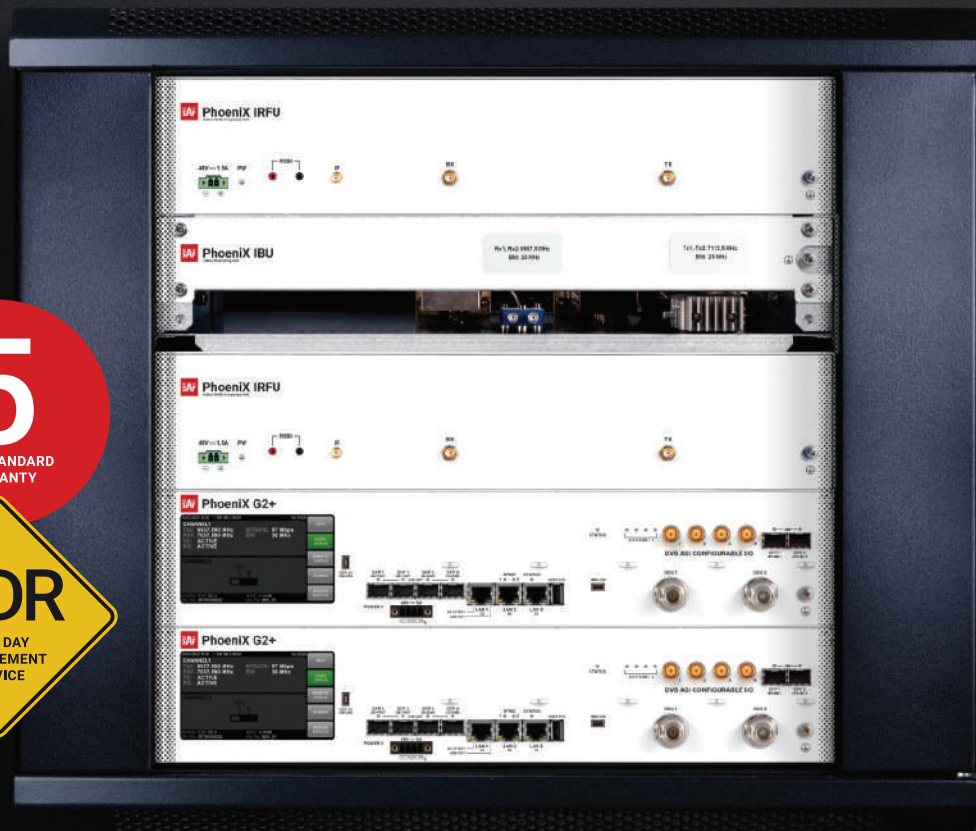


Phoenix G2 Series



ASI + IP microwave for ATSC 1.0 and ATSC 3.0



- ✓ Ideal for STL/TSL, Intercity Relay and ENG backhaul for simultaneous ASI and IP connectivity with future migration to all IP
- ✓ Flexible configurations with available hitless Adaptive Code Modulation (ACM): Full duplex, Simplex, Hot-Standby fully protected, and Space Diversity
- ✓ Comprehensive web browser control and monitoring with error logging and alarm notifications
- ✓ Single frequency dual polarity support with XPIC capability to double data rates in a 2+0 or 2+2 configuration
- ✓ New Phoenix G2+ have a touch-sensitive LCD control panel for quick and easy critical parameter monitoring and single chassis design with ultra-reliable fanless cooling

Supporting channel bandwidths of up to 80 MHz, the Phoenix G2 Series enables a transition from TDM only or ASI only networks to hybrid native ASI/T1/E1/ IP networks, providing up to 16 ASI ports for video or up to 64E1/T1 lines for telephony, and Gigabit Ethernet ports for IP connectivity with a total throughput of up to 1 Gbps in 2+0 configuration.

