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DVR-LX®
Ordering Guide

Revision 4.5

July 2024

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Important Notes

1. **Custom Filtering:** Only the frequency plans shown in this ordering guide are available as standard configurations. For custom filtering, please contact a [Sales Solution Specialist](#) for assistance.

2. **Frequencies Required:** DVR-LX® frequencies must be specified when placing an order since the filters are custom tuned and cannot be re-tuned in the field.

3. **Delivery Time:** Standard DVR-LX® delivery time is 16-18 weeks after receipt of a purchase order and a valid frequency plan. Frequency information must be accurate and in accordance with the frequency plan requirements described in this document in order to avoid delays.

4. **Control Heads:** The APX™ Mobile radio can operate with up to two control heads while interfaced to a DVR-LX® (vehicle mount DVR-LX® model only).

5. **MSU Transmit Power:** In all In-Band configurations, the MSU Transmit power must not exceed 50 Watts on DVRS Enabled MSU Modes due to the in-band filters' power rating. The in-band filters connected to the MSU have typical insertion loss of 1.5dB

6. **Subscriber Options:** APX™ Mobile Radios operating as the host mobile for the DVR-LX® require subscriber option **GA00631** for operation. APX™ Portable Radios operating through a DVR-LX®, utilizing the digital enhanced DVR TRUNKING feature set require subscriber option **QA00631**.

Mobile Radio Type

Compatible Mobile Radios

Please refer to the Compatibility Charts under the Firmware section for complete information.

When Pairing with an APX™8500 Mobile Radio

1. **Mount Types:** APX™8500 is not compatible with all repeater mount types in all bands:

   - Suitcase only supports APX™8500 Mid Power in 700MHz, 800MHz
   - Rackmount does not support APX™8500 in any band

   For inquiries regarding an unsupported pairing of APX™8500 with a Suitcase/Rackmount, please contact a Sales Solution Specialist for assistance.

2. **Interface Kits:** Depending on the isolation available between the APX™8500 mobile and DVR-LX® antennas, an interface kit may be required. Download the Interface Kit Selection tool under the Ordering Guide header to determine which (if any) kit and installation drawing is required.

NOTE: For quoting purposes, the **No Kit** option may be selected but note that there is an additional cost if an interface kit is determined to be required later.
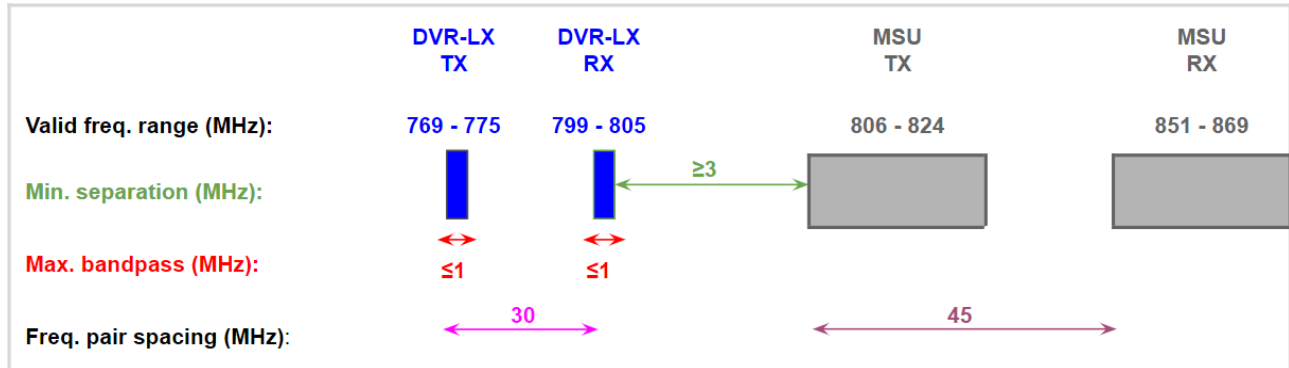
3. **Required Y Cable:** One of the following Y cables are required:

   - Without SmartConnect- GA01515 (or KT000247A01 as standalone accessory)
     - splits the J2 into J2 and J600(DB25)
   - With SmartConnect- GA01779 (or KT000247A04 as standalone accessory)
     - allows RS232 and USB line to be used concurrently

How to Interpret a Frequency Plan Diagram

Below is an example of a frequency plan with the set of rules that must be met for it to be a valid selection. For this example, additional color coding was added for clarity.

