

# Synthesized Vehicular Repeaters















### **Communicate with Confidence**



# PYRAMID COMMUNICATIONS

Since 1990











### **SVR-250** Proven Strong Analog Performance

**MULTI-CHANNEL** 

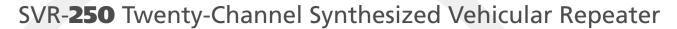
2-WATT COVERAGE

**NEW ESP™ PRIORITY STRUCTURE** 

WIDE OR NARROW-BAND

**EMERGENCY SIGNALING** 

- ▲ SVR-200 Compatible
- **▲** 20 Channels
- **▲** 5 mS Priority Sampling
- **▲ Wide or Narrow-Band Programmable Per Channel**
- **▲** New ESP™ Multi-Vehicle Format
- **▲** Optional Internal Auxiliary Receiver
- **▲** Emergency Signaling
- ▲ Factory Interface Cables for Most Popular Public Safety Radios



The SVR-**250** is the **next-generation analog vehicular repeater** from Pyramid Communications. Available in VHF, UHF, 700, 800, and 900 MHz.

Enhanced features include the fastest priority sampling time in the industry at 5 mS, and emergency signaling from portable to dispatch. PC programmable for up to 20 channels, with wideband/narrow-band, CTCSS/DCS, emergency or dual-tone on a per channel basis.

The SVR-**250** utilizes the new ESP<sup>TM</sup> priority structure that **resolves priority conflicts during repeater idle time** rather than at the critical start of a conversation. With ESP<sup>TM</sup>, priority vehicles are assigned without user intervention to ensure **uninterrupted communications** when users exit their vehicles. ESP<sup>TM</sup> also ensures a quick recovery if two vehicles get in a priority mode at one scene.

The SVR-250 can interface to analog or P25 digital mobile radios, providing flexible interoperability between systems that wouldn't normally be able to communicate with analog portable radios on a scene. The SVR-250 can also interface to conventional or trunking mobiles and is capable of operating with Lightsquared (formally SkyTerra) mobile satellite phones. In trunking mode, the SVR-250 ensures proper acquisition of the trunking channel and uses the Smart Trunking Access<sup>TM</sup> mechanism of alerting the portable users of trunking status information.

SVR-250 is fully compatible with existing SVR-200 vehicular repeaters to provide seamless integration while users expand their systems or upgrade to the new SVR-250 with ESP™ system.

Optional capabilities include **full-duplex operation for extended coverage** between handhelds, and the ARS-250 auxiliary receiver for half-duplex mobile systems that do not repeat car-to-car.





## Specifications svr-250 / svr-252



TRANSMITTER	VHF	UHF
Frequency Range	150–174 MHz	450–470 MHz 405–425 MHz <sup>©</sup>
RF power out	250mW - 2W	250mW - 2W
Spurious emissions	-50dBc	-52dBc
Frequency stability -30°~+60°C	±1.5 PPM	±1.5 PPM
Modulation	11KOF3E/16KOF3E	11KOF3E/16KOF3E
Hum and noise	-40dB	-40dB
Audio response (300-3kHz)	Flat or -6dB/octave	Flat or -6dB/octave
Audio distortion	<3%@60% deviation	<3%@60% deviation
Local mic sensitivity	300mV - 5VPP	300mV - 5VPP
FCC Type Acceptance	LRUSVR-200VB	LRUSVR-200UD
Industry Canada Approval	2390 195 458A	2390 212 113A

RECEIVER	VHF	UHF
Frequency Range	150–174 MHz	450–470 MHz 405–425 MHz <sup>●</sup>
RF sensitivity	.35uV	.35uV
Squelch sensitivity	.2uV to 2uV adjustable	.2uV to 2uV adjustable
Modulation acceptance	±3.75/±7.5kHz	±3.75/±7.5kHz
Selectivity	72dB	60dB
Spurious/image rejection	70dB	60dB
IMD response	60dB	60dB
Frequency stability	1.5 PPM	1.5 PPM
Audio response (300-3kHz)	Flat or +6dB/octave	Flat or +6dB/octave
Audio output	0-5VPP AC coupled	0-5VPP AC coupled
	600/2.2K	600/2.2K
Local Rx Audio	400 mW 8 Ohms@	400 mW 8 Ohms@
	<5% distortion	<5% distortion



