



CROSSFIRE

XP

## EXTRA POWER

Dual Band Digital Radios  
46dBm per Band  
Outdoor Rated  
Integration with CrossFire

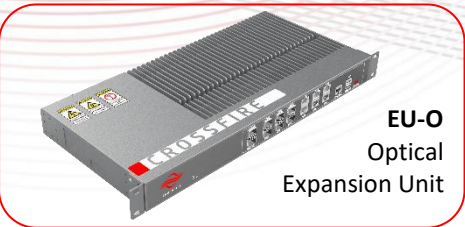
## OVERVIEW

CrossFire XP 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, comparable to analog technology. This platform is ideal for multi-operator and multi-band deployments of cellular services for underground tunnels, outdoor coverage areas & high bandwidth 3GPP bands.

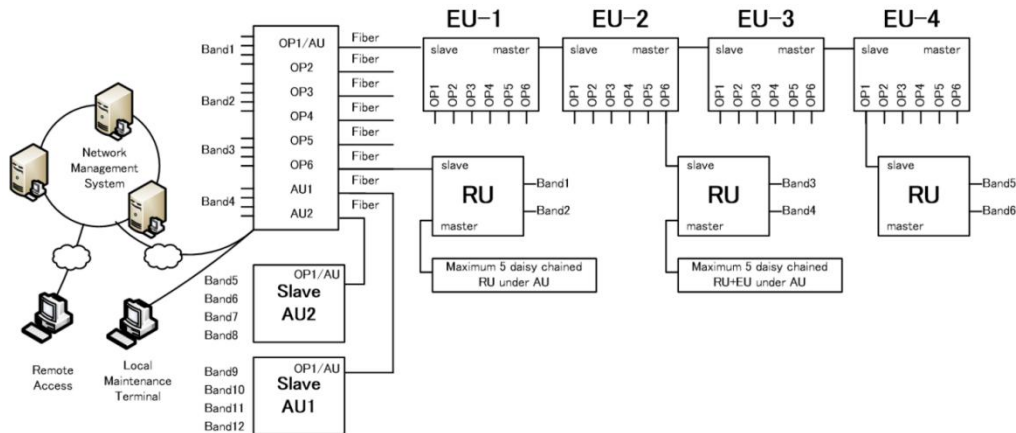
## KEY FEATURES

- 46dBm output power per band
- External alarm interface
- Optical cascading of EU-O's & RU's
- Optical connectivity
- 2 3GPP Bands per Remote
- 700 to 2700MHz Range
- Up to 80MHz per Band

## SYSTEM ELEMENTS



## BLOCK DIAGRAM



TECHNICAL SPECIFICATIONS	
System	
Maximum RF Bands per Access Unit	4
Maximum RF Bands per Remote Unit	2
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	6
Frequency Range (Non-Contiguous)	700MHz – 2700MHz
Bandwidth per Channel (Downlink & Uplink)	≤80MHz (Contiguous)
Digital Bandwidth per Channel (Downlink & Uplink)	20/ 30/ 40/ 60/ 80 MHz
Bandwidth per System (Downlink & Uplink)	≤280MHz (in each direction)
MIMO	2 x 2: 1 x RU 4 x 4: 2 x RU 8 x 8: 4 x RU
IP Transmission Rate per RU	0
Maximum IP Connections per EU	0
Maximum IP Connections per RU	0 (Used to XPRU Fan Control functionality)
System Delay Adjustment	Up to 80.00μs

FORWARD PATH (DOWNLINK)					
	Number of Carriers	1	2	4	8
Output Power per Carrier	UMTS (dBm)	46	43	40	37
	LTE (dBm)	46	43	40	37
Output Power Accuracy	±2dB				
Maximum Gain	46 ± 3dB				
Maximum Input Power	+15dBm				
Error Vector Magnitude	<8.0% @ 64 QAM				
Ripple	3dB Typical				
Manual Gain Control	45dB @ 1dB/step (AU:30dB, RU:15dB)				
System Delay (AU+EU+RU)	12μS				
VSWR (AU/RU)	1.5:1				