700MHz Frequency Plan Example

- Ensure the DVR-LX and System/Mobile frequencies are within the **Valid frequency range (MHz)**
    - **DVR-LX Tx 769-775   DVR-LX Rx 799-805**
    - **MSU Tx 806-824   MSU Rx 851-869**

- Ensure the **Minimum separation (MHz)** frequency requirements are met
    - at least **3MHz** between the highest DVR-LX Rx frequency and the lowest MSU Tx frequency

- Ensure the **Maximum bandpass (MHz)** is not exceeded
    - difference between the highest - lowest DVR-LX Tx frequencies must be less than or equal to **1MHz**
    - difference between the highest - lowest DVR-LX Rx frequencies must be less than or equal to **1MHz**

- Ensure the **Frequency pair spacing (MHz)** is met
    - DVR-LX Lowest Tx and Rx frequencies must be exactly **30MHz** apart
    - DVR-LX Highest Tx and Rx frequencies must be exactly **30MHz** apart
    - MSU Lowest Tx and Rx frequencies must be exactly **45MHz** apart
    - MSU Highest Tx and Rx frequencies must be exactly **45MHz** apart

- Each frequency plan identifies the repeater mount type that is it compatible with
    - Vehicle Mount (**VM**)- check mark indicates supported
    - Suitcase (**SC**)- check mark indicates supported
    - Rackmount (**RM**)- white indicates not supported

VM	SC	RM
✔	✔	

Preparing a Quote Without Customer Frequencies

If preparing a quote before customer frequencies are known, please select the Frequency Information slider to remove the frequency related fields (see screenshot below).

Frequency Information

Select slider if accurate frequency information is not known at this time

A reminder will be received at Request Order to validate this information. Once accurate frequencies are entered and the slider is unselected, the Required Order Info Status will be Complete and the order can progress to Order Submitted status. NOTE: Changes to frequency information may alter pricing.

Please note that the quote cannot be submitted as an order until:

● the slider is deselected (see screenshot below)
● the correct frequency plan is selected
● valid frequency information is entered

Frequency Information

Select slider if accurate frequency information is not known at this time

Frequency Plan

Please refer to the Ordering Guide for details on each Frequency Plan, located here: Click Here
If frequencies do not align with any of the available Frequency Plans, please contact a Sales Solution Specialist for assistance: Click Here

Selecting a Frequency Plan

Standard Frequency Plans
When the customer frequencies are known, follow the specified frequency requirements in the set of standard frequency plan diagrams to select the correct plan.

Custom Frequency Plans
When customer frequencies cannot meet all of the requirements of a standard frequency plan, this is a custom request. Please contact a **Sales Solution Specialist** to determine if a custom frequency plan is viable. If viable, a per unit custom charge is applicable.

Standard Frequency Plans

Frequency Band	Frequency Plan	Vehicle Mount	Suitcase	Rackmount
700MHz	In-Band Plan A	Yes	Yes	
	In-Band Plan B	Yes	Yes	
	In-Band Plan C	Yes	Yes	
	Cross-Band Plan A	Yes	Yes	
800MHz	In-Band Plan A1	Yes	Yes	
	In-Band Plan A2	Yes	Yes	
	In-Band Plan B	Yes	Yes	
	In-Band Plan C	Yes	Yes	
	Cross-Band Plan A	Yes	Yes	
VHF	In-Band Plan A	Yes	Yes	Yes
	In-Band Plan B	Yes	Yes	Yes
	Cross-Band Plan A1	Yes	Yes	Yes
	Cross-Band Plan A2	Yes	Yes	Yes
	Cross-Band Plan A3	Yes	Yes	Yes

