Data Sheet

XVN500 remote speaker microphone

Operate & communicate in uncharted extremes

The XVN500 RSM is NFPA 1930 certified when used with an APX NEXT XN radio. This RSM features an intelligent audio design that provides clear communication from any direction, even in extreme environments.

Details

When paired with the APX NEXT XN, the XVN500 RSM's compliance with fire standards is unmatched. Capable of being dropped, frozen, heated, drowned and tumbled, this RSM redefines toughness. Both the XVN500's housing and audio functions will withstand extreme conditions. With four high dynamic range mics, automatic audio leveling and noise reduction and a built in ViQi button, the XVN500 RSM will deliver loud, clear communications despite the noise of your environment.

Key features overview

- Heat resistant housing and cable
- Exceptionally loud speaker
- Four High Dynamic Range (HDR) microphones
- Dedicated ViQi button
- Water and Windshielding
- New adaptive noise suppression
- Illuminated emergency button

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Mission-critical design

Audio for extreme environments

The XVN500 features four high dynamic range (HDR) microphones, which are arranged for all-round coverage. This guarantees that communications are clear from every direction. The designated HDR mic arrangement also provides significant muffled audio reductions from any positions that the RSM may be held or worn.

To further enhance noise suppression, all HDR microphones are not only windported but are also placed behind our exclusively engineered housing. This further redirects airflow and facilitates water draining, effectively mitigating any leftover wind noise.

The adaptive noise suppression also allows for voice tracking while filtering out surrounding background noise, giving you the best clarity in your communications.

The XVN500's HDR microphone technology prevents speech distortion, even when shouting in extreme noise environments. And as the noise environment changes, so will the XVN500 to adjust for maximum noise cancellation. When combined with the APX NEXT XN, this technology will give firefighters high quality audio features for any intense situation.

Tested for extreme environments

The XVN500 RSM can withstand:

- 500°F conditions for 5 minutes
- 350°F conditions for 15 minutes, then immersed into 5 feet of water
- Direct flames for 10 seconds
- 10-foot drop after being exposed to 72°F, -4°F and 160°F

Enhanced software features

- APX NEXT XN system self-checks its RSM connection every 5 minutes
- Built-in sensor for over temperature alert
- RSM Data logging via APX NEXT XN
- Bluetooth connection status LED indication

Loud and intelligible

The XVN500 RSM speaker improves speaker clarity while the maintaining best in class volumes. Even at the highest volume, the RSM will maintain understandable and intelligible audio output. This audio cuts through the noisiest environments while simultaneously preserving audio richness at mid to low volumes.

The XVN500 audio experience is enhanced by using the full features of the adaptive audio engine on the APX NEXT XN.

This dynamically optimizes the radio's performance in the presence of background noise. Adaptive microphones help with gain control, while adaptive speaker equalization provides the loudest, most intelligible audio in any environment, even at maximum volume.

The algorithm in the XVN500 RSM allows additional audio features like Receive Volume Leveling. With receive volume leveling, a firefighter can set the volume once, and the radio will adjust based on the power of the received audio of loud or soft voices.

Extreme durability

Like its compatible radio, the AXP NEXT XN, the XVN500 RSM can withstand the harshest conditions, up to the latest firefighter standards. With specially designed and developed housing, this RSM has been tested and proven to operate in various high temperatures. All to make sure that you, your RSM and your radio are prepared for anything that comes your way.

Flexible wearing

Your XVN500 RSM is built to be worn however you need. The strategic placement of the microphones and enhanced water drainage provide users with the flexibility to wear it straight, upside down and even sideways. Despite varying positions, the XVN500 RSM will still provide clear, loud communication in the most extreme environments.

ViQi access

The XVN500's ViQi button creates efficient access to voice controls. This enables firefighters to perform actions without breaking focus, such as changing zones/channels, checking battery status and adjusting volume.