#### **Power Requirements**

DC Supply Standby 13.6VDC negative ground ± 25%

170mA

Receive 250mA @ 400mW Rx Audio Transmit <1A @ rated output

**Physical** 

**Dimensions** 5.75"W x 10"L x 2.25"H

Weight 38 ounces

One piece extruded aluminium Case

Mil-Std-810D/E Ratings

Procedure II High Temp +60°C Procedure II Low Temp -30°C 501.2 502.3 Procedure II Humidity
Procedure II Blowing Dust 507.2 510.2 514.3 Procedure I Category 8 Vibration, Ground Vehicle 516.3 Procedure I Shock



# SVR-350 GUARDIAN The Scalable Vehicular Repeater

SIMPLEX COVERAGE

2 WATT COVERAGE

**ESP™ PRIORITY STRUCTURE** 

P25 SMART TRUNKING™ / EVRS

ANALOG & P25 EMERGENCY

P25 PHASE 1 COMPLIANT

**AES/DES ENCRYPTION OPTIONS** 



- ▲ SVR-200 and SVR-250 Compatible
- ▲ P25 Upgradeable In The Field
- ▲ SVR-P250 and SVR-P255 Compatible with P25 Option
- **▲ Software Configured Audio Levels and Jumpers**
- ▲ **ESP™** Multi-Vehicle Format
- ▲ Available in VHF, UHF, 700 & 800 Mhz Models
- ▲ Seamless Trunking Handshake with EVRS Option
- ▲ Factory Interface Cables for Most Popular Public Safety Radios



The SVR-350™ Guardian™ is the latest and most advanced simplex vehicular repeater from Pyramid Communications. This is the first vehicular repeater offered by Pyramid that is scalable from a full featured analog unit to a digital P25 unit later. Optional Software Feature Keys (SFK) can add capabilities like P25 digital operation, AES/DES Encryption, EVRS and more!

In analog mode, the unit is fully backwards compatible with SVR-200™ and SVR-250™ analog systems. Users can enjoy a budget friendly entry to the SVR product line with the option to add APCO Project 25 Phase 1 digital, and enjoy clear and secure communications in P25. In P25 mode, the SVR-350™ Guardian is backwards compatible with SVR-P250™ and SVR-P255™ products.

Optionally, the unit supports Pyramid's **P25 SmartTrunking** feature and works with mobile radios using the **EVRS** trunking protocol, to create a seamless trunking handshake between the mobile

radio network and SVR-350™ user. This ensures that portable radio users outside the vehicle get quick and accurate notifications of all transmissions to the P25 network. Users will get indications of **Channel Grant, Busy, Denial, Out of Range** just as if they were on a trunked channel of the digital network.

In addition, when in P25 operation, the SVR350™ offers optional AES and DES encryption,
and enhanced P25 emergency signaling from portable to dispatch through the SVR-350™. This allows
the SVR to relay an emergency with Hot Mic from
the portable radio user.

The SVR-350™ also utilizes Pyramid's latest ESP™ and ESP2™ priority structures that resolve priority conflicts during repeater idle time rather than at the critical start of a conversation.





### Specifications svr-350

**VHF** 

<5% distortion





#### TRANSMITTER **VHF UHF** 764-870 **Frequency Range** 136-174 MHz 380-470 MHz 764-776 MHz + 850-870 MHz **RF Power Out** 0.5 - 2W 0.5 - 2W 0.25 - 1W **Spurious Emissions** -70dBc -70dBc -70dBc Frequency Stability -30°~+60°C ±1.5PPM ±1.5PPM ±1.5PPM Modulation 10K0F1D, 10K0F1E, 10K0F1D, 10K0F1E, 10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 10K0F7D,10K0F7E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 11K0F3E, 12K3F1D, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 16K0F3E, 4K80F2D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 7K60F1D,8K10F1D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F1E, 8K10F7D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D 8K10F7E, 8K40F2D 8K10F7E, 8K40F2D **Hum and Noise** 25/30kHz -43dB -43dB -40dB 12.5kHz -38dB -38dB -33dB Audio Response (300-3kHz) Flat or -6dB/octave Flat or -6dB/octave Flat or -6dB/octave **Audio Distortion** <3% @ 1kHz 60% deviation <3% @ 1kHz 60% deviation <3% @ 1kHz 60% deviation 300mV - 5VPP 300mV - 5VPP 300mV - 5VPP **Local Mic Sensitivity FCC Type Acceptance** LRUSVR-P250VA LRUSVR-P250UA LRUSVR-P250MB **Industry Canada Approval** 2390A-SVRP250VA 2390A-SVRP250UA 2390A-SVRP250MB

