

Digital Repeater

Product Catalog

SHENZHEN PREVAIL TECHNOLOGY CO., LTD.

Single Band-adjustable Digital Pico Repeater

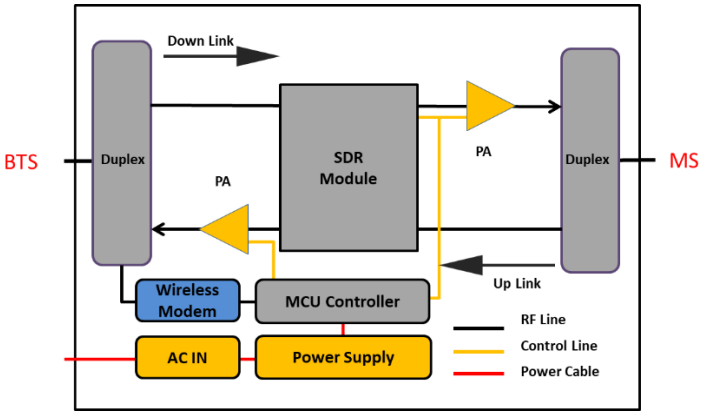
Model: 42011D (P/N: 42011D.20)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.
- CE certification guarantees high-quality performance.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 42011D.20		B20 (800)
Frequency Range	Uplink	832-862 MHz (adjustable)
	Downlink	791-821 MHz (adjustable)
Number of Sub-bands		1-3
Bandwidth per Sub-band		0.2-20 MHz (adjustable)
Max. Gain	Uplink	70±2 dB
	Downlink	70±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)
Max. Input Power Without Damage		0 dBm
Output Power	Uplink	20±2 dBm
	Downlink	20±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB
	5.0≤f_offset_CW<10.0 MHz	≤45 dB
	10.0 MHz≤f_offset_CW	≤35 dB
Spurious Emission	9KHz-1GHz	≦ -36 dBm
	1GHz-12.75GHz	≦ -30 dBm
ACRR	±10/20MHz	≦-36dBc/30KHz
	±20/40MHz	≦-40dBc/30KHz
EVM		≦ 8%
Frequency Stability		≦ ±0.01 ppm
Noise Figure		≦ 8 dB
VSWR		≦ 2
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		≦ 40 W
Dimensions		330*258*95 mm
Weight		≦ 3 kgs
IP Rating		IP30
Operating Temperature		-10 °C to 50 °C
NMS	Local	Via Type-C/Wi-Fi App
	Remote	Via Cloud-based NMS (optional)

Technical specification is subject to change without prior notice.

Dual Band-adjustable Digital Pico Repeater

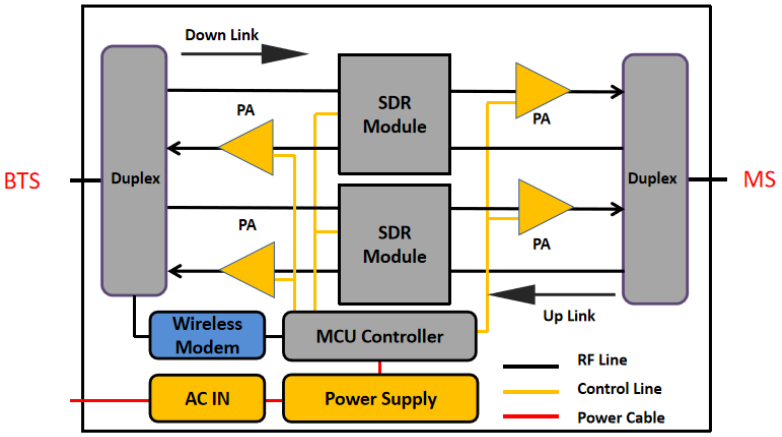
Model: 42012D (P/N: 42012D.820)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.
- CE certification guarantees high-quality performance.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 42012D.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 per Sub-band		0.2-20 MHz (adjustable)	0.2-20 MHz (adjustable)
Max. Gain	Uplink	70±2 dB	70±2 dB
	Downlink	70±2 dB	70±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)	
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	20±2 dBm	20±2 dBm
	Downlink	20±2 dBm	20±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB	
	5.0≤f_offset_CW<10.0 MHz	≤45 dB	
	10.0 MHz≤f_offset_CW	≤35 dB	
Spurious Emission	9KHz-1GHz	≦ -36dBm	
	1GHz-12.75GHz	≦ -30dBm	
ACRR	±10/20MHz	≦-36dBc/30KHz	
	±20/40MHz	≦-40dBc/30KHz	
EVM		≦ 6%	≦ 6%
Frequency Stability		≦ ±0.01 ppm	
Noise Figure		≦ 8 dB	
VSWR		≦ 2	
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		≦ 60 W	
Dimensions		330*258*95 mm	
Weight		≦ 5 kgs	
IP Rating		IP30	
Operating Temperature		-10 °C to 50 °C	
NMS	Local	Via Type-C/Wi-Fi App	
	Remote	Via Cloud-based NMS (optional)	