Frequency Band	Frequency Plan	Vehicle Mount	Suitcase	Rackmount
VHF Simplex	In-Band Plan D1	Yes	Yes	
	In-Band Plan D2	Yes	Yes	
	In-Band Plan E1	Yes	Yes	
	In-Band Plan E2	Yes	Yes	
	Cross-Band Plan A	Yes		
UHF 380-430MHz	In-Band Plan A1	Yes	Yes	Yes
	In-Band Plan A2	Yes	Yes	Yes
	In-Band Plan A3	Yes	Yes	Yes
	In-Band Plan A4	Yes	Yes	Yes
	In-Band Plan B1	Yes	Yes	Yes
	In-Band Plan B2	Yes	Yes	Yes
	In-Band Plan B3	Yes	Yes	Yes
	In-Band Plan B4	Yes	Yes	Yes
	In-Band Plan C	Yes	Yes	Yes
	In-Band Plan D	Yes	Yes	Yes
	Cross-Band Plan A	Yes	Yes	Yes
	Cross-Band Plan B	Yes	Yes	Yes
UHF 380-430MHz Simplex	Cross-Band Plan A	Yes		
UHF 450-470MHz	In-Band Plan A	Yes	Yes	Yes
	In-Band Plan B	Yes	Yes	Yes
	Cross-Band Plan A	Yes	Yes	Yes
UHF 450-470MHz Simplex	Cross-Band Plan A	Yes		

700MHz Frequency Plans

NOTE: For In-Band Plans B and C, if 700MHz or 800MHz band is not in use in the System, enter placeholder frequency values that satisfy the plan and add an internal note to the quote indicating this.

	DVR-LX TX	DVR-LX RX	MSU TX	MSU RX		VM	SC	RM
DVR-LX 700MHz IN-BAND PLAN A						✔	✔	
Valid freq. range (MHz):	769 - 775	799 - 805	806 - 824	851 - 869				
Min. separation (MHz):			≥3					
Max. bandpass (MHz):	≤1	≤1						
Freq. pair spacing (MHz):	30		45					

	DVR-LX TX	MSU RX Range 1	DVR-LX RX	MSU TX Range 1	MSU TX Range 2	MSU RX Range 2	VM	SC	RM
DVR-LX 700MHz IN-BAND PLAN B							✔	✔	
Valid freq. range (MHz):	769 - 772	772 - 775	799 - 802	802 - 805	806 - 824	851- 869			
Min. separation (MHz):		≥3		≥3					
Max. bandpass (MHz):	≤1		≤1						
Freq. pair spacing (MHz):	30 / 30				45				

	MSU RX Range 1	DVR-LX TX	MSU TX Range 1	DVR-LX RX	MSU TX Range 2	MSU RX Range 2	VM	SC	RM
DVR-LX 700MHz IN-BAND PLAN C							✔	✔	
Valid freq. range (MHz):	769 - 772	772 - 775	799 - 802	802 - 805	806 - 824	851- 869			
Min. separation (MHz):		≥3		≥3	≥6				
Max. bandpass (MHz):		≤1		≤1					
Freq. pair spacing (MHz):	30 / 30				45				

	MSU RX/TX	MSU RX/TX	DVR-LX TX	DVR-LX RX	VM	SC	RM
DVR-LX 700MHz CROSS BAND PLAN A					✔	✔	
Valid freq. range (MHz):	VHF	UHF	769 - 775	799 - 805			
Max. bandpass (MHz):			≤6	≤6			
Freq. pair spacing (MHz):			30				

800MHz Frequency Plans

NOTE: For In-Band Plans A1, A2, and B, if 700MHz or 800MHz band is not in use in the System, enter placeholder frequency values that satisfy the plan and add an internal note to the quote indicating this.

