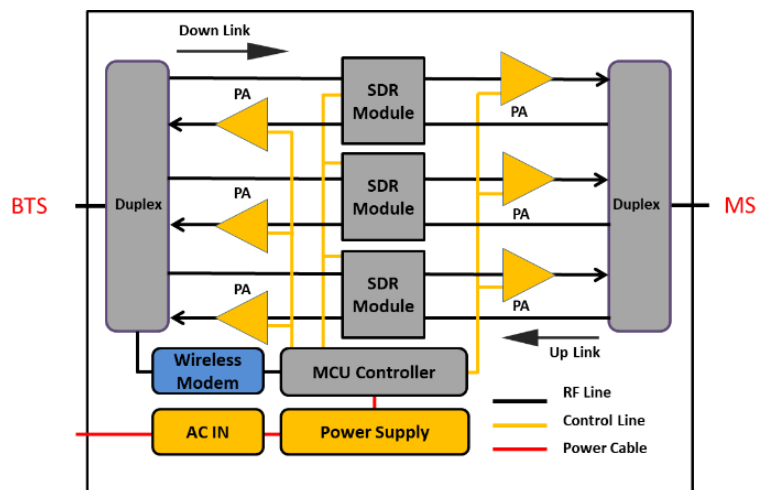
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42313D.745		B5 (850)	B4 (1700)	B7 (2600)
Frequency Range	Uplink	824–849 MHz (adjustable)	1710-1755 MHz (adjustable)	2500-2570 MHz (adjustable)
	Downlink	869–894 MHz (adjustable)	2110-2155 MHz (adjustable)	2620-2690 MHz (adjustable)
Number of Sub-bands		1-3	1-3	1-3
Bandwidth		≤ 25 MHz (adjustable)	≤ 45 MHz (adjustable)	≤ 70 MHz (adjustable)
Max. Gain	Uplink	$\geq 80 \pm 2$ dB	$\geq 80 \pm 2$ dB	$\geq 80 \pm 2$ dB
	Downlink	$\geq 85 \pm 2$ dB	$\geq 85 \pm 2$ dB	$\geq 85 \pm 2$ dB
Manual Gain Control		31 dB in step of 1 dB		
Automatic Gain Control		≥ 20 dB		
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 3.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	$\geq 20 \pm 2$ dBm	$\geq 20 \pm 2$ dBm	$\geq 20 \pm 2$ dBm
	Downlink	$\geq 23 \pm 2$ dBm	$\geq 23 \pm 2$ dBm	$\geq 23 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 8 dB @ Max. Gain		
VSWR		≤ 2.0		
System Delay		≤ 6 μ s		
RF Connector		N-Female		
Impedance		50 Ω		
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A		
Power Consumption		≤ 70 W		
Dimensions		330*258*95 mm		
Weight		≤ 7 kgs		
IP Rating		IP65		
Operating Temperature		-10 °C to 50 °C		
Control & Monitoring	Local	Via RJ45		
	Remote	Via Wireless Modem (optional)		

Technical specification is subject to change without prior notice.



Triple Band-adjustable Digital Pico Repeater

Model: 42313D (P/N: 42313D.138)

Product Features:

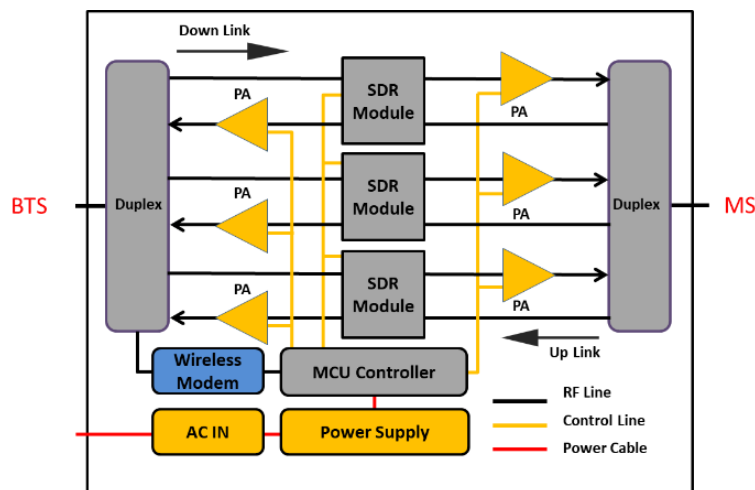
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- IP65 rating to provide a better protection class.
- OMS Lite for remote/local control and monitoring.
- CE certified quality.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 42313D.138		B8 (900)	B3 (1800)	B1 (2100)
Frequency Range	Uplink	880-915 MHz (adjustable)	1710-1785 MHz (adjustable)	1920-1980 MHz (adjustable)
	Downlink	925-960 MHz (adjustable)	1805-1880 MHz (adjustable)	2110-2170 MHz (adjustable)
Number of Sub-bands		1-3	1-3	1-3
Bandwidth		≤ 35 MHz (adjustable)	≤ 75 MHz (adjustable)	≤ 60 MHz (adjustable)
Max. Gain	Uplink	$\geq 80 \pm 2$ dB	$\geq 80 \pm 2$ dB	$\geq 80 \pm 2$ dB
	Downlink	$\geq 85 \pm 2$ dB	$\geq 85 \pm 2$ dB	$\geq 85 \pm 2$ dB
Manual Gain Control		31 dB in step of 1 dB		
Automatic Gain Control		≥ 20 dB		
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 3.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	$\geq 20 \pm 2$ dBm	$\geq 20 \pm 2$ dBm	$\geq 20 \pm 2$ dBm
	Downlink	$\geq 23 \pm 2$ dBm	$\geq 23 \pm 2$ dBm	$\geq 23 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 8 dB @ Max. Gain		
VSWR		≤ 2.0		
System Delay		≤ 6 μ s		
RF Connector		N-Female		
Impedance		50 Ω		
Power Supply		Input: AC 100~240 V, 50/ 60 Hz; Output: DC 24 V/ 4.2 A		
Power Consumption		≤ 70 W		
Dimensions		330*258*95 mm		
Weight		≤ 7 kgs		
IP Rating		IP65		
Operating Temperature		-10 °C to 50 °C		
Control & Monitoring	Local	Via RJ45		
	Remote	Via Wireless Modem (optional)		

Technical specification is subject to change without prior notice.



Single Band-adjustable Digital Repeater

Model: 44311D (P/N: 44311D.8)

Product Features:

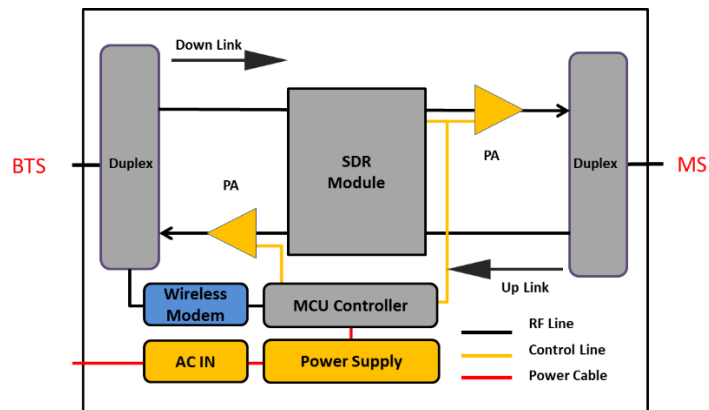
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 44311D.8		B8 (900)
Frequency Range	Uplink	880-915 MHz (adjustable)
	Downlink	925-960 MHz (adjustable)
Number of Sub-bands		1-3
Bandwidth		≤ 35 MHz (adjustable)
Max. Gain	Uplink	$\geq 85 \pm 2$ dB
	Downlink	$\geq 90 \pm 2$ dB
Manual Gain Control		31 dB in step of 1 dB
Automatic Gain Control		≥ 20 dB
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm
Output Power	Uplink	≥ 27 dBm
	Downlink	$\geq 43 \pm 1$ dBm
Out of Band Gain		Comply with 3GPP
Spurious Emission		Comply with 3GPP
ACRR		Comply with 3GPP
EVM		$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm
Noise Figure		≤ 6 dB
VSWR		≤ 1.5
System Delay		≤ 8 μ s
RF Connector		N-Female
Impedance		50 Ω
Power Supply		AC 110/ 220 V, 50/ 60 Hz
Power Consumption		200 W
Dimensions		410*490*190 mm
Weight		≤ 25 kg
IP Rating		IP65
Operating Temperature		-25 to 55 $^{\circ}$ C
Control & Monitoring	Local	Via RJ45
	Remote	Via Wireless Modem (optional)