Technical specification is subject to change without prior notice.

Triple Band-adjustable Digital Pico Repeater

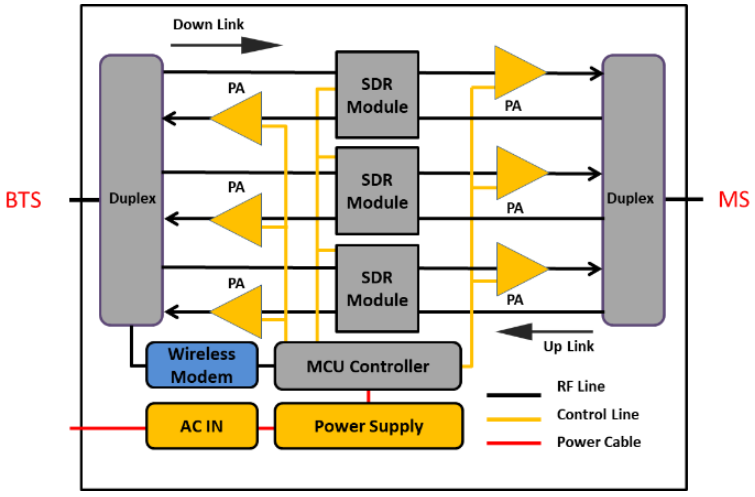
Model: 42013D (P/N: 42013D.138)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.
- CE certification guarantees high-quality performance.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 42013D.138		B8 (900)	B3 (1800)	B1 (2100)
Frequency Range	Uplink (adjustable)	880-915 MHz	1710-1785 MHz	1920-1980 MHz
	Downlink (adjustable)	925-960 MHz	1805-1880 MHz	2110-2170 MHz
Number of Sub-bands		1-3	1-3	1-3
Bandwidth per Sub-band		0.2- 20 MHz adjustable	0.2- 20 MHz adjustable	0.2- 20 MHz adjustable
Max. Gain	Uplink	70±2 dB	70±2 dB	70±2 dB
	Downlink	70±2 dB	70±2 dB	70±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)		
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	20±2 dBm	20±2 dBm	20±2 dBm
	Downlink	20±2 dBm	20±2 dBm	20±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB		
	5.0≤f_offset_CW<10.0 MHz	≤45 dB		
	10.0 MHz≤f_offset_CW	≤35 dB		
Spurious Emission	9KHz-1GHz	≦ -36dBm		
	1GHz-12.75GHz	≦ -30dBm		
ACRR	±10/20MHz	≦-36dBc/30KHz		
	±20/40MHz	≦-40dBc/30KHz		
EVM		≦ 6%	≦ 8%	≦ 6%
Frequency Stability		≦ ±0.01 ppm		
Noise Figure		≦ 8 dB		
VSWR		≦ 2		
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		IP30		
Operating Temperature		-10 °C to 50 °C		
NMS	Local	Via Type-C/Wi-Fi App		
	Remote	Via Cloud-based NMS (optional)		

Technical specification is subject to change without prior notice.