Frequency Range	136-174 MHz	380-470 MHz	764-776 MHz + 850-870 MHz
Analog Sensitivity	0.28uV	0.28uV	0.28uV
Digital Sensitivity (5% BER)	0.20uV	0.20uV	0.20uV
Squelch Sensitivity	.2uV to 2uV adjustable	.2uV to 2uV adjustable	.2uV to 2uV adjustable
Selectivity	•	·	·
25/30kHz channel	75dB	75dB	75dB
12.5kHz channel	65dB	65dB	65dB
Spurious/Image Rejection	75dB	75dB	75dB
IMD Response	75dB	75dB	75dB
Frequency Stability	±1.5PPM	±1.5PPM	±1.5PPM
Audio Response (300-3kHz)	Flat or +6dB/octave	Flat or +6dB/octave	Flat or +6dB/octave
Audio Output	0-5VPP AC coupled	0-5VPP AC coupled	0-5VPP AC coupled
•	600/2.2K	600/2.2K	600/2.2K
Local Rx Audio	400 mW 8 Ohms@	400 mW 8 Ohms@	400 mW 8 Ohms@

**UHF** 

<5% distortion



RECEIVER

#### **Power Requirements**

DC Supply Standby 13.6VDC negative ground ± 25%

250mA

500mA @ 400mW Rx audio Receive **Transmit** <3A @ rated output

**Physical** 

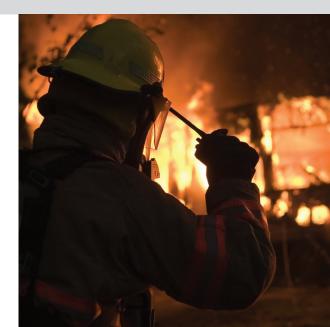
**Dimensions** 5.75"W x 10"L x 2.25"H

Weight 38 ounces

One-piece extruded aluminium Case

#### Mil-Std-810H Ratings

Procedure II High Temp +60°C 501.5 502.5 Procedure II Low Temp -30°C 507.4 Procedure II Humidity Procedure I Category 8 514.5 Vibration, Ground Véhicle 516.5 Procedure I Shock



<5% distortion

764-870

# SVR-P250 P25 Compliant

MULTI-CHANNEL

2-WATT COVERAGE

**NEW ESP™ PRIORITY STRUCTURE** 

**WIDE OR NARROW-BAND** 

**EMERGENCY SIGNALING** 

**P25 PHASE 1 COMPLIANT** 

**AES/DES ENCRYPTION** 

- ▲ P25 Phase 1 Compliant
- ▲ 20 Channels
- **▲** New ESP™ Multi-Vehicle Format
- ▲ AES / DES Encryption
- ▲ Programmable P25 or Analog Per Channel
- ▲ SVR-200 and SVR-250 Compatible
- **▲** Wide or Narrow-Band Programmable Per Channel
- **▲** Emergency Signaling
- **▲** Factory Interface Cables for Most Popular Public Safety Radios





### SVR-P250 P25 Twenty-Channel Digital Vehicular Repeater

The SVR-**P250** is the next generation vehicular repeater from Pyramid Communications that is fully compliant with the **APCO Project 25 Phase 1 Digital Common Air Interface** (CAI) protocol.

