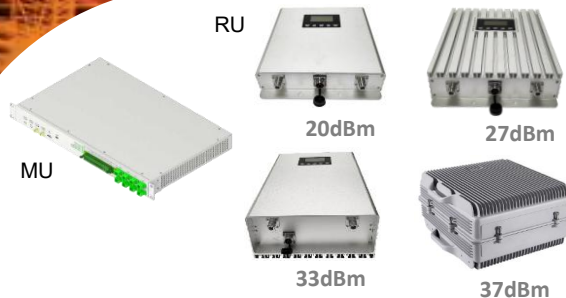


Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | Output Power: 20 /27 /33 /37dBm
 System Gain: 80 /85 /90 /95dB | Type: Wireless Coupling | Power Supply: AC100 /240V
 Usage: Indoor (20 /27 /33dBm), Outdoor (37dBm)



OVERVIEW

BRIDGE Repeater is the product to solve signal coverage problem of indoor and outdoor. Fiber Optical Repeater (FOR) includes master unit (MU) and remote unit (RU) as a system transmission products. The MU with optional direct or wireless coupling type to provide flexible applications on sites. The MU receives signal resources from Base station either directly or via air interface and forward the signal through fiber optical cable(s) to RU(s) located in another service areas. The RU boosts the signal to target areas, fast to provide strong signal in poor coverage areas. BRIDGE product portfolio includes a full series of flexible product family to support single band, dual band, triple band, and multiple band systems.

BRIDGE Repeater adopts multimode technologies, compatible with GSM /WCDMA /LTE /NR systems. Its noise and interference control technology reduces the noise floor and interference. BRIDGE product utilize High-quality linear power amplifier to always effectively maintain signal operation in a linear status. Various RF features are optional and customizable to fulfill different deployment scenarios on site.

In the section of material selection, BRIDGE products are all made of good and rugged stuffs, including brand new chipsets and electronic components, ensuring stable performance and long product life.

FEATURES

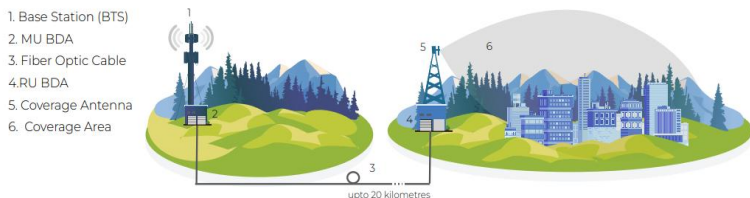
- Fully compatible with multi-mode systems.
- MU:RU = 1:4 /1:8 / 1:16 with star topology
- Customizable operation frequency band is much suitable for customer’s networks, rejecting the interference.
- Perfect calling and data transmission performance by high linear amplifier technology
- Remote control is an option, able to manage and check the product status in offices.
- Compact size and light weight
- Power supply complies with EN 60950.

PRODUCT LIST

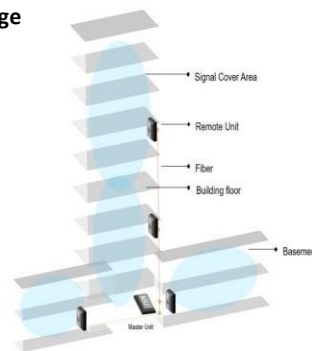
PRODUCT	PART NUMBER
MU 1:4 via Air	41-FMWM040304A-C1
MU 1:8 via Air	41-FMWM040308A-C1
MU 1:16 via Air	41-FMWM040316A-C1
RU 20dBm	41-FRWM040320-C1
RU 27dBm	41-FRWM040327-C1
RU 33dBm	41-FRWM040333-C1
RU 37dBm	41-FRWM040337-C1

SITE APPLICATION

Outdoor Coverage



Indoor Coverage



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DATA SHEET

41-FMWM040304A-C1

TRI-BAND FIBER OPTICAL REPEATER (MU)

Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | **Output Power:** 23dBm | **Gain:** 40dB

Type: Wireless Coupling (via Air) | **MU:RU:** 1:4 | **Power Supply:** AC100 /240V | **Usage:** Indoor

BRIDGE
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TECHNICAL DATA

Electrical & Optical Specifications						
Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1785MHz	1805-1880MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		75MHz		60MHz	
Max. RF Output Power	23 ±2dBm	/	23 ±2dBm	/	23 ±2dBm	/
Max. Gain	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB
Max. No Damage Input Power	/	-10dBm	/	-10dBm	/	-10dBm
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
VSWR	≤1.5					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	-3 ±3dBm Downlink @1550nm					
Optical Receiver Sensitivity	-15dBm Uplink @1310nm					
Mechanical, Environmental & Miscellaneous Specifications						
Dimension	440 x280 x43mm					
Weight	≤7kg					
Power Supply	AC100~240V, Comply with EN60950					
Power Consumption	≤45W					
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)					
FO Connector	4x LC /SC /FC - UPC /APC (customizable)					
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)					
OMC	Via Wi-Fi or LTE Wireless Modem (customizable)					
Temperature	-10 to +55°C					
Humidity	≤95%					
Ingress Protection	IP30, Indoor					
Installation	19" Rack or Wall Mount					
MTBF	≥50000h					