Technical specification is subject to change without prior notice.



Single Band ICS Repeater

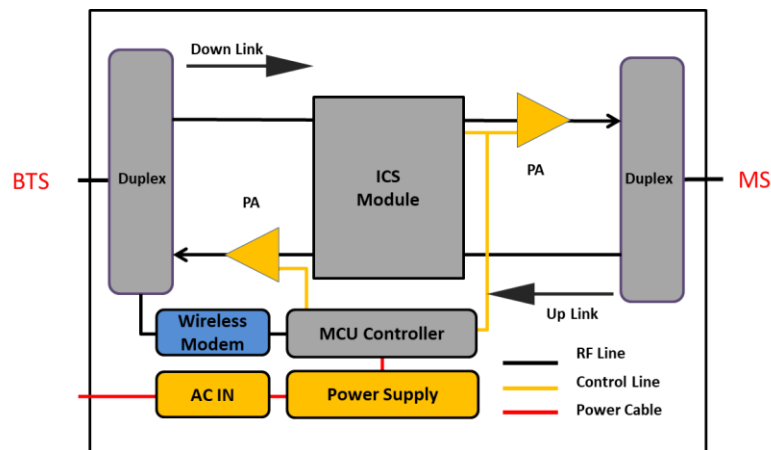
Model: 44311S (P/N: 44311S.20)

Product Features:

- Less isolation requirement, easier for outdoor application
- Donor signal monitoring for easy optimization and troubleshooting.
- Isolation detection function to further enhance the repeater performance.
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Intelligent algorithm to prevent UL interference.
- OMS Lite for remote/local control and monitoring.



Block Diagram:



Application Scenario:





Technical Specifications:

P/N: 44311S.20		B20 (800)
Frequency Range	Uplink	832-862 MHz (adjustable)
	Downlink	791-821 MHz (adjustable)
Number of Sub-bands		1
Bandwidth		30 MHz (adjustable)
Max. Gain	Uplink	$\geq 85 \pm 2$ dB
	Downlink	$\geq 95 \pm 2$ dB
Interference Cancellation		≥ 25 dB
Manual Gain Control		31 dB in step of 1 dB
Automatic Gain Control		≥ 20 dB
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm
Output Power	Uplink	≥ 27 dBm
	Downlink	$\geq 43 \pm 1$ dBm
Out of Band Gain		Comply with 3GPP
Spurious Emission		Comply with 3GPP
ACRR		Comply with 3GPP
EVM		$\leq 8\%$
Frequency Stability		$\leq \pm 0.01$ ppm
Noise Figure		≤ 5 dB
VSWR		≤ 1.5
System Delay		≤ 11 μ s
RF Connector		N-Female
Impedance		50 Ω
Power Supply		AC 110/ 220 V, 50/ 60 Hz
Power Consumption		200 W
Dimensions		410*490*190 mm
Weight		≤ 25 kg
IP Rating		IP65
Operating Temperature		-25 to 55 $^{\circ}$ C
Control & Monitoring	Local	Via RJ45
	Remote	Via Wireless Modem (optional)

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Repeater

Model: 43712D (P/N: 43712D.820)

Product Features:

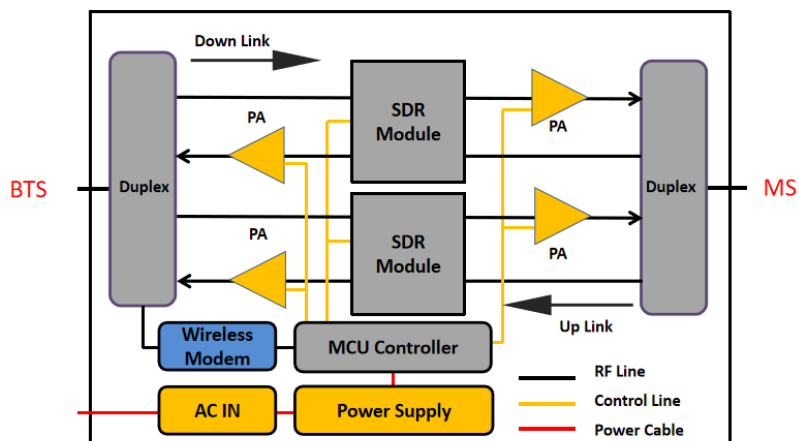
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 43712D.820		B20 (800)	B8 (900)
Frequency Range	Uplink	832 – 862 MHz (adjustable)	880 – 915 MHz (adjustable)
	Downlink	791 – 821 MHz (adjustable)	925 – 960 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 30 MHz (adjustable)	≤ 35 MHz (adjustable)
Max. Gain	Uplink	≥ 85±3 dB	≥ 85±3 dB
	Downlink	≥ 90±3 dB	≥ 90±3 dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 27±2 dBm	≥ 27±2 dBm
	Downlink	≥ 37±2 dBm	≥ 37±2 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 7 dB @ Max. Gain	
VSWR		≤ 1.5	
System Delay		≤ 6 μs	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		AC 100~240 V, 50/ 60 Hz	
Power Consumption		≤ 325 W	
Dimensions		410*490*190 mm	
Weight		≤ 25 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Repeater

Model: 43712D (P/N: 43712D.38)

Product Features:

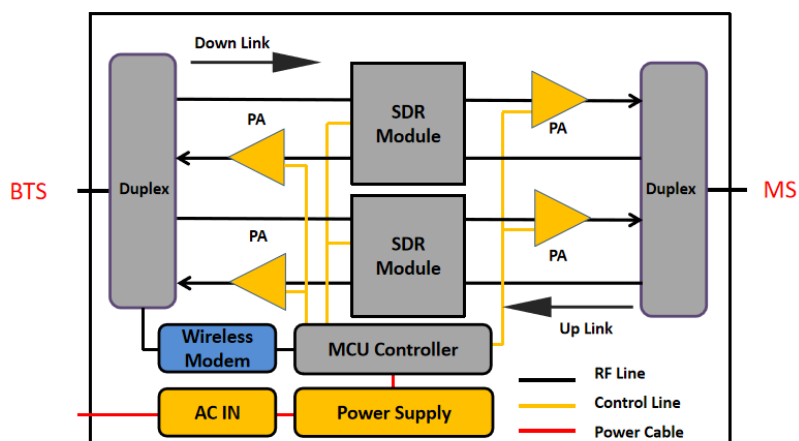
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 43712D.38		B8 (900)	B3 (1800)
Frequency Range	Uplink	880 – 915 MHz (adjustable)	1710 – 1785 MHz (adjustable)
	Downlink	925 – 960 MHz (adjustable)	1805 – 1880 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 35 MHz (adjustable)	≤ 75 MHz (adjustable)
Max. Gain	Uplink	$\geq 85 \pm 3$ dB	$\geq 85 \pm 3$ dB
	Downlink	$\geq 90 \pm 3$ dB	$\geq 90 \pm 3$ dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	$\geq 27 \pm 2$ dBm	$\geq 27 \pm 2$ dBm
	Downlink	$\geq 37 \pm 2$ dBm	$\geq 37 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 7 dB @ Max. Gain	
VSWR		≤ 1.5	
System Delay		≤ 6 μ s	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		AC 100~240 V, 50/ 60 Hz	
Power Consumption		≤ 325 W	
Dimensions		410*490*190 mm	
Weight		≤ 25 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Dual Band-adjustable Digital Repeater