DVR - LX 800MHz IN-BAND PLAN A1

	MSU RX Range 1	MSU TX Range 1	MSU TX Range 2	DVR-LX RX	MSU RX Range 2	DVR-LX TX	VM	SC	RM
							✔	✔	
Valid freq. range (MHz):	764 - 775	794 - 805	806 - 819	816 - 824	851 - 864	861 - 869			
Min. separation (MHz):				≥5		≥5			
Max. bandpass (MHz):				≤3		≤3			
Freq. pair spacing (MHz):		30			45	45			

DVR - LX 800MHz IN-BAND PLAN A2

	MSU RX Range 1	MSU TX Range 1	DVR-LX RX	MSU TX Range 2	DVR-LX TX	MSU RX Range 2	VM	SC	RM
							✔	✔	
Valid freq. range (MHz):	764 - 775	794 - 804	806 - 814	811 - 824	851 - 859	854 - 869			
Min. separation (MHz):			≥10 ≥5		≥5				
Max. bandpass (MHz):			≤3		≤3				
Freq. pair spacing (MHz):		30		45 45					

DVR - LX 800MHz IN-BAND PLAN B

	MSU RX Range 1	MSU TX Range 1	MSU TX Range 2	DVR-LX RX	MSU RX Range 2	DVR-LX TX	VM	SC	RM
							✔	✔	
Valid freq. range (MHz):	764 - 775	794 - 805	806 - 821	809 - 824	851 - 864	854 - 869			
Min. separation (MHz):				≥3		≥3			
Max. bandpass (MHz):				≤1		≤1			
Freq. pair spacing (MHz):		30			45 45				

DVR - LX 800MHz IN-BAND PLAN C

	MSU RX Range 1	MSU TX Range 1	DVR-LX RX	MSU TX Range 2	DVR-LX TX	MSU RX Range 2	VM	SC	RM
							✔	✔	
Valid freq. range (MHz):	N/A	N/A	806 - 821	809 - 824	851 - 866	854 - 869			
Min. separation (MHz):		No 700MHz	≥3		≥3				
Max. bandpass (MHz):			≤1		≤1				
Freq. pair spacing (MHz):				45 45					

DVR - LX 800MHz CROSS BAND PLAN A

	MSU RX/TX	MSU RX/TX	DVR-LX RX	DVR-LX TX	VM	SC	RM
					✔	✔	
Valid freq. range (MHz):	VHF	UHF	806 - 824	851 - 869			
Max. bandpass (MHz):			≤10	≤10			
Freq. pair spacing (MHz):				45			

VHF 136-174MHz Frequency Plans

DVR-LX VHF IN-BAND PLAN A	DVR-LX TX/RX RX/TX	MSU TX/RX	VM	SC	RM
			✔	✔	✔
Valid freq. range (MHz):	136 - 174	136 - 174			
Separation (MHz):	4.5 - 5.5 ≥5				
Max. bandpass (MHz):	≤0.3 ≤0.3	≤12			

DVR-LX VHF IN-BAND PLAN B	MSU TX/RX	DVR-LX TX/RX RX/TX	VM	SC	RM
			✔	✔	✔
Valid freq. range (MHz):	136 - 174	136 - 174			
Separation (MHz):		≥5 4.5 - 5.5			
Max. bandpass (MHz):	≤12	≤0.3 ≤0.3			

DVR-LX VHF CROSS BAND PLAN A1	DVR-LX TX/RX RX/TX	MSU TX/RX	MSU TX/RX	VM	SC	RM
				✔	✔	✔
Valid freq. range (MHz):	136 - 148 136 - 148	UHF	700/800			
Separation (MHz):	4.5 - 5.5					
Max. bandpass (MHz):	≤0.3 ≤0.3					