Advanced features include **secure communications** with P25 portable radios, **AES and DES encryption**, and **emergency signaling** from portable to dispatch. **PC programmable** for up to **20 channels**, with P25, wide-band/narrowband, CTCSS/DCS, and emergency signaling on a per channel basis.

The SVR-P250 utilizes the new ESP™ priority structure that resolves priority conflicts during repeater idle time rather than at the critical start of a conversation. With ESP™, priority vehicles are assigned without user intervention to ensure uninterrupted communications when users exit their vehicles. ESP™ also ensures a quick recovery if two vehicles get in a priority mode at one scene.

The SVR-P250 is both P25 and analog capable

and can interface to analog or P25 mobiles providing flexible inter-operability between systems that wouldn't normally be able to communicate. The SVR-P250 will interface to analog, digital, conventional or trunking mobiles and is capable of operating with Lightsquared (formally SkyTerra) mobile satellite phones. In trunking mode, the SVR-P250 ensures proper acquisition of the trunking channel and uses the Smart Trunking Access™ mechanism of alerting the portable users of trunking status information.

In analog mode, the SVR-**P250** is **fully compatible with existing** SVR-**200** and SVR-**250** vehicular repeaters to provide seamless integration while users upgrade their systems from analog to P25 digital.





## Specifications svr-P250





TRANSMITTER	VHF	UHF	764-870
Frequency Range RF power out Spurious emissions Frequency stability -30°~+60°C Modulation	136-174 MHz 0.5 - 2W -70dBc ±1.5PPM 10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D	380-470 MHz 0.5 - 2W -70dBc ±1.5PPM 10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D	764-776 MHz + 850-870 MHz 0.25 - 1W -70dBc ±1.5PPM 10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D
Hum and noise 25/30kHz 12.5kHz Audio response (300-3kHz) Audio distortion Local mic sensitivity FCC Type Acceptance Industry Canada Approval	-43dB -38dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-P250VA 2390A-SVRP250VA	-43dB -38dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-P250UA 2390A-SVRP250UA	-40dB -33dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-P250MB 2390A-SVRP250MB
RECEIVER	VHF	UHF	764-870
Frequency Range Analog sensitivity Digital sensitivity (5% BER) Squelch sensitivity Selectivity	136-174 MHz 0.28uV 0.20uV .2uV to 2uV adjustable	380-470 MHz 0.28uV 0.20uV .2uV to 2uV adjustable	764-776 MHz + 850-870 MHz 0.28uV 0.20uV .2uV to 2uV adjustable
25/30kHz channel 12.5kHz channel Spurious/image rejection IMD response Frequency stability	75dB 65dB 75dB ±1.5PPM	75dB 65dB 75dB ±1.5PPM	75dB 65dB 75dB 75dB ±1.5PPM

Local Rx audio

**Audio output** 



Audio response (300-3kHz)

# ±1.5PPM

Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K 400 mW 8 0hms@

<5% distortion

±1.5PPM Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K 400 mW 8 0hms@

<5% distortion

±1.5PPM

Flat or +6dB/octave 0-5VPP AC coupled

600/2.2K

400 mW 8 0hms@ <5% distortion

#### **Power Requirements**

DC Supply Standby 13.6VDC negative ground ± 25%

170mA

Receive 250mA @ 400mW Rx Audio **Transmit** <2A @ rated output

**Physical** 

**Dimensions** 5.75"W x 10"L x 2.25"H

Weight

Case One piece extruded aluminium

Mil-Std-810D/E Ratings

501.2 Procedure II High Temp +60°C 502.3 Procedure II Low Temp -30°C Procedure II Humidity
Procedure II Blowing Dust 507.2 510.2 Procedure I Category 8 514.3 Vibration, Ground Vehicle 516.3 Procedure I Shock