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UK | TAIWAN

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DATA SHEET

41-FMWM040308A-C1

TRI-BAND FIBER OPTICAL REPEATER (MU)

Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | **Output Power:** 23dBm | **Gain:** 40dB
Type: Wireless Coupling (via Air) | **MU:RU:** 1:8 | **Power Supply:** AC100 /240V | **Usage:** Indoor



TECHNICAL DATA

Electrical & Optical Specifications						
Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1785MHz	1805-1880MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		75MHz		60MHz	
Max. RF Output Power	23 ±2dBm	/	23 ±2dBm	/	23 ±2dBm	/
Max. Gain	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB
Max. No Damage Input Power	/	-10dBm	/	-10dBm	/	-10dBm
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
VSWR	≤1.5					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	-6 ±3dBm Downlink @1550nm					
Optical Receiver Sensitivity	-15dBm Uplink @1310nm					
Mechanical, Environmental & Miscellaneous Specifications						
Dimension	440 x280 x43mm					
Weight	≤7kg					
Power Supply	AC100~240V, Comply with EN60950					
Power Consumption	≤45W					
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)					
FO Connector	8x LC /SC /FC - UPC /APC (customizable)					
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)					
OMC	Via Wi-Fi or LTE Wireless Modem (customizable)					
Temperature	-10 to +55°C					
Humidity	≤95%					
Ingress Protection	IP30, Indoor					
Installation	19" Rack or Wall Mount					
MTBF	≥50000h					

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DATA SHEET

41-FMWM040316A-C1

TRI-BAND FIBER OPTICAL REPEATER (MU)

Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | Output Power: 23dBm | Gain: 40dB

Type: Wireless Coupling (via Air) | MU:RU: 1:16 | Power Supply: AC100 /240V | Usage: Indoor



TECHNICAL DATA

Electrical & Optical Specifications

Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1785MHz	1805-1880MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		75MHz		60MHz	
Max. RF Output Power	23 ±2dBm	/	23 ±2dBm	/	23 ±2dBm	/
Max. Gain	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB
Max. No Damage Input Power	/	-10dBm	/	-10dBm	/	-10dBm
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
VSWR	≤1.5					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	-6 ±3dBm Downlink @1550nm					
Optical Receiver Sensitivity	-15dBm Uplink @1310nm					

Mechanical, Environmental & Miscellaneous Specifications

Dimension	440 x280 x43mm
Weight	≤8kg
Power Supply	AC100~240V, Comply with EN60950
Power Consumption	≤45W
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)
FO Connector	16x LC /SC /FC - UPC /APC (customizable)
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)
OMC	Via Wi-Fi or LTE Wireless Modem (customizable)
Temperature	-10 to +55°C
Humidity	≤95%
Ingress Protection	IP30, Indoor
Installation	19" Rack or Wall Mount
MTBF	≥50000h

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DATA SHEET

41-FRWM040320-C1

TRI-BAND FIBER OPTICAL REPEATER (RU)

Frequency: 885-960 /1710-1870 /1920-2170MHz Wide Band | Output Power: 20dBm | Gain: 40dB

Power Supply: AC100 /240V | Usage: Indoor



20dBm

TECHNICAL DATA

Electrical & Optical Specifications

Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1775MHz	1805-1870MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		65MHz		60MHz	
Max. RF Output Power	/	20 ±2dBm	/	20 ±2dBm	/	20 ±2dBm
Max. Gain	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB	40 ±3dB
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
Auto Level Control (ALC)	Control range: ≥20dB		Control range: ≥20dB		Control range: ≥20dB	
VSWR	≤2.4					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	3 ±3dBm Uplink @1310nm					
Optical Receiver Sensitivity	-15dBm Downlink @1550nm					

Mechanical, Environmental & Miscellaneous Specifications

Dimension	250 x200 x50mm
Weight	3kg
Power Supply	AC100~240V, Comply with EN60950
Power Consumption	≤30W
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)
FO Connector	1x LC /SC /FC - UPC /APC (customizable)
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)
OMC	Through MU via Fiber Cable
Temperature	-10 to +55°C
Humidity	≤95%
Ingress Protection	IP40, Indoor
Installation	Wall or Pole Mount
MTBF	≥50000h

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DATA SHEET

41-FRWM040327-C1

TRI-BAND FIBER OPTICAL REPEATER (RU)

Frequency: 885-960 /1710-1870 /1920-2170MHz Wide Band | Output Power: 27dBm | Gain: 45dB

