

#### Model SRDR-33-7080-A-FN

- NFPA/IFC Compliant
- Dual-Band 700/800 MHz
- Channel & Band Selective
- FirstNet Supported
- 2 Watts per Band
- Active DAS mode
- Near-Far Mitigation
- Noise Muting
- Integrated Battery Charging and Alarming
- 60°C + Extended Life Feature
- Enhanced Filtering for Colocation with Commercial DAS



**The SOLiD RESPONDER™ goes well beyond today's fire codes and is a first in the industry to include patented technology for enhanced oscillation protection.**

**Combine this with advanced temperature-sensitive, power-saving mode and the RESPONDER will deliver performance and reliability when needed most. The SOLiD RESPONDER™ is built to survive!**

This dual-band, dual-mode repeater has a robust flexible design that simplifies traditional configuration issues and addresses today's interference and performance challenges.

Integrated battery backup control circuitry simplifies planning and affords system designers more battery choices, better performance, and considerable cost savings.

Active DAS Mode provides low-power separated UL and DL feeds for direct connectivity to fiber DAS head ends. No external RF filtering, attenuation, or expensive NEMA4 enclosures required.

Interference between co-located commercial and Public Safety DAS can be a challenge. The SOLiD RESPONDER uses high-Q passive reject filtering to virtually eliminate colocation interference.

## RF Specifications

SRDR-33-7080-A-FN		
Frequency Range		DL: 758 to 775 MHz, UL: 788 to 805 MHz DL: 851 to 861 MHz, UL: 806 to 816 MHz
Composite Output Power at Antenna Ports (N-Female)	700 DL	+3 to +33 dBm (2W) in 1 dB steps
	800 DL	+3 to +33 dBm (2W) in 1 dB steps
	700/800 UL	0 to +27 dBm (0.5W) in 1 dB steps
Gain Range at Antenna Ports	700 DL	65 to 95 dB in 1 dB steps
	800 DL	65 to 95 dB in 1 dB steps
	700/800 UL	65 to 95 dB in 1 dB steps
Output Channel Power at Antenna Ports	700 DL	-30 to +33 dBm in 1 dB steps within 33 dB of Maximum Composite Output Power
	800 DL	
	700/800 UL	-33 to +27 dBm in 1 dB steps within 33 dB of Maximum Composite Output Power
Output Power at Active DAS Ports	700 DL	-5 dBm maximum
	800 DL	-5 dBm maximum
Input ALC		75 dB
Maximum RF Input Power		+10 dBm
Smart AGC - UL & DL		0 to 30 dB
Channel Power Equalization - UL & DL	Smart AGC on	up to 60 dB
	Smart AGC off	up to 37 dB
Squelch - UL & DL		-110 dBm to -60 dBm in 1 dB steps per sub-band/channel
Noise Figure - UL & DL		6 dB
VSWR		1.5:1 max. (donor & service antenna ports)
Service Port Filter Rejection at 777 MHz		Minimum 38 dB; Typical 43 dB
Service Port Filter Rejection at 849 MHz		Minimum 43 dB; Typical 48 dB
Band Selective Modes		
Pre-Configured Filter Modes	700MHz Band Selections (DL, UL)	① 769 to 775, 799 to 805 MHz (PS NB Only)
		② 758 to 768, 788 to 798 MHz (FN Only)
		③ 758 to 775, 788 to 805 MHz (FN + PSNB)
	800MHz Band Selections (DL, UL)	① 851 to 854, 806 to 809 MHz (NPSPAC Only)
		② 851 to 860, 806 to 815 MHz (NPSPAC + SMR)
③ 851 to 861, 806 to 816 MHz (NPSPAC + SMR +EB)		
Delay	5.5 µsec for radio narrowband, 4.5 µsec for FirstNet	
Semi-Auto & Manual Filter Modes	Number of Sub-Bands	Up to 4 filter sub-bands for 700 band; Up to 4 filter sub-bands for 800 band
	Sub-Band Bandwidth	300 KHz to 1 MHz with 100 KHz step, 1 MHz to 9 MHz with 1 MHz step
	Delay Options	5.5 µsec for radio narrowband, 4.5 µsec for FirstNet
Channel Selective Mode		
Number of Channels		36 (any increment can be assigned between 700 & 800 bands)
Channel Bandwidths		12.5, 25, 50, 75, 100, 150, 200 KHz
Delay Options		16 µsec, 33 µsec, 49 µsec, 95 µsec