Model: 44312D (P/N: 44312D.24)

Product Features:

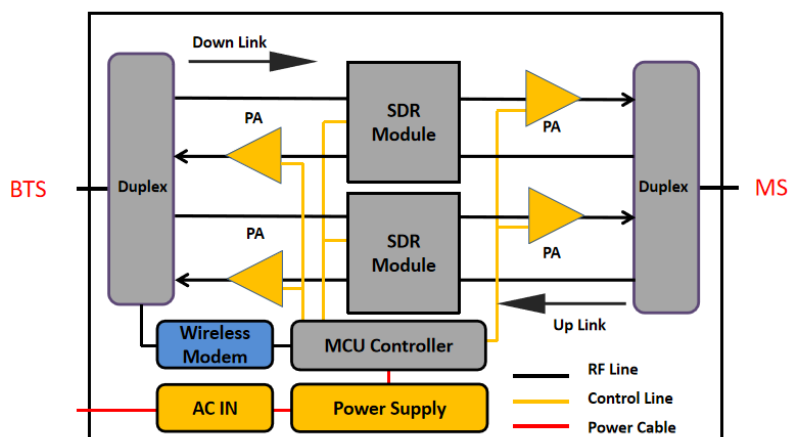
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 44312D.24		B4 (1700)	B2 (1900)
Frequency Range	Uplink	1710-1755 MHz (adjustable)	1850-1910 MHz (adjustable)
	Downlink	2110-2155 MHz (adjustable)	1930-1990 MHz (adjustable)
Number of Sub-bands		1-3	1-3
Bandwidth		≤ 45 MHz (adjustable)	≤ 60 MHz (adjustable)
Max. Gain	Uplink	$\geq 85 \pm 3$ dB	$\geq 85 \pm 3$ dB
	Downlink	$\geq 90 \pm 3$ dB	$\geq 90 \pm 3$ dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	$\geq 27 \pm 2$ dBm	$\geq 27 \pm 2$ dBm
	Downlink	$\geq 43 \pm 2$ dBm	$\geq 43 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		$\leq 6\%$	$\leq 6\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 7 dB @ Max. Gain	
VSWR		≤ 1.5	
System Delay		≤ 6 μ s	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		AC 100~240 V, 50/ 60 Hz	
Power Consumption		≤ 325 W	
Dimensions		410*490*190 mm	
Weight		≤ 25 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



5G NR Dual Band-adjustable Digital Repeater

Model: 54012D (P/N: 54012D.7841)

Product Features:

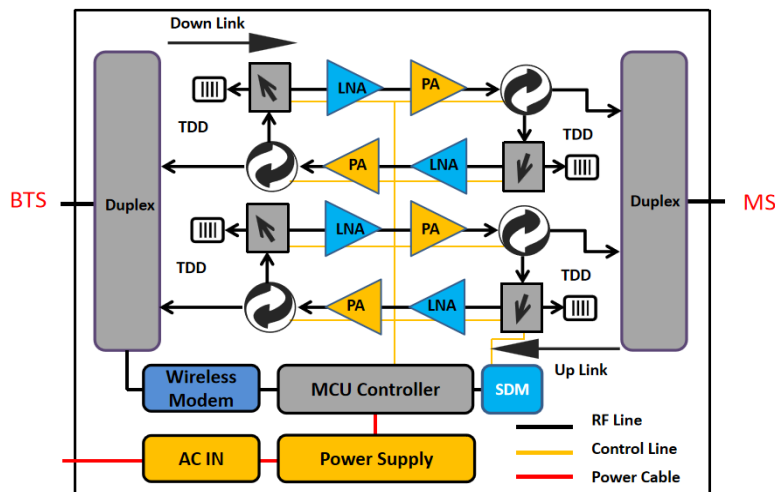
- Support 5G NSA+SA mode.
- 5G baseband synch module included to ensure precise synchronization with donor base station.
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Intelligent algorithm to prevent UL interference.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 54012D.7841		N41 (2500)	N78 (3500)
Frequency Range	Uplink	2500 - 2690 MHz (adjustable)	3400 - 3600 MHz (adjustable)
	Downlink	2500 - 2690 MHz (adjustable)	3400 - 3600 MHz (adjustable)
Number of Sub-bands		1	1
Bandwidth		≤ 100 MHz per carrier (adjustable)	≤ 100 MHz per carrier (adjustable)
Max. Gain	Uplink	≥ 85±3 dB	≥ 85±3 dB
	Downlink	≥ 90±3 dB	≥ 90±3 dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	≥ 27±2 dBm	≥ 27±2 dBm
	Downlink	≥ 40±2 dBm	≥ 40±2 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		≤ 3.5%	≤ 3.5%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 6 dB	
VSWR		≤ 1.5	
System Delay		≤ 4.5 μs	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		AC 100~240 V, 50/ 60 Hz	
Power Consumption		≤ 245 W	
Dimensions		410*490*190 mm	
Weight		≤ 25 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



5G MIMO Band-adjustable Digital Repeater

Model: 54012D (P/N: 54012D.78)

Product Features:

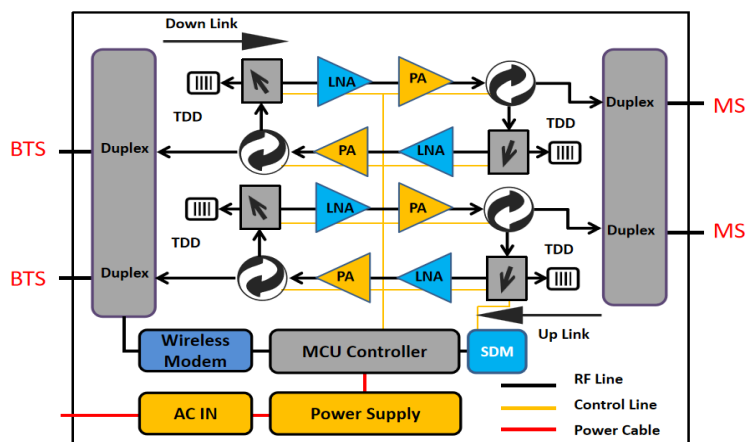
- The data transmission speed up to 600*Mbps (MIMO).
- Support 2T2R MIMO function, NSA+SA mode.
- 5G baseband synch module included to ensure precise synchronization with donor base station.
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Intelligent algorithm to prevent UL interference.
- OMS Lite for remote/local control and monitoring



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 54012D.78		N78 (2T2R)	
Frequency Range	Uplink	3400 - 3600 MHz (adjustable)	3400 - 3600 MHz (adjustable)
	Downlink	3400 - 3600 MHz (adjustable)	3400 - 3600 MHz (adjustable)
Number of Sub-bands		1	1
Bandwidth		≤ 100 MHz per carrier (adjustable)	≤ 100 MHz per carrier (adjustable)
Max. Gain	Uplink	$\geq 85 \pm 3$ dB	$\geq 85 \pm 3$ dB
	Downlink	$\geq 90 \pm 3$ dB	$\geq 90 \pm 3$ dB
Manual Gain Control		31 dB in step of 1 dB	
Automatic Gain Control		≥ 20 dB	
Gain Flatness (per sub-band)		$\leq \pm 2.5$ dB (peak-to-peak)	$\leq \pm 2.5$ dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	$\geq 27 \pm 2$ dBm	$\geq 27 \pm 2$ dBm
	Downlink	$\geq 40 \pm 2$ dBm	$\geq 40 \pm 2$ dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP
EVM		$\leq 3.5\%$	$\leq 3.5\%$
Frequency Stability		$\leq \pm 0.01$ ppm	$\leq \pm 0.01$ ppm
Noise Figure		≤ 6 dB	
VSWR		≤ 1.5	
System Delay		≤ 4.5 μ s	
RF Connector		N-Female	
Impedance		50 Ω	
Power Supply		AC 100~240 V, 50/ 60 Hz	
Power Consumption		≤ 200 W	
Dimensions		410*490*190 mm	
Weight		≤ 20 kgs	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
Control & Monitoring	Local	Via RJ45	
	Remote	Via Wireless Modem (optional)	