# SVR-P252 P25 Enhanced Full-Duplex Vehicular Repeater

FULL-DUPLEX REPEAT

2-WATT COVERAGE

ESP2™ PRIORITY STRUCTURE

NEW P25 SMART TRUNKING™

**P25 EMERGENCY CALLS** 

P25 PHASE 1 COMPLIANT

AES/DES ENCRYPTION OPTION



- ▲ Full-Duplex Local Repeat
- **▲** System Repeat Using Mobile Radio
- ▲ ESP™ Multi-Vehicle Format
- ▲ Triggers **P25 Emergency Call with Hot Mic**
- ▲ Passes **P25 Channel Status** to Portable User
- ▲ Notifies Portable User if Out of Range of SVR-P252
- ▲ Seamless Trunking Handshake Through SVR-P252
- ▲ Notifies Portable User if Mobile is Out of Range of P25 Network
- Works with KENWOOD Viking™ & L3Harris XL™ Series Radios

### SVR-P252 P25 Enhanced Digital Vehicular Repeater

The SVR-**P252** is the latest generation full-duplex vehicular repeater from Pyramid Communications that is fully compliant with the **APCO Project 25** Phase 1 Digital Common Air Interface (CAI) protocol.

With Local Repeat (extending local coverage between portable users on a scene) and System Repeat (extending portable radio coverage back to dispatch using attached mobile radio interface), the SVR-P252 provides uncompromising on-scene coverage.

The all new P25 SmartTrunking™ feature works with select models of EVRS capable portables and mobile radios by Kenwood and L3Harris to create a seamless trunking handshake between the mobile radio network and SVR-P252 user. This ensures that portable radio users outside the vehicle get quick and accurate notifications of all transmissions to the P25 network. Users will get indications of Channel Grant, Busy, Denial, Out of Range just as if they were on a

trunked channel of the digital network.

In addition, the SVR-P252 offers optional AES and DES encryption, and enhanced P25 emergency signaling from portable to dispatch through the SVR-P252. This allows the SVR to relay an emergency with Hot Mic from the portable radio user.

The SVR-P252 also utilizes Pyramid's latest ESP<sup>TM</sup> priority structure that resolves priority conflicts during repeater idle time rather than at the critical start of a conversation. With ESP<sup>TM</sup>, priority vehicles are assigned without user intervention to ensure uninterrupted communications when users exit their vehicles. ESP<sup>TM</sup> also ensures a quick recovery if two vehicles get in a priority mode at one scene.





### Specifications svr-P252





### TRANSMITTER

**Frequency Range RF Power Out Spurious Emissions** 

Frequency Stability -30°~+60°C

Modulation

**Hum and Noise** 25/30kHz

12.5kHz Audio Response (300-3kHz) **Audio istortion Local Mic Sensitivity** 

**FCC Type Acceptance Industry Canada Approval**  VHF

136-174 MHz 0.5 - 2W -70dBc ±1.5PPM

10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D

-43dB -38dB

Flat or -6dB/octave <3% @ 1kHz 60% deviation

300mV - 5VPP LRUSVR-P250VA 2390A-SVRP250VA **UHF** 

380-470 MHz 0.5 - 2W -70dBc ±1.5PPM

10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D, 16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D