DVR-LX VHF CROSS BAND PLAN A2	DVR-LX TX/RX RX/TX	MSU TX/RX	MSU TX/RX	VM	SC	RM
				✔	✔	✔
Valid freq. range (MHz):	148 - 160 148 - 160	UHF	700/800			
Separation (MHz):	4.5 - 5.5					
Max. bandpass (MHz):	≤0.3 ≤0.3					

DVR-LX VHF CROSS BAND PLAN A3	DVR-LX TX/RX RX/TX	MSU TX/RX	MSU TX/RX	VM	SC	RM
				✔	✔	✔
Valid freq. range (MHz):	160 - 174 136 - 174	UHF	700/800			
Separation (MHz):	4.5 - 5.5					
Max. bandpass (MHz):	≤0.3 ≤0.3					

VHF 136-174MHz Simplex Frequency Plans

			VM	SC	RM
DVR-LX VHF IN-BAND PLAN SIMPLEX D1	**DVR-LX TX/RX SIMPLEX**	MSU TX/RX	✔	✔	
Valid freq. range (MHz):	136 - 174	136 - 174			
Separation (MHz):		2 - 4			
Max. bandpass (MHz):	≤0.3	≤6			

			VM	SC	RM
DVR-LX VHF IN-BAND PLAN SIMPLEX D2	**DVR-LX TX/RX SIMPLEX**	MSU TX/RX	✔	✔	
Valid freq. range (MHz):	136 - 174	136 - 174			
Min. separation (MHz):		>4			
Max. bandpass (MHz):	≤0.3	≤12			

			VM	SC	RM
DVR-LX VHF IN-BAND PLAN SIMPLEX E1	MSU TX/RX	**DVR-LX TX/RX SIMPLEX**	✔	✔	
Valid freq. range (MHz):	136 - 174	136 - 174			
Separation (MHz):		2 - 4			
Max. bandpass (MHz):	≤6	≤0.3			

			VM	SC	RM
DVR-LX VHF IN-BAND PLAN SIMPLEX E2	MSU TX/RX	**DVR-LX TX/RX SIMPLEX**	✔	✔	
Valid freq. range (MHz):	136 - 174	136 - 174			
Min. separation (MHz):		> 4			
Max. bandpass (MHz):	≤12	≤0.3			

				VM	SC	RM
DVR-LX VHF CROSS BAND SIMPLEX PLAN A	**DVR-LX TX/RX**	MSU TX/RX	MSU TX/RX	✔		
Valid freq. range (MHz):	136 - 174	UHF	700/800			
Max. bandpass (MHz):	≤0.3					

UHF 380-430MHz Frequency Plans

DVR-LX 380 - 430MHz IN-BAND PLAN A1	DVR-LX TX	MSU RX	DVR-LX RX	MSU TX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2	≥3	≥2			
Max. bandpass (MHz):	≤0.1	≤4	≤0.1	≤4			

DVR-LX 380 - 430MHz IN-BAND PLAN A2	DVR-LX TX	MSU TX	DVR-LX RX	MSU RX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2	≥3	≥2			
Max. bandpass (MHz):	≤0.1	≤4	≤0.1	≤4			

DVR-LX 380 - 430MHz IN-BAND PLAN A3	DVR-LX RX	MSU RX	DVR-LX TX	MSU TX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2	≥3	≥2			
Max. bandpass (MHz):	≤0.1	≤4	≤0.1	≤4			

DVR-LX 380 - 430MHz IN-BAND PLAN A4	DVR-LX RX	MSU TX	DVR-LX TX	MSU RX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2	≥3	≥2			
Max. bandpass (MHz):	≤0.1	≤4	≤0.1	≤4			

UHF 380-430MHz Frequency Plans (cont)

DVR-LX 380 - 430MHz IN-BAND PLAN B1	MSU RX	DVR-LX TX	MSU TX	DVR-LX RX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2 ≥3		≥2			
Max. bandpass (MHz):	≤4	≤0.1	≤4	≤0.1			