Technical specification is subject to change without prior notice.



Triple Band-adjustable Digital Repeater

Model: 43313D (P/N: 43313D.745)

Product Features:

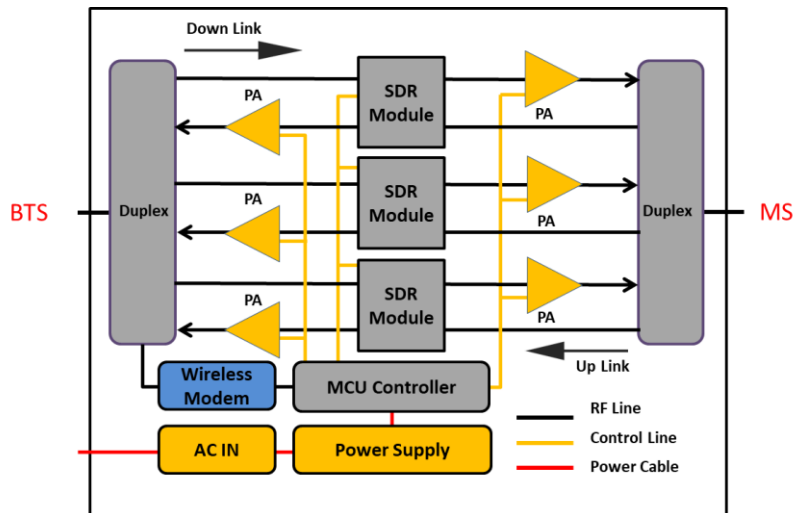
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 43313D.745		B5 (850)	B4 (1700)	B7 (2600)
Frequency Range	Uplink	824–849 MHz (adjustable)	1710-1755 MHz (adjustable)	2500-2570 MHz (adjustable)
	Downlink	869–894 MHz (adjustable)	2110-2155 MHz (adjustable)	2620-2690 MHz (adjustable)
Number of Sub-bands		1-3	1-3	1-3
Bandwidth		≤ 25 MHz (adjustable)	≤ 45 MHz (adjustable)	≤ 70 MHz (adjustable)
Max. Gain	Uplink	≥ 85±2 dB	≥ 85±2 dB	≥ 85±2 dB
	Downlink	≥ 90±2 dB	≥ 90±2 dB	≥ 90±2 dB
Manual Gain Control		31 dB in step of 1 dB		
Automatic Gain Control		≥ 20 dB		
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±3.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	≥ 27 dBm	≥ 27 dBm	≥ 27 dBm
	Downlink	≥ 33±1 dBm	≥ 33±1 dBm	≥ 33±1 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 6 dB		
VSWR		≤ 1.5		
System Delay		≤ 11 μs		
RF Connector		N-Female		
Impedance		50 Ω		
Power Supply		AC 110/ 220 V, 50/ 60 Hz		
Power Consumption		200 W		
Dimensions		410*490*190 mm		
Weight		≤ 30 kg		
IP Rating		IP65		
Operating Temperature		-25 to 55 °C		
Control & Monitoring	Local	Via RJ45		
	Remote	Via Wireless Modem (optional)		

Technical specification is subject to change without prior notice.