Triple Band-adjustable Digital Pico Repeater

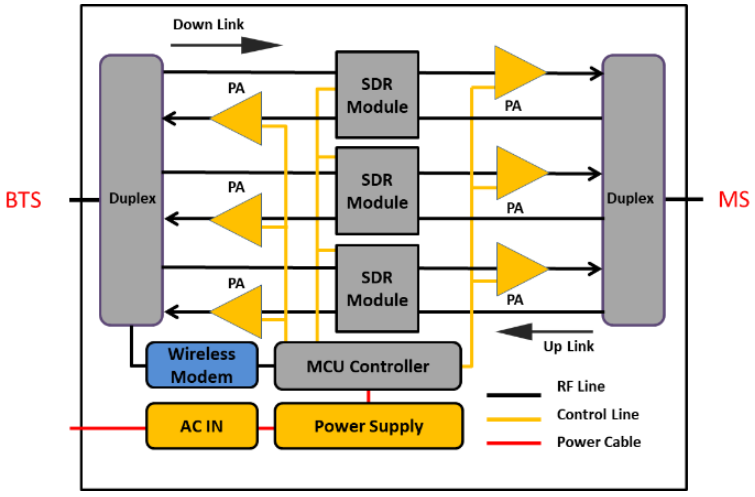
Model: 42313D (P/N: 42313D.745)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.
- CE certification guarantees high-quality performance.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 42313D.745		B5 (850)	B4 (1700)	B7 (2600)
Frequency Range	Uplink (adjustable)	824–849 MHz	1710-1755 MHz	2500-2570 MHz
	Downlink (adjustable)	869–894 MHz	2110-2155 MHz	2620-2690 MHz
Number of Sub-bands		1-3	1-3	1-3
Bandwidth per Sub-band		0.2- 20 MHz adjustable	0.2- 20 MHz adjustable	0.2- 20 MHz adjustable
Max. Gain	Uplink	70±2 dB	70±2 dB	70±2 dB
	Downlink	70±2 dB	70±2 dB	70±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)		
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	20±2 dBm	20±2 dBm	20±2 dBm
	Downlink	23±2 dBm	23±2 dBm	23±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB		
	5.0≤f_offset_CW<10.0 MHz	≤45 dB		
	10.0 MHz≤f_offset_CW	≤35 dB		
Spurious Emission	9KHz-1GHz	≦ -36dBm		
	1GHz-12.75GHz	≦ -30dBm		
ACRR	±10/20MHz	≦-36dBc/30KHz		
	±20/40MHz	≦-40dBc/30KHz		
EVM		≦ 6%	≦ 8%	≦ 6%
Frequency Stability		≦ ±0.01 ppm		
Noise Figure		≦ 8 dB		
VSWR		≦ 2		
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		IP30		
Operating Temperature		-10 °C to 50 °C		
NMS	Local	Via Type-C/Wi-Fi App		
	Remote	Via Cloud-based NMS (optional)		

Technical specification is subject to change without prior notice.