G2



G2+



Capacity		up to 1 Gbps in 2+0 configuration	
Frequency bands		2 GHz, 2.3 GHz FCC, L4 GHz, U4 GHz, L6 GHz, U6 GHz, 7 GHz, 8 GHz, 11 GHz, 13 GHz, 15 GHz, 18 GHz, 23 GHz, 38 GHz	
Max modulation		1024QAM	
Configurations		1+0, 1+1 HSB/SD/FD, 1+0 Dual, 1+0 Star (Repeater), 2+0 (Layer 1 aggregation), 2+0 XPIC, 2+2 aggregation/protection (with two IDUs)	
Channel bandwidth	ETSI	from 3.5 MHz, up to 56 MHz	
	FCC	from 5 MHz, up to 80 MHz*	
Maximum Tx power		+37 dBm	
Modifications		IDU with external extension modules (ASI and E1/T1)	IDU w/o extensions; IDU with embedded 4x ASI; IDU w 8x ASI; IDU with 16E1/T1; IDU with 4x ASI and 16E1/T1. More extension modules can be added externally
Ethernet switch		Managed Gigabit Ethernet Layer 2	
Management		In-band (via port grouping), Out-of-band; Web based, HTTP/HTTPS; via WEB GUI (HTTP*/HTTPS), CLI (Telnet/SSH), NMS (SNMP v1/v2c/v3), Serial interface (USB IP port); SNMP traps, MIB, SNMP v1/v2c/3; Perf. monitoring	
Synchronization		PTP 1588v2	
Encryption		AES256	
QoS		IPv4 64 level DiffServ (DSCP) or 8 level 802.1p mapped in 4 prioritization queues with VLAN support, IPv6 Traffic Class	
Type		Split Mount (IDU + ODU) or Full indoor (IDU + IRFU)	
Cooling		3-mode Fans built-in: On, Off, Auto (controlled by internal temperature)	Fanless
Form factor		½ width 1U (44 x 220 x 240 mm) / (1.73 x 8.66 x 9.45 in); 2.2 kg / 4.9 lb	19" 2U (90 x 430 x 265 mm) / (3.54 x 16.93 x 10.43 in); <3.5 kg / <6.61 lbs
Max. power consumption		IDU only: <30W, IDU + 2xODUL:<120W	IDU only w/o ASI or E1/T1: <30W, 4xASI: <9W, 16xE1/T1: <9W. IDU + 2xODU: < IDU + 120W
Temperature range		-5 °C to +45 °C / 23 °F to 113 °F / 0 % to 95 %	
Display		—	LCD touchscreen
Ports			
Ethernet traffic	RJ-45	3x 10/1000 Base-T for traffic and/or management access	
	SFP	4x 1000BaseSX/LX for traffic, 2x also work as Extension/Protection ports	
ASI (optional)	BNC	Available on external extension module	up to 8x unbalanced, 75 ohm native ASI channels for ASI input
E1/T1 (optional)	RJ-45	Available on external extension module	up to 16x G.703-E1 balanced 120ohm for E1 mode; G.703-E1 unbalanced 75 ohm for E1 mode; T1.102-T1/100 ohm for T1 mode
IDU <-> ASI/E1/T1	SFP	Available on external extension module	1x 1000Base-SX (proprietary GigE protocol) for embedded ASI and/or E1/T1 module connection
Additional module connection	SFP	Available on external extension module	1x 1000Base-SX (proprietary GigE protocol) for additional ASI and/or E1/T1 module connection
Outband management access	RJ-45	1x 10/100/1000 Base-T for management traffic	
Serial	USB Mini-B	1x – for configuration (alternative IP)	
Flash memory	USB A	1x for log files export	
Display service	USB Mini-B	—	1x for display maintenance
ODU	N-Type Female	2x for connection to radio units	
DC power	Single block 4 pole	1x for input power source connection	

* 2 GHz, 4 GHz and 38 GHz band radios work up to 60 MHz BW. Please contact SAF.

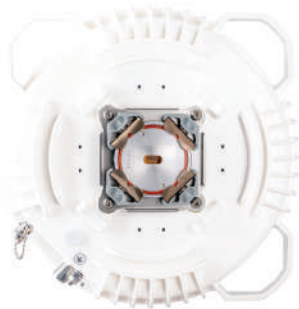
Tx power for IRFU w/o filters

Modulation	2 GHz (VHP)	L4, U4 GHz (HP)	L6, U6 GHz (HP/VHP)	7 GHz (HP/VHP)	8 GHz (HP/VHP)	11 GHz (HP/VHP)	13 GHz (HP/VHP)	*15 GHz (HP)
Min Tx power	+17	+14	+9/+14	+9/+13	+9/+12	+7/+10	+7/+9	+7
4 QAM	+37	+33	+28/+34	+28/+33	+28/+32	+26/+30	+26/+29	+26
16 QAM	+36	+32	+27/+33	+27/+32	+27/+31	+25/+29	+25/+28	+25
32 QAM	+35	+31	+26/+32	+26/+31	+26/+30	+24/+28	+24/+27	+24
64 QAM	+34	+30	+25/+31	+25/+30	+25/+29	+23/+27	+23/+26	+23
128 QAM	+34	+30	+25/+31	+25/+30	+25/+29	+23/+27	+23/+26	+23
256 QAM	+33	+29	+24/+30	+24/+29	+24/+28	+22/+26	+22/+25	+22
512 QAM	+32	+28	+23/+29	+23/+28	+23/+27	+21/+25	+21/+24	+21
1024 QAM	+29	+25	+20/+26	+20/+25	+20/+24	+18/+22	+18/+21	+18

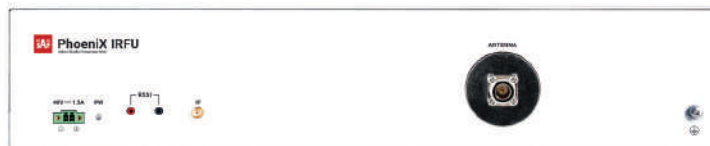
For IRFU with diplexer the Tx power is 1dBm lower.