-43dB -38dB

Flat or -6dB/octave <3% @ 1kHz 60% deviation

300mV - 5VPP LRUSVR-P250UA 2390A-SVRP250UA 764-776

764-776 MHz 0.25 - 1W -70dBc ±1.5PPM 10K0F1D, 10K0F1E, 10K0F7D,10K0F7E, 11K0F3E, 12K3F1D,

16K0F3E, 4K80F2D, 7K60F1D,8K10F1D, 8K10F1E, 8K10F7D, 8K10F7E, 8K40F2D

-40dB -33dB

Flat or -6dB/octave

<3% @ 1kHz 60% deviation

300mV - 5VPP LRUSVR-P250MB 2390A-SVRP250MB

#### RECEIVER

**Frequency Range Analog Sensitivity** Digital Sensitivity (5% BER) **Squelch Sensitivity** 

Selectivity 25/30kHz channel 12.5kHz channel

**Spurious/Image Rejection IMD** Response Frequency Stability Audio Response (300-3kHz) **Audio Output** 

**Local Rx Audio** 



VHF

136-174 MHz 0.28uV 0.20uV

.2uV to 2uV adjustable

75dB 65dB 75dB 75dB ±1.5PPM

Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K

400 mW 8 Ohms@ <5% distortion

UHF

380-470 MHz 0.28uV 0.20uV

.2uV to 2uV adjustable

75dB 65dB 75dB 75dB ±1.5PPM

Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K

400 mW 8 Ohms@ <5% distortion

764-776

764-776 MHz 0.28uV 0.20uV

.2uV to 2uV adjustable

75dB 65dB 75dB 75dB ±1.5PPM

Flat or +6dB/octave 0-5VPP AC coupled

600/2.2K

400 mW 8 Ohms@ <5% distortion

#### **Power Requirements**

**DC Supply** 13.6VDC negative ground  $\pm$  25%

Standby

Receive 500mA @ 400mW Rx audio **Transmit** <3A @ rated output

**Physical** 

**Dimensions** 5.75"W x 10"L x 2.25"H

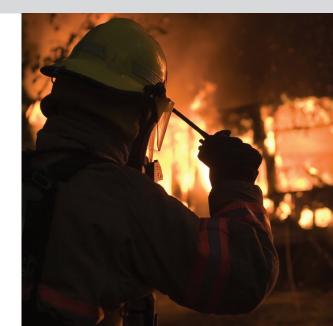
Weight

One-piece extruded aluminium Case

Mil-Std-810H Ratings

Procedure II High Temp +60°C 501.5 502.5 Procedure II Low Temp -30°C 507.4 Procedure II Humidity Procedure I Category 8 514.5 Vibration, Ground Vehicle 516.5

Procedure I Shock



## **SVR-D300 DMR** Digital Vehicular Repeater

MULTI-CHANNEL

2-WATT COVERAGE

**ESP™ PRIORITY STRUCTURE** 

NEW DMR SMART TRUNKING™

**DMR EMERGENCY CALLS** 

**DMR DIGITAL COMPLIANT** 



- ▲ 20 Programmable Channels
- **▲ ESP™** Multi-Vehicle Format
- **▲** Triggers **DMR** Emergency Calls
- ▲ Factory Interface Cables for Most Popular **DMR** Radios
- ▲ Works With All Models of **DMR** Mobile Radios
- ▲ **USB** Programmable
- ▲ Built on Over 25 Years of Vehicular Repeater Solutions

### SVR-D300 DMR Digital Vehicular Repeater

The SVR-**D300** is the next-generation simplex vehicular repeater from Pyramid Communications that is fully compliant with the **DMR** Air Interface (AI) protocol, the ETSI dual time slot communications protocol.

The SVR-D300 also utilizes Pyramid's latest DMR ESP<sup>TM</sup> priority structure that establishes a priority vehicle to handle on-scene communications. With ESP<sup>TM</sup>, priority vehicles are assigned without user intervention to ensure uninterrupted communications when users exit their vehicles. ESP<sup>TM</sup> also ensures a quick recovery if two vehicles get in a priority mode at one scene.

In addition, the SVR-D300 offers our built-in DMR Smart Trunking protocol, which automates the trunking to the portable radio using our TM-250 series trunking microphones. Supports DMR emergency signaling from portable to dispatch through the SVR-D300 and allows the SVR to relay an emergency with Hot Mic from the portable radio user.

The SVR-**D300** is both **DMR and Analog** capable and can interface to analog or DMR mobile radios, providing flexible inter-operability between systems that wouldn't normally be able to communicate. The SVR-**D300** will interface to analog, digital, conventional or trunked mobiles for a wide range of applications.

In Analog mode, the SVR-**D300** is fully compatible with existing SVR-**200** and SVR-**250** vehicular repeaters to provide seamless integration while users upgrade their systems from analog to DMR digital.





## Specifications svr-**D300 DMR**



TRANSMITTER	VHF	UHF-A	UHF-D
Frequency Range RF power out Spurious emissions Frequency stability -30°~+60°C Modulation	136-174 MHz 1 - 2W -73dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D	380-470 MHz 1 - 2W -75dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D	450-520 MHz 1 - 2W -75dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D
Hum and noise Analog @ 12.5kHz Analog @ 25khz Audio response (300-3kHz) Audio distortion Local mic sensitivity FCC Type Acceptance Industry Canada Approval ACMA	45dB 50dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300V 2390A-SVR300V	40dB 45dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300UA 2390A-SVR3000U(A) or (D)	40dB 45dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300UD 2390A-SVR300UD
RECEIVER	VHF	UHF-A	UHF-D
Frequency Range Analog sensitivity Digital sensitivity (5% BER) Squestivity	136-174 MHz 0.25uV 0.25uV .2uV to 2uV adjustable	380-470 MHz 0.25uV 0.25uV .2uV to 2uV adjustable	450-520 MHz 0.25uV 0.25uV .2uV to 2uV adjustable