REVERSE PATH (UPLINK)	
Maximum Output Power per Band	- 7dBm
Output Power Accuracy	± 2dB
Maximum Gain	46 ± 3dB
Maximum Input Power	- 35dBm
Ripple	3dB Typical
Manual Gain Control	45dB @ 1dB/step (AU:30dB, RU:15dB)
System Delay (1AU + 1EU + 1RU)	8μS
Noise Figure	4dB Typical @ Maximum Gain

SUPPORTED BANDS				
Band	3GPP Band	Downlink	Uplink	Max Bandwidth
1800MHz	3	1805-1880	1710-1785	75
2100MHz	1	2110-2170	1920-1980	60
2600MHz	7	2620-2690	2500-2570	70

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
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/ 450W
AC Power	100-240V AC, 50/60Hz
DC Power	48VDC ± 20% (AU/EU-O)

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 ~ 50°C/ -40°F ~ 122°F
Storage Temperature	-40°C ~ 70°C/ -40°F ~ 158°F
Humidity	5% ~ 85% (Non-Condensing)
Cooling	AU/ EU: Passive   RU: Active
Installation	AU/ EU: Wall or 19" Rack RU: Wall or Pole
Ingress Protection Rating	AU/ EU: IP30 (Indoor) RU: IP65 (Outdoor)

MECHANICAL	
AU: Width x Height x Depth (Weight)	440mm x 44mm x 329mm (8.0kg)/ 17.32in x 1.73in x 12.95in (17.64lbs)
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)	528mm x 148mm x 350mm (18.0kg)/ 20.78in x 5.82in x 13.78in (39.68lbs)

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)

ORDERING INFORMATION	
Part Code	Part Description
<b>Access Unit Chassis</b>	
AU-4-AC	Access Unit Chassis, 4 Bands, 700 - 2700MHz supported, 100-240v AC Powered
AU-4-DC	Access Unit Chassis, 4 Bands, 700 - 2700MHz supported, ±48v DC Powered
<b>Access Unit Modules</b>	
AU-AC-M1800	Access Unit Module, 4 Way Active Combiner 1800MHz (UL 1710-1785/ DL 1805-1880)
AU-AC-M2100	Access Unit Module, 4 Way Active Combiner 2100MHz (UL 1920-1980/ DL 2110-2170)
AU-AC-M2600	Access Unit Module, 4 Way Active Combiner 2600MHz (2500-2570/ 2620-2690)
AU/RU-NC	Blanking Card to suit AU or Indoor Low Power RU
<b>Expansion Units</b>	
EU-O-6-AC	Expansion Unit Supports up to 6 x Optical Outputs. 100-240v AC Powered
EU-O-6-DC	Expansion Unit Supports up to 6 x Optical Outputs. ±48v DC Powered
<b>Remote Unit Chassis</b>	
XPRU-OD-2-AC	Outdoor Extra Power Remote Unit Supports up to 2 Discrete Bands. 100-240v AC Powered
<b>Remote Unit Modules</b>	
XPRU-OD-M1800	Outdoor Extra Power Remote Unit Module, 1800MHz (UL 1710-1785/ DL 1805-1880)
XPRU-OD-M2100	Outdoor Extra Power Remote Unit Module, 2100MHz (UL 1920-1980/ DL 2110-2170)
XPRU-OD-M2600	Outdoor Extra Power Remote Unit Module, 2600MHz (UL 2500-2570/ DL 2620-2690)
<b>Other Items</b>	
FAN-1U-AC	AC Fan Unit to support AU & LPRU Chassis, 1U Rack Unit Height, 100-240v AC Powered
FAN-1U-DC	DC Fan Unit to support AU & LPRU Chassis, 1U Rack Unit Height, ± 48v DC Powered
SFP+1.4-SS	1.4km Optical SFP+ Module, Simplex, Single-Mode (Sold as a pair)
SFP+10-DS	10.0km Optical SFP+ Module, Duplex, Single-Mode (Sold as a pair)

Contact Us

[www.btiwireless.com](http://www.btiwireless.com)

[sales@btiwireless.com](mailto:sales@btiwireless.com)