Quad Band-adjustable Digital Pico Repeater

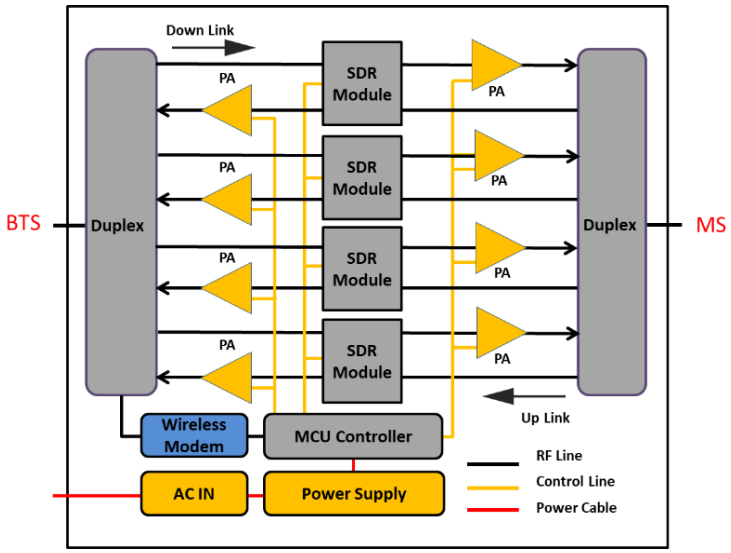
Model: 42314D (P/N: 42314D.266528)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 42314D.266528		B28 (700)	B5 (850)	B66 (AWS)	B2 (1900)
Frequency Range (adjustable)	Uplink	703 – 748 MHz	824 – 849 MHz	1710-1780 MHz	1850-1910 MHz
	Downlink	758 – 803 MHz	869 – 894 MHz	2110-2200 MHz	1930-1990 MHz
Number of Sub-bands		1-3	1-3	1-3	1-3
Bandwidth per Sub-band (adjustable)		0.2- 20 MHz	0.2- 20 MHz	0.2- 20 MHz	0.2- 20 MHz
Max. Gain	Uplink	70±2 dB	70±2 dB	70±2 dB	70±2 dB
	Downlink	75±2 dB	75±2 dB	75±2 dB	75±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)			
Max. Input Power Without Damage		0 dBm			
Output Power	Uplink	20±2 dBm	20±2 dBm	20±2 dBm	20±2 dBm
	Downlink	23±2 dBm	23±2 dBm	23±2 dBm	23±2 dBm
Out of Band Gain		2.5≤f_offset_CW< 5.0 MHz ≤60 dB			
		5.0≤f_offset_CW<10.0 MHz ≤45 dB			
		10.0 MHz≤f_offset_CW ≤35 dB			
Spurious Emission	9KHz-1GHz	≦ -36dBm			
	1GHz-12.75GHz	≦ -30dBm			
ACRR	±10/20MHz	≦-36dBc/30KHz			
	±20/40MHz	≦-40dBc/30KHz			
EVM		≦ 6%	≦ 6%	≦ 6%	≦ 6%
Frequency Stability		≦ ±0.01 ppm			
Noise Figure		≦ 6 dB			
VSWR		≦ 1.8			
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		≦ 85 W			
Dimensions		330*258*95 mm			
Weight		≦ 7 kgs			
IP Rating		IP30			
Operating Temperature		-10 °C to 50 °C			
NMS	Local	Via Type-C/Wi-Fi App			
	Remote	Via Cloud-based NMS (optional)			

Technical specification is subject to change without prior notice.

Single Band-adjustable Digital Repeater

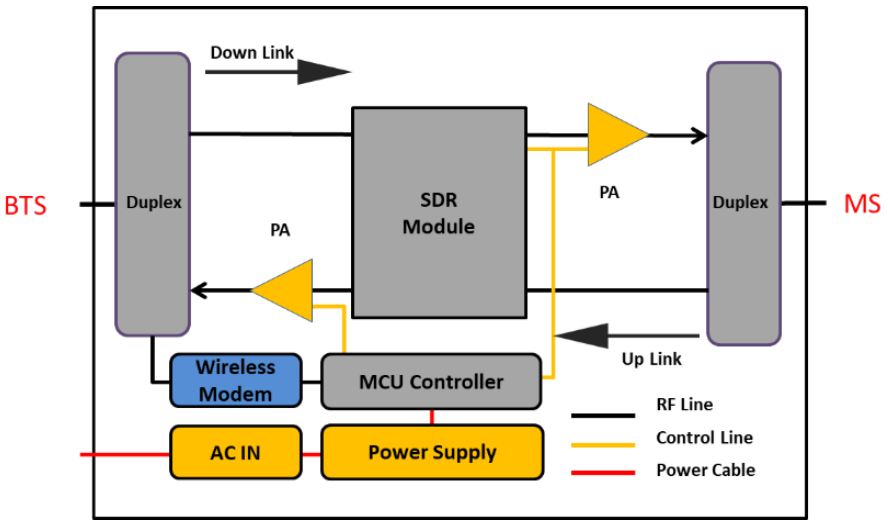
Model: 44311D (P/N: 44311D.7)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 44311D.7		B7 (2600)
Frequency Range	Uplink	2500-2570 MHz (adjustable)
	Downlink	2620-2690 MHz (adjustable)
Number of Sub-bands		1-3
Bandwidth per Sub-band		0.2-20 MHz (adjustable)
Max. Gain	Uplink	85±2 dB
	Downlink	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)
Max. Input Power Without Damage		0 dBm
Output Power	Uplink	27±2 dBm
	Downlink	43±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB
	5.0≤f_offset_CW<10.0 MHz	≤45 dB
	10.0 MHz≤f_offset_CW	≤35 dB
Spurious Emission	9kHz~1GHz	≦ -36dBm
	1GHz~12.75GHz	≦ -30dBm
ACRR	±10/20MHz	≦-36dBc/30KHz
	±20/40MHz	≦-40dBc/30KHz
EVM		≦ 6%
Frequency Stability		≦ ±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
NMS	Local	Via RJ45/Wi-Fi App
	Remote	Via Cloud-based NMS (optional)