Digital Schollivity (3 /0 DLIL)	0.ZJUV	0.ZJu v	0.23uv
Squelch sensitivity	.2uV to 2uV adjustable	.2uV to 2uV adjustable	.2uV to 2uV adjustable
Selectivity	·	·	
Analog 25/30kHz channel	71dB	70dB	70dB
Analog 12.5kHz channel	81dB	80dB	80dB
Spurious/image rejection	87dB	85dB	85dB
IMD response	80dB	75dB	75dB
Frequency stability	±1.0PPM	±1.0PPM	±1.0PPM
Audio response (300-3kHz)	Flat or +6dB/octave	Flat or +6dB/octave	Flat or +6dB/octave
Audio output	0-5VPP AC coupled	0-5VPP AC coupled	0-5VPP AC coupled
•	600/2.2K	600/2.2K	600/2.2K
Local Rx audio	400 mW 8 Ohms@	400 mW 8 Ohms@	400 mW 8 Ohms@
	<5% distortion	<5% distortion	<5% distortion

#### **Power Requirements**

DC Supply Standby 13.6VDC negative ground ± 25%

350mA

Receive 400mA @ 400mW Rx Audio <2.5A @ rated output Transmit

**Physical** 

5.75"W x 10"L x 2.25"H Dimensions

Weight 50 ounces

One piece extruded aluminium Case

Mil-Std-810D/E Ratings

501.2 Procedure II High Temp +60°C Procedure II Low Temp -30°C Procedure II Humidity Procedure II Blowing Dust Procedure I Category 8 502.3 507.2 510.2 514.3 Vibration, Ground Vehicle 516.3 Procedure I Shock



### SVR-N300 NXDN Digital Vehicular Repeater

MULTI-CHANNEL

2-WATT COVERAGE

**ESP™ PRIORITY STRUCTURE** 

NEW NXDN SMART TRUNKING™

**NXDN EMERGENCY CALLS** 

**NEXEDGE / NXDN COMPLIANT** 



- ▲ 20 Programmable Channels
- ▲ 6.25 & 12.5 kHz Channels
- ▲ **ESP™** Multi-Vehicle Format
- ▲ Triggers **NXDN** Emergency Call with Hot Mic
- ▲ Factory Interface Cables for Most Popular Radios
- ▲ Works with Kenwood NEXEDGE Mobile Radios
- ▲ **USB** Programmable
- ▲ Built on Over 25 Years of Vehicular Repeater Solutions

### SVR-N300 NXDN NEXEDGE Digital Vehicular Repeater

The SVR-**N300** is the next-generation simplex vehicular repeater from Pyramid Communications that is fully compliant with the NEXEDGE **NXDN** Digital Air Interface (DAI) protocol.

The SVR-N300 also utilizes Pyramid's latest NXDN ESP<sup>TM</sup> priority structure that establishes a priority vehicle to handle on-scene communications. With ESP<sup>TM</sup>, priority vehicles are assigned without user intervention to ensure uninterrupted communications when users exit their vehicles. ESP<sup>TM</sup> also ensures a quick recovery if two vehicles get in a priority mode at one scene.

In addition, the SVR-N300 offers our built-in NXDN Smart Trunking protocol, which automates the trunking to the portable radio using our TM-250 series trunking microphones. Supports NXDN emergency signaling from portable to dispatch through the SVR-N300 and allows the SVR to relay an emergency with Hot Mic from the portable radio user.

The SVR-**N300** is both **NXDN and Analog** capable and can interface to analog, NEXEDGE or NXDN mobile radios, providing flexible inter-operability between systems that wouldn't normally be able to communicate. The SVR-**N300** will interface to analog, digital, conventional or trunked mobiles for a wide range of applications.