Power Supply: AC100 /240V | Usage: Indoor



27dBm

TECHNICAL DATA

Electrical & Optical Specifications						
Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1775MHz	1805-1870MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		65MHz		60MHz	
Max. RF Output Power	/	27 ±2dBm	/	27 ±2dBm	/	27 ±2dBm
Max. Gain	40 ±3dB	45 ±3dB	40 ±3dB	45 ±3dB	40 ±3dB	45 ±3dB
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
Auto Level Control (ALC)	Control range: ≥20dB		Control range: ≥20dB		Control range: ≥20dB	
VSWR	≤2.4					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	3 ±3dBm Uplink @1310nm					
Optical Receiver Sensitivity	-15dBm Downlink @1550nm					
Mechanical, Environmental & Miscellaneous Specifications						
Dimension	350 x250 x65mm					
Weight	7kg					
Power Supply	AC100~240V, Comply with EN60950					
Power Consumption	≤90W					
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)					
FO Connector	1x LC /SC /FC - UPC /APC (customizable)					
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)					
OMC	Through MU via Fiber Cable					
Temperature	-10 to +55°C					
Humidity	≤95%					
Ingress Protection	IP40, Indoor					
Installation	Wall or Pole Mount					
MTBF	≥50000h					

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DATA SHEET

41-FRWM040333-C1

TRI-BAND FIBER OPTICAL REPEATER (RU)

Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | **Output Power:** 33dBm | **Gain:** 50dB
Power Supply: AC100 /240V | **Usage:** Indoor



33dBm

TECHNICAL DATA

Electrical & Optical Specifications						
Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1785MHz	1805-1880MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		75MHz		60MHz	
Max. RF Output Power	/	33 ±2dBm	/	33 ±2dBm	/	33 ±2dBm
Max. Gain	45 ±3dB	50 ±3dB	45 ±3dB	50 ±3dB	45 ±3dB	50 ±3dB
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
Auto Level Control (ALC)	Control range: ≥20dB		Control range: ≥20dB		Control range: ≥20dB	
VSWR	≤1.5					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	3 ±3dBm Uplink @1310nm					
Optical Receiver Sensitivity	-15dBm Downlink @1550nm					
Mechanical, Environmental & Miscellaneous Specifications						
Dimension	350 x250 x110mm					
Weight	9kg					
Power Supply	AC100~240V, Comply with EN60950					
Power Consumption	≤90W					
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)					
FO Connector	1x LC /SC /FC - UPC /APC (customizable)					
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)					
OMC	Through MU via Fiber Cable					
Temperature	-10 to +55°C					
Humidity	≤95%					
Ingress Protection	IP40, Indoor					
Installation	Wall or Pole Mount					
MTBF	≥50000h					

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DATA SHEET

41-FRWM040337-C1

TRI-BAND FIBER OPTICAL REPEATER (RU)

Frequency: 885-960 /1710-1880 /1920-2170MHz Wide Band | **Output Power:** 37dBm | **Gain:** 55dB
Power Supply: AC100 /240V | **Usage:** Indoor & Outdoor



37dBm

TECHNICAL DATA

Electrical & Optical Specifications						
Item	FDD-LTE900 (B8)		FDD-LTE1800 (B3)		FDD-NR2100 (n1)	
	Uplink	Downlink	Uplink	Downlink	Uplink	Downlink
Frequency Range	885-915MHz	930-960MHz	1710-1785MHz	1805-1880MHz	1920-1980MHz	2110-2170MHz
Operation Bandwidth	30MHz		75MHz		60MHz	
Max. RF Output Power	/	37 ±2dBm	/	37 ±2dBm	/	37 ±2dBm
Max. Gain	50 ±3dB	55 ±3dB	50 ±3dB	55 ±3dB	50 ±3dB	55 ±3dB
Noise Figure (1x RU: MU)	≤5dB	/	≤5dB	/	≤5dB	/
Pass Band Ripple (p-p)	≤±4dB		≤±4dB		≤±4dB	
Manual Gain Control	0 - 31dB /1dB step		0 - 31dB /1dB step		0 - 31dB /1dB step	
Auto Level Control (ALC)	Control range: ≥20dB		Control range: ≥20dB		Control range: ≥20dB	
VSWR	≤1.5					
System Delay	≤3μs					
EVM (RMS)	≤8%		≤8%		≤3.5%	
Frequency Stability	≤0.01ppm					
Spurious Emissions	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Spectrum Emission Mask	3GPP TS 36.106		3GPP TS 36.106		3GPP TS 38.106	
Optical Output Power	3 ±3dBm Uplink @1310nm					
Optical Receiver Sensitivity	-15dBm Downlink @1550nm					
Mechanical, Environmental & Miscellaneous Specifications						
Dimension	500 x440 x187mm					
Weight	30kg					
Power Supply	AC100~240V, Comply with EN60950					
Power Consumption	≤300W					
RF Connector	1x N Female or 4.3-10 Female, 50Ω (customizable)					
FO Connector	1x LC /SC /FC - UPC /APC (customizable)					
Local Control	LCD + Keypad & Wi-Fi via Web Browser, USB-C /RJ45 (customizable)					
OMC	Through MU via Fiber Cable					
Temperature	-10 to +55°C					
Humidity	≤95%					
Ingress Protection	IP65, Indoor & Outdoor					
Installation	Wall or Pole Mount					
MTBF	≥50000h					

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