Technical specification is subject to change without prior notice.

Triple Band-adjustable Digital Repeater

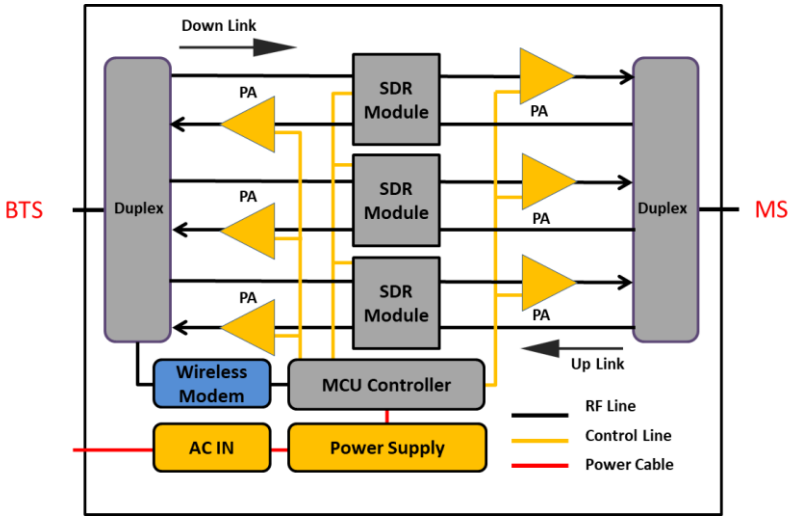
Model: 44313D (P/N: 44313D.1328)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.

Application Scenario:

Block Diagram:



Technical Specifications:

P/N: 44313D.1328		B28 (700)	B3 (1800)	B1 (2100)
Frequency Range	Uplink (adjustable)	703-748 MHz	1710-1785 MHz	1920-1980 MHz
	Downlink (adjustable)	758-803 MHz	1805-1880 MHz	2110-2170 MHz
Number of Sub-bands		1-3	1-3	1-3
Bandwidth per Sub-band		0.2- 20 MHz adjustable	0.2- 20 MHz adjustable	0.2- 20 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)		≦ ±3.5 dB (peak-to-peak)		
Max. Input Power Without Damage		0 dBm		
Output Power	Uplink	27±2 dBm	27±2 dBm	27±2 dBm
	Downlink	43±2 dBm	43±2 dBm	43±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB		
	5.0≤f_offset_CW<10.0 MHz	≤45 dB		
	10.0 MHz≤f_offset_CW	≤35 dB		
Spurious Emission	9KHz-1GHz	≦ -36dBm		
	1GHz-12.75GHz	≦ -30dBm		
ACRR	±10/20MHz	≦-36dBc/30KHz		
	±20/40MHz	≦-40dBc/30KHz		
EVM		≦ 6%	≦ 8%	≦ 6%
Frequency Stability		≦ ±0.01 ppm		
Noise Figure		≦ 6 dB		
VSWR		≦ 1.5		
System Delay		≦ 11 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		≦ 30 kg		
IP Rating		IP65		
Operating Temperature		-10 °C to 50 °C		
NMS	Local	Via Type-C/Wi-Fi App		
	Remote	Via Cloud-based NMS (optional)		

Technical specification is subject to change without prior notice.