In Analog mode, the SVR-N300 is fully compatible with existing SVR-200 and SVR-250 vehicular repeaters to provide seamless integration while users upgrade their systems from analog to NXDN digital.





# Specifications svr-**N300** NXDN



TRANSMITTER	VHF	UHF-A	UHF-D
Frequency Range RF power out Spurious emissions Frequency stability -30°~+60°C Modulation	136-174 MHz 1 - 2W -73dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D	380-470 MHz 1 - 2W -75dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D	450-520 MHz 1 - 2W -75dBc ±1.0PPM 16K0F3E, 11K0F3E, 8K30F1E,8K30F1D, 8K30F7W, 4K00F1E, 4K00F1D, 4K00F7W, 4K00F2D,8K10F1W, 8K10F1E, 8K10F1D
Hum and noise Analog @ 12.5kHz Analog @ 25khz Audio response (300-3kHz) Audio distortion Local mic sensitivity FCC Type Acceptance Industry Canada Approval ACMA	45dB 50dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300V 2390A-SVR300V	40dB 45dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300UA 2390A-SVR3000U(A) or (D)	40dB 45dB Flat or -6dB/octave <3% @ 1kHz 60% deviation 300mV - 5VPP LRUSVR-300UD 2390A-SVR300UD
RECEIVER	VHF	UHF-A	UHF-D
Frequency Range Analog sensitivity Digital sensitivity (5% BER) Squelch sensitivity Selectivity Analog 25/30kHz channel Analog 12.5kHz channel Spurious/image rejection IMD response Frequency stability Audio response (300-3kHz) Audio output	136-174 MHz 0.25uV 0.25uV .2uV to 2uV adjustable  71dB 81dB 87dB 80dB ±1.0PPM Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K	380-470 MHz 0.25uV 0.25uV .2uV to 2uV adjustable  70dB 80dB 85dB 75dB ±1.0PPM Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K	450-520 MHz 0.25uV 0.25uV .2uV to 2uV adjustable  70dB 80dB 85dB 75dB ±1.0PPM Flat or +6dB/octave 0-5VPP AC coupled 600/2.2K
Local Rx audio	400 mW 8 Ohms@ <5% distortion	400 mW 8 Ohms@ <5% distortion	400 mW 8 Ohms@ <5% distortion

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# **TFC - Repeater Tactical Field Case**

COMPACT

**PERFECT CARRY-ON SIZE** 

**EASY-TO-USE PULL HANDLE** 

**RUGGED DESIGN** 

**QUIET-GLIDE WHEELS** 

FITS ALL SVR MODELS

MADE IN THE USA



- ▲ Field-Deployable Portable Repeater Solution
- ▲ Creates a **Digital** or **Analog** Field Repeater
- ▲ Supports SVR-250, SVR-350, SVR-P250, SVR-300 and SVR-P252
- ▲ Universal Mobile Radio Mounting
- ▲ Internal Duplexer Optional
- ▲ Internal In-Band Filters Optional
- ▲ External Dimensions: 9.5" X 14" X 22.55"
- ▲ Includes DC Power Cables





### Portable SVR Repeater Tactical Field Case

Special circumstances call for special equipment. Teams rely on enhanced portable radio coverage on-scene and the SVR **Tactical Field Case** can quickly enhance portable radio coverage for mission-critical scenarios.

Create a portable repeater with the SVR **Tactical Field Case**. This rugged, easy-to-transport case encloses the **SVR Repeater** of your choice along with your preferred mobile radio to create an easy-to-deploy repeater system that links back to dispatch using the enclosed mobile radio.

The case is designed to run off of 12V. Powerpole cables are included for quick connection to vehicle power sources.

In addition, the **Tactical Field Case** is designed to enclose all required duplexers and in-band filters to maximize portable radio coverage when deployed.

Designed with durability in mind, the **Tactical Field Case** and **SVR Repeater** ensures your users get the coverage they need when on-scene.

Contact Pyramid Communications to work with an experienced sales manager to configure the various options available for the **Tactical Field Case.** 



