



CROSSFIRE

M2RU

MID POWER

4T4R Digital Radios
37dBm Output Power
Supports 5GNR
Outdoor Rated

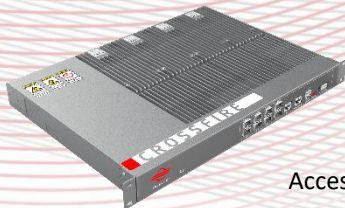
OVERVIEW

CrossFire M2RU is a digital transmission platform supporting CPRI protocol over fiber optic cable for cellular and wideband public safety technologies. The power amplifier leverages Digital Pre-Distortion technology, allowing for a significant reduction in power consumption, compared to analog technology. This platform is ideal for multi-operator and multi-band deployments of cellular services for outdoor and underground applications such as parking lots & garages, remote entertainment venues, mass transit, tunnels & mines.

KEY FEATURES

- Single Band 4T4R
- Up to 37dBm Output Power
- Dual Band 2T2R
- Supports External Alarm
- Supports TDD & FDD
- Up to 100 MHz IBW
- Supports Sub-6GHz
- 5GNR Compliant

SYSTEM ELEMENTS



A2
Access Unit

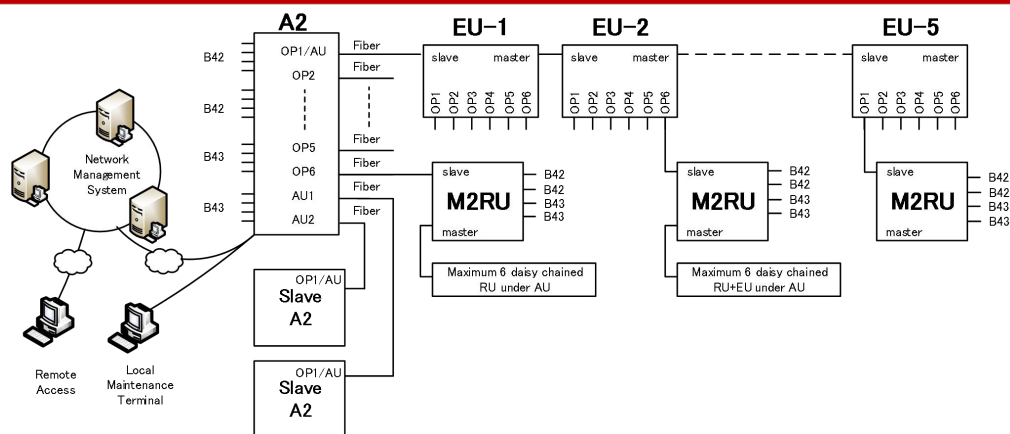


EU-O
Optical
Expansion Unit



M2RU
Mid Power
Remote Unit

BLOCK DIAGRAM



TECHNICAL SPECIFICATIONS

SYSTEM

Maximum RF Bands per Access Unit	4
Maximum RF Channels per Remote Unit	4
Maximum Access Units per System	3 (1 x Master AU/ 2 x Slaves AU)
Maximum EUs per Master AU	8
Maximum EUs cascaded	5
Maximum RUs cascaded	6
Frequency Range (Non-Contiguous)	600 MHz – 4200 MHz
Bandwidth per Channel (Downlink & Uplink)	≤100 MHz (Contiguous)
Digital Bandwidth per Channel (Downlink & Uplink)	20/ 30/ 40/ 50/ 60/ 80/ 100MHz
Bandwidth per System (Downlink & Uplink)	≤400MHz (in each direction)
System Delay Adjustment	Up to 80.00μs @ 1us step, manual& auto, Band based.
Redundancy	Fiber Loopback
VSWR	1.5

FORWARD PATH (DOWNLINK)

Number of Carriers	1	2	4	8	16
Output Power per Carrier(dBm)	37	34	31	28	25
Maximum Gain	37 ± 2dB				
Maximum Input Power	+15dBm (with AGC operating) / 0dBm (without AGC operating)				
EVM	<3.5% @ 256 QAM				
Ripple	4dB Typical				
Manual Attenuation Control	45dB @ 1dB/step (AU: 30dB, RU: 15dB)				
System Delay (AU+EU+RU)	12μS				

REVERSE PATH (UPLINK)

Maximum Output Power per Band	- 13dBm
Maximum Gain	37 ± 2dB
Maximum Input Power	- 35dBm
Ripple	4dB Typical
Manual Gain Control	45dB @ 1dB/step (AU: 30dB, RU: 15dB)
System Delay (AU+EU+RU)	8μS
Noise Figure	4dB Typical @ Maximum Gain

SUPPORTED BANDS

Band	3GPP Band	Downlink	Uplink	Max Bandwidth
3500MHz	42	3400-3600	3400-3600	100
3500MHz	n78	3450-3650	3450-3650	100
3600MHz	48	3550-3700	3550-3700	100
3700MHz	43	3600-3800	3600-3800	100
2600MHz TDD	41	2496-2690	2496-2690	100
1800MHz	3	1805-1880	1710-1785	75

INTERFACES	
Antenna Interface (All bands)	4.3-10 Female
Access Unit RF Interface	QMA Female
Optical Connector Type	SFP+, Standard LC
Optical Transmission Rate	9.8304GB/s
Optical Fibre Length	1.4km/ 10km/ 30km 0.87mi/ 6.21mi/ 18.64mi
Dry Contact	AU: 4 Inputs & 4 Outputs, NO and NC Mode RU: 2 Inputs & 2 Outputs, NO and NC Mode
Maintenance Interface	Ethernet RJ45

ELECTRICAL	
Complies with	3GPP TS36.106/ 3GPP TS25.106
EMC	EN 301489-1/ -50, EN 50121-4, EN 55032, EN 61000-4 series
Safety	EN 60950-1, EN 60950-22, EN 62368-1, EN 50385
Maximum Power Consumption (AU/EU/RU)	80W/ 50W/ 150W
Power Supply	100-240V AC, 50/60Hz 48VDC ± 20%

ENVIRONMENTAL	
Mean Time Between Failure (MTBF)	>100,000 hours
Operating Temperature (AU/EU)	-10°C ~ 50°C/ 14°F ~ 122°F
Operating Temperature (RU)	-40°C ~ 55°C/ -40°F ~ 131°F
Humidity	5% ~ 100% (Non-Condensing)
Cooling	Passive
Installation	AU/EU: Wall or 19" Rack RU: Wall or Pole
Ingress Protection Rating	AU/EU: IP30 (Indoor) RU: IP67 (Outdoor)
Complies with	EN 300019-1-1, EN 300019-1-2, EN 300019-1-4

MECHANICAL	
AU: Width x Height x Depth (Weight)	440mm x 44mm x 370mm (9.0kg)/ 17.32in x 1.73in x 14.57in (19.84lbs)
EU-O: Width x Height x Depth (Weight)	440mm x 44mm x 220mm (5.0kg)/ 17.32in x 1.73in x 8.66in (11.02lbs)
RU: : Width x Height x Depth (Weight)	360mm x 115mm x 260mm (12.0kg)/ 14.17in x 4.53in x 10.24in (26.46lbs)

ELEMENT MANAGEMENT	
OMT (Operations and Maintenance Terminal)	RJ45. Access via AU, EU or RU (Web Based)
LMS (Local Management System)	Yes (Ordered separately)
Remote Alarming	SNMP V2C & V3, Dry Contact (NO or NC mode)

Contact Us

www.btiwireless.com

sales@btiwireless.com