Quad Band-adjustable Digital Repeater

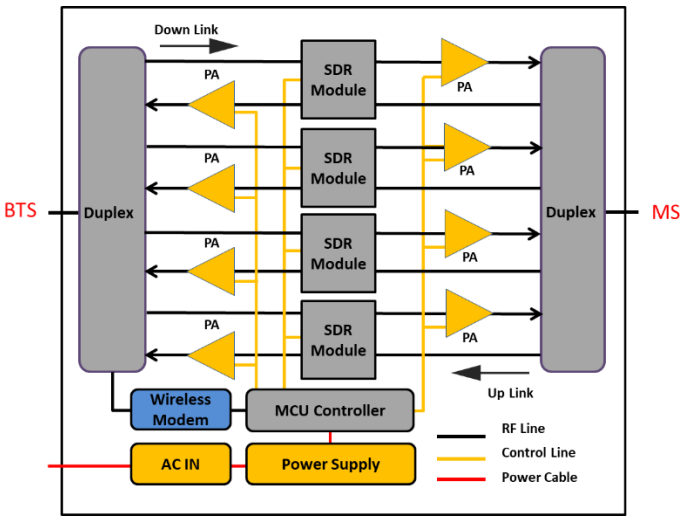
Model: 44314D (P/N: 44314D.13828)

Product Features:

- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates 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		1-3	1-3	1-3	1-3
Bandwidth per Sub-band (adjustable)		0.2- 20 MHz	0.2- 20 MHz	0.2- 20 MHz	0.2- 20 MHz
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)			
Max. Input Power Without Damage		0 dBm			
Output Power	Uplink	27±2 dBm	27±2 dBm	27±2 dBm	27±2 dBm
	Downlink	43±2 dBm	43±2 dBm	43±2 dBm	43±2 dBm
Out of Band Gain		2.5≤f_offset_CW< 5.0 MHz ≤60 dB			
		5.0≤f_offset_CW<10.0 MHz ≤45 dB			
		10.0 MHz≤f_offset_CW ≤35 dB			
Spurious Emission	9KHz-1GHz	≦ -36dBm			
	1GHz-12.75GHz	≦ -30dBm			
ACRR	±10/20MHz	≦-36dBc/30KHz			
	±20/40MHz	≦-40dBc/30KHz			
EVM		≦ 6%	≦ 6%	≦ 8%	≦ 6%
Frequency Stability		≦ ±0.01 ppm			
Noise Figure		≦ 6 dB			
VSWR		≦ 1.8			
System Delay		≦ 11 μs			
RF Connector		N-Female			
Impedance		50 Ω			
Power Supply		Input: AC 100~240 V, 50/ 60 Hz			
Power Consumption		≦ 500 W			
Dimensions		410*490*190 mm			
Weight		≦ 38 kg			
IP Rating		IP65			
Operating Temperature		-10 °C to 50 °C			
NMS	Local	Via Type-C/Wi-Fi App			
	Remote	Via Cloud-based NMS (optional)			

Technical specification is subject to change without prior notice.