Supervisory			
Antenna Port - WiFi	SMA, Female	Local management terminal	
Ethernet Port	RJ45 Port with IP66	SNMP traps	
Alarms Out	MS3102 20-29S (17 PIN)	5 dry contacts (Normally Open & Normally Closed)	
		① System component malfunction	
		② VSWR-antenna malfunction, donor & service antenna	
		③ Normal AC power, loss of normal AC power	
		④ Battery charger failure	
		⑤ Low battery capacity (to 70 percent depletion)	
Environmental			
Operating Temperature		-30 to +60°C	
Cooling		Convection (no fan)	
Humidity		10% to 90% condensed	
Enclosure		IP66 / NEMA4	
Installation Site		Indoor & Outdoor	
Electrical			
Power Supply	AC	100 to 120 (90 to 130) VAC	
	DC	43 to 57 VDC	
	Charger	48V charger for lead-acid batteries with State of Charge detection	
Compliance			
Standards		UL, FCC, IC, NFPA, IFC	
Power Consumption (60°C, Non-charge state)			
Operation Mode	120 VAC	48 VDC	Power-Saving Mode
Passive DAS (PS 700 and PS 800)	< 165W	< 150W	< 130W
Passive DAS (PS 700 or PS 800)	< 140W	< 125W	< 110W
Active DAS Mode (PS 700 and PS 800)	< 110W	< 95W	< 88W
Mechanical			
Dimensions (HxWxD)	630 x 460 x 218 (mm) 24.8 x 18.1 x 8.6 (inches)		Dimensions include handles and hinges
Weight	76 lbs. / 34.5 kg		
Mounting	Wall mount or Rack mount (19" rack)		
RF Ports	Antenna, 2 Ports: Donor & Service		N Female
	30 dB Coupler, 2 Ports: Donor & Service Antenna		SMA Female
	Active DAS, 4 Ports: 700 UL & DL, 800 UL & DL		QMA Female

## Ordering Information

The SOLiD RESPONDER is available from the factory in the configurations described below. The base configuration can be factory or field upgraded by purchasing the Channel Selective license.

Refer to the following descriptions or consult your local SOLiD Sales Engineer for guidance in selecting the best product configuration for your application.

### SRDR-33-7080-A-FN (Base Configuration)

This Part Number represents the base configuration, which includes the Band Selective mode only (FCC Class B Wideband Signal Booster Device). All Class B Signal Booster devices must be registered with the FCC prior to operation. Band selective mode provides four non-contiguous window filters in each band that can be user defined. The minimum bandwidth for each window filter is 300KHz and the maximum bandwidth is 10MHz. This mode is good for RF environments where interference is minimal and window filters can be arranged to sufficiently reject interference while maintaining acceptable system performance.

### SRDR-33-L1 (Channel Selective Software Upgrade)

This license upgrade adds a Channel Selective mode allowing the user to switch between Band Selective and Channel Selective operation. When operating at channel bandwidths of 75KHz or less, this device is classified by FCC as a Class A Narrowband Signal Booster Device, and as such, does not require registration with the FCC. Channel Selective mode is typically used in RF congested areas where narrow pass windows are needed to minimize interference from undesired frequencies. In Channel Selective mode, also known as "Channelized" mode, the user can assign up to 36 window filters, in any increment, between the 700 and 800 MHz bands. Filter bandwidths range from 12.5KHz to 200KHz in this mode.

License Descriptions	Part Number
Digital Repeater, 2 Watt, 700/800 MHz Public Safety + FirstNet, Band selective, NEMA4, NFPA/IFC Compliant.	SRDR-33-7080-A-FN
Digital Repeater Channel Selective License Upgrade	SRDR-33-L1



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