*Preliminary data

RF Module Options



ODU (outdoor unit)



IRFU (indoor unit with built-in duplexer)



IRFU (indoor unit for external filters)

Optional modules



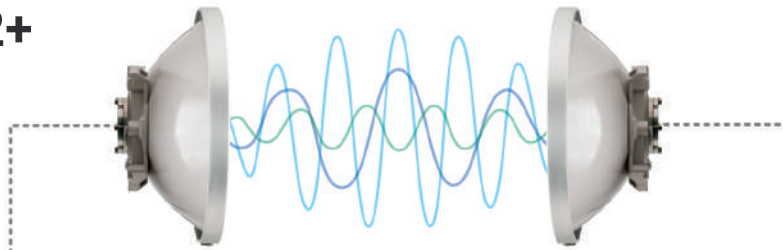
External ASI module, 4x BNC, 2x SFP ports



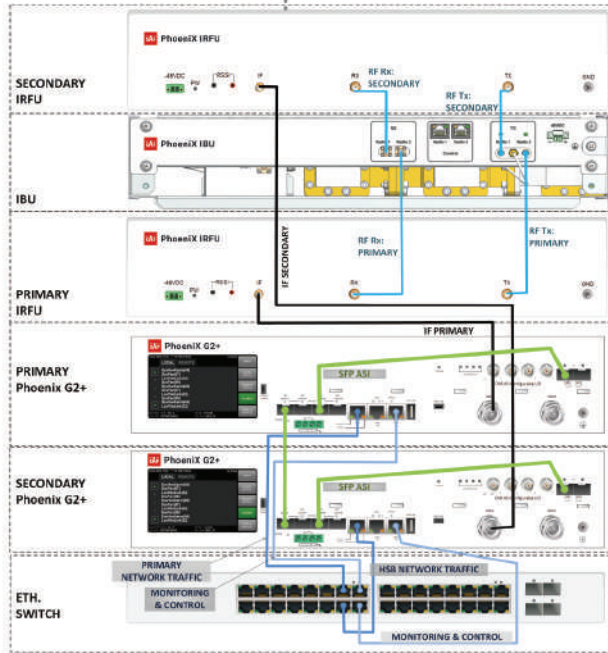
16E1/T1 external module, 16x RJ-45, 2x SFP ports

PhoeniX G2+

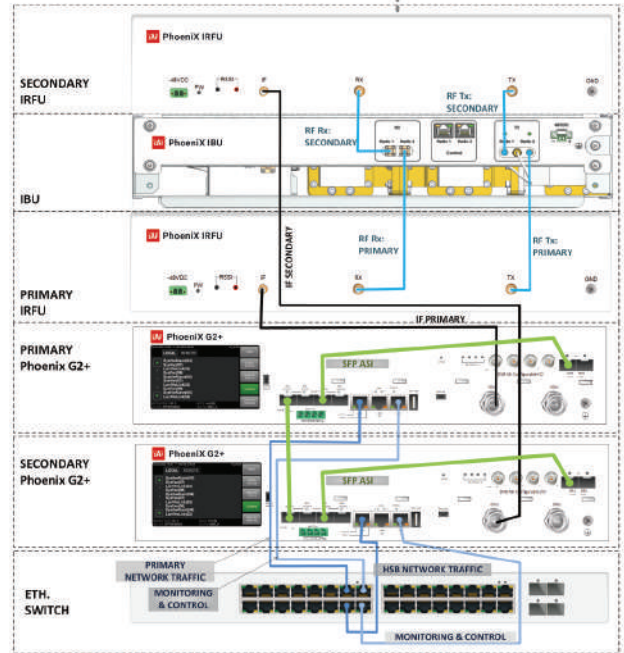
1+1 HSB
Full Redundancy



RF HIGH



RF LOW



Max Tx Power, RSL and Capacity of PhoeniX G2 IRFU w. ext filters at 25 MHz

Modulation		6 GHz		13 GHz		Capacity (Mbps)	2+0 XPIC Capacity (Mbps)
		VHP Tx (dBm)	RSL (dBm)	VHP Tx (dBm)	RSL (dBm)		
25 MHz	4QAM	+34	-85	+29	-84.5	37	74
	16QAM	+33	-79	+28	-78	74	148
	32QAM	+32	-75.5	+27	-75	93	186
	64QAM	+31	-73	+26	-72	111	222
	128QAM	+31	-70	+26	-69	130	260
	256QAM	+30	-67	+25	-66	148	296
	512QAM	+29	-64	+24	-62.5	167	334
	1024QAM	+26	-61	+21	-59.5	186	372



saftehnika.com

For more information about SAF Tehnika's products visit saftehnika.com
Product features may vary between different models and configurations and are subject to change without prior notice.
All product pictures are for illustration purposes only. © SAF Tehnika 2023