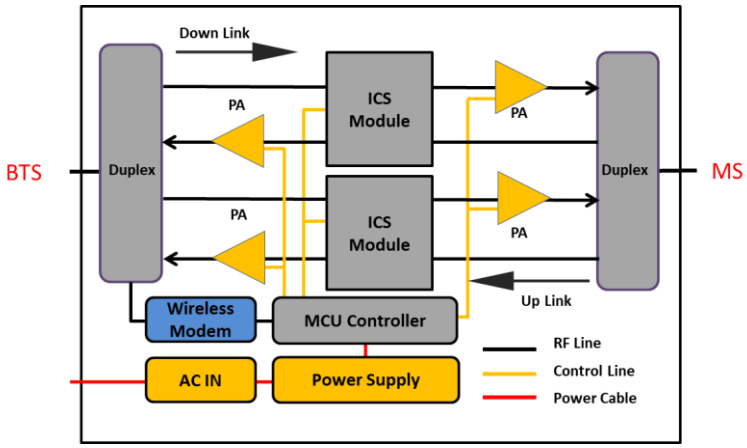
Dual Band-adjustable ICS Repeater

Model: 44312S (P/N: 44312S.828)

Product Features:

- 30dB of feedback interference cancellation for lower isolation requirement and less antenna installation space.
- Multi-band support offers flexibility to meet various network demands.
- Fine-grained control is achieved through individual sub-band activation/deactivation.
- Intelligent algorithms effectively mitigate uplink interference.
- Independent gain control further optimizes performance.
- Self-control mechanisms minimize interference during new base station deployments.
- NMS facilitates remote/local control and monitoring.

Block Diagram:

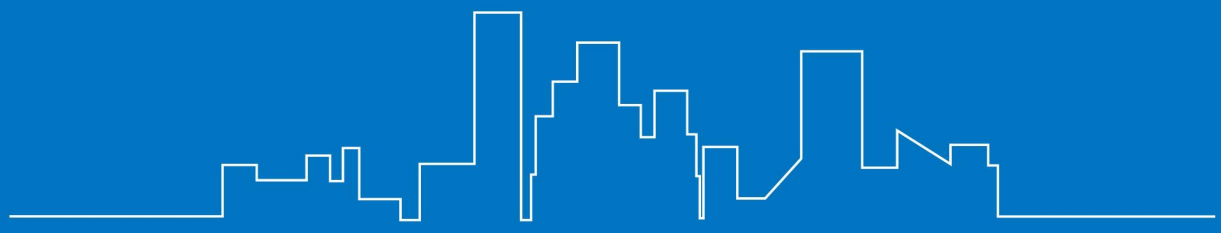


Application Scenario:

Technical Specifications:

P/N: 44312S.828		B28 (700)	B8 (900)
Frequency Range	Uplink (adjustable)	703 - 748 MHz (adjustable)	880 - 915 MHz (adjustable)
	Downlink (adjustable)	758 - 803 MHz (adjustable)	925 - 960 MHz (adjustable)
Number of Sub-bands		1	1
Bandwidth per Sub-band		0.2- 20 MHz adjustable	0.2- 20 MHz adjustable
Max. Gain	Uplink	≧ 90±2 dB	≧ 90±2 dB
	Downlink	≧ 95±2 dB	≧ 95±2 dB
Interference Cancellation		≧ 30 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)	
Max. Input Power Without Damage		0 dBm	
Output Power	Uplink	27±2 dBm	27±2 dBm
	Downlink	43±2 dBm	43±2 dBm
Out of Band Gain	2.5≤f_offset_CW< 5.0 MHz	≤60 dB	
	5.0≤f_offset_CW<10.0 MHz	≤45 dB	
	10.0 MHz≤f_offset_CW	≤35 dB	
Spurious Emission	9KHz-1GHz	≦ -36dBm	
	1GHz-12.75GHz	≦ -30dBm	
ACRR	±10/20MHz	≦-36dBc/30KHz	
	±20/40MHz	≦-40dBc/30KHz	
Frequency Stability		≦ ±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		300 W	
Dimensions		490*410*190 mm	
Weight		≦ 32 kg	
IP Rating		IP65	
Operating Temperature		-10 °C to 50 °C	
NMS	Local	Via Type-C/Wi-Fi App	
	Remote	Via Cloud-based NMS (optional)	

Technical specification is subject to change without prior notice.



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