Learn more at motorolasolutions.com/viqi

XVN500 RSM specifications

GENERAL	WITH CHANNEL KNOB	WITHOUT CHANNEL KNOB
Part Number	PMMN4162A	PMMN4138A
Compatible radio	APX NEXT XN	
Compatible radio firmware	R05.05.00 or newer	R04.41.00 or newer
Dimensions (RSM Head only)	3.86 x 2.96 x 1.3 in (98 x 75 x 34 mm)	
Weight (Full Kit)	14.75 oz (418 g)	14.22 oz (403 g)
Color	High impact green	
Power Source	Radio	
Emergency Button	Yes	
1-dot Button	Yes	
3-dot Button	Yes	
Hot Microphone Feature	Supported through radio software configuration	
Noise Cancelling	DINC-Xwb	
Clip	360° rotating clip with D-ring	

MICROPHONE	
Type	Quad beam
Sensitivity	-42dBV typical
Distortion (THD)	< 5%, wideband
IMPRES™	Yes
Noise cancellation	4-microphone adaptive noise suppression algorithm
Windporting	Yes

SPEAKER	
Diameter	1.9 in (47 mm)
Rated output level	Max power 3W (rated 0.5W @ 90 dB SPL @ 30cm)
Speech loudness @ 12 in. (300 mm)	105 Phon
Distortion (THD)	< 15%

CONTROLS	
Top	Emergency (orange) Channel knob (16 positions)
Side	PTT, 1 programmable (1-dot)
Front	1 programmable (3-dot ViQi)
Volume	Up/down
Strobe	1 strobe light control (front facing)

COILED CABLE	
Flex Life	100,000 cycles minimum
Pull Strength	40 lbs (18.14 kg) minimum
Cable Length	7 in (178 mm) coiled length
Accessory Connector Case	Polycarbonate black (withstand high heat)

ENVIRONMENTAL	
Operating temperature	-40°C to +100°C (-40°F to +212°F)
Storage temperature	-55°C to +85°C (-67°F to +185°F)
Humidity	90%–95% relative humidity at +50°C for 8 hours
ESD	IEC / EN 61000-4-2
IP rating	IP68 (2 meters, 4 hours)
Impact grill	1.25 in (31.75 mm) diameter steel ball drop
Work-When-Wet	Yes

HAZARDOUS CERTIFICATION
Div 2, Class I (A, B, C, D), Class II (F, G), Class III
The XVN500 RSM is UL certified for APX NEXT XN radio, please see your radio's UL manual for more information.
NFPA 1930 certified when used with APX NEXT XN radio

REPLACEMENT PARTS	
CB001073A01	Extreme temperature replacement cable
PMLN9005A	Replacement clip
PMLN7653	Replacement knob

Portable military standards 810 C, D, E, F & G

	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G/H	
	METHOD	PROC./CAT.	METHOD	PROC./ CAT.	METHOD	PROC./ CAT.	METHOD	PROC./ CAT.	METHOD	PROC./CAT.
Low pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/ Hot	501.5	I/A1, II/A1
Low temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I/C3, II/C1
Temperature shock	503.1	I	503.2	I/A1, C3	503.3	I/A1, C3	503.4	I	503.5	I/C
Solar radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I/A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II/ Aggravated
Salt fog	509.1	I	509.2	I	509.3	I	509.4	1 Proc	509.5	1 Proc
Blowing dust	510.1	I	510.2	I	510.3	I	510.4	I	510.5	I
Blowing sand	1 Proc	1 Proc	510.2	II	510.3	II	510.4	II	510.5	II
Submersion	512.1	I	512.2	I	512.3	I	512.4	I	512.5	I
Vibration	514.2	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I/24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI
Shock (drop)	516.2	II	516.3	IV	516.4	IV	516.5	IV	516.6	IV

To view compatible accessories of the APX NEXT XN radio, visit: **motorolasolutions.com/apxnextxn**

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