Quad Band-adjustable Digital Repeater

Model: 44314D (P/N: 44314D.13828)

Product Features:

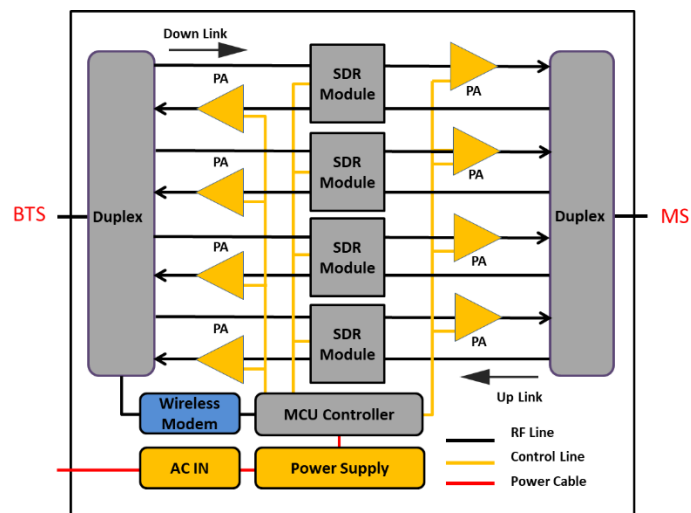
- Digital bandwidth-adjustable feature allows for seamless adaptability to different frequency bands.
- Multi-band options provide flexibility to meet various network requirements.
- Each sub-band can be easily turned on and off, allowing for more precise control.
- Separate gain control to further enhance performance.
- Intelligent algorithm to prevent UL interference.
- Self-control to minimize interference for new rollout e-Node B.
- OMS Lite for remote/local control and monitoring.



Application Scenario:



Block Diagram:





Technical Specifications:

P/N: 44314D.13828		B28 (700)	B8 (900)	B3 (1800)	B1 (2100)
Frequency Range (adjustable)	Uplink	703-748 MHz	880-915 MHz	1710-1785 MHz	1920-1980 MHz
	Downlink	758-803 MHz	925-960 MHz	1805-1880 MHz	2110-2170 MHz
Number of Sub-bands		1-2	1-2	1-2	1-2
Bandwidth (adjustable)		≤ 45 MHz	≤ 35 MHz	≤ 75 MHz	≤ 60MHz
Max. Gain	Uplink	≥ 85±2 dB	≥ 85±2 dB	≥ 85±2 dB	≥ 85±2 dB
	Downlink	≥ 90±2 dB	≥ 90±2 dB	≥ 90±2 dB	≥ 90±2 dB
Manual Gain Control		31 dB in step of 1 dB			
Automatic Gain Control		≥ 20 dB			
Gain Flatness (per sub-band)		≤ ±2.5 dB (peak-to-peak)	≤ ±3.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)	≤ ±2.5 dB (peak-to-peak)
Max. Input Power Without Damage		0 dBm			
Output Power	Uplink	≥ 27 dBm	≥ 27 dBm	≥ 27 dBm	≥ 27 dBm
	Downlink	≥ 43±1 dBm	≥ 43±1 dBm	≥ 43±1 dBm	≥ 43±1 dBm
Out of Band Gain		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
Spurious Emission		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
ACRR		Comply with 3GPP	Comply with 3GPP	Comply with 3GPP	Comply with 3GPP
EVM		≤ 6%	≤ 6%	≤ 8%	≤ 6%
Frequency Stability		≤ ±0.01 ppm	≤ ±0.01 ppm	≤ ±0.01 ppm	≤ ±0.01 ppm
Noise Figure		≤ 6 dB			
VSWR		≤ 1.5			
System Delay		≤ 11 μs			
RF Connector		N-Female			
Impedance		50 Ω			
Power Supply		AC 110/ 220 V, 50/ 60 Hz			
Power Consumption		500 W			
Dimensions		410*490*190 mm			
Weight		≤ 38 kg			
IP Rating		IP65			
Operating Temperature		-25 to 55 °C			
Control & Monitoring	Local	Via RJ45			
	Remote	Via Wireless Modem (optional)			

Technical specification is subject to change without prior notice.



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