DVR-LX 380 - 430MHz IN-BAND PLAN B2	MSU RX	DVR-LX RX	MSU TX	DVR-LX TX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2 ≥3		≥2			
Max. bandpass (MHz):	≤4	≤0.1	≤4	≤0.1			

DVR-LX 380 - 430MHz IN-BAND PLAN B3	MSU TX	DVR-LX TX	MSU RX	DVR-LX RX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2 ≥3		≥2			
Max. bandpass (MHz):	≤4	≤0.1	≤4	≤0.1			

DVR-LX 380 - 430MHz IN-BAND PLAN B4	MSU TX	DVR-LX RX	MSU RX	DVR-LX TX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	380 - 430			
Min. separation (MHz):		≥2 ≥3		≥2			
Max. bandpass (MHz):	≤4	≤0.1	≤4	≤0.1			

UHF 380-430MHz Frequency Plans (cont)

DVR-LX 380 - 430MHz IN-BAND PLAN C

	DVR-LX TX/RX	DVR-LX RX/TX	MSU TX/RX	VM	SC	RM
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	✓	✓	✓
Separation (MHz):	4.5 - 5.5	≥5				
Max. bandpass (MHz):	≤0.3	≤0.3	≤12			

DVR-LX 380 - 430MHz IN-BAND PLAN D

	MSU TX/RX	DVR-LX TX/RX	DVR-LX RX/TX	VM	SC	RM
Valid freq. range (MHz):	380 - 430	380 - 430	380 - 430	✓	✓	✓
Separation (MHz):	≥5	4.5 - 5.5				
Max. bandpass (MHz):	≤12	≤0.3	≤0.3			

DVR-LX 380 - 430MHz CROSS BAND PLAN A

	MSU TX/RX	DVR-LX TX/RX	DVR-LX RX/TX	MSU TX/RX	VM	SC	RM
Valid freq. range (MHz):	VHF	380 - 430	380 - 430	700/800	✓	✓	✓
Separation (MHz):		9.5 - 10.5					
Max. bandpass (MHz):		≤0.3	≤0.3				

DVR-LX 380 - 430MHz CROSS BAND PLAN B

	MSU TX/RX	DVR-LX TX/RX	DVR-LX RX/TX	MSU TX/RX	VM	SC	RM
Valid freq. range (MHz):	VHF	380 - 430	380 - 430	700/800	✓	✓	✓
Separation (MHz):		4.5 - 5.5					
Max. bandpass (MHz):		≤0.3	≤0.3				

UHF 380-430MHz Simplex Frequency Plans

DVR-LX 380 - 430MHz CROSS BAND SIMPLEX PLAN A

	MSU TX/RX	DVR-LX TX/RX	MSU TX/RX	VM	SC	RM
Valid freq. range (MHz):	VHF	380 - 430	700/800	✓		
Max. bandpass (MHz):		≤0.3				

UHF 450-470MHz Frequency Plans

DVR-LX 450 - 470MHz IN-BAND PLAN A

	DVR-LX TX/RX	DVR-LX RX/TX	MSU TX/RX	VM	SC	RM
				✔	✔	✔
Valid freq. range (MHz):	450 - 470	450 - 470	450 - 470			
Separation (MHz):		4.5 - 5.5	≥5			
Max. bandpass (MHz):	≤0.3	≤0.3	≤12			

DVR-LX 450 - 470MHz IN-BAND PLAN B

	MSU TX/RX	DVR-LX TX/RX	DVR-LX RX/TX	VM	SC	RM
				✔	✔	✔
Valid freq. range (MHz):	450 - 470	450 - 470	450 - 470			
Separation (MHz):	≥5	4.5 - 5.5				
Max. bandpass (MHz):	≤12	≤0.3	≤0.3			

DVR-LX 450 - 470MHz CROSS BAND PLAN A

	MSU TX/RX	DVR-LX TX/RX	DVR-LX RX/TX	MSU TX/RX	VM	SC	RM
					✔	✔	✔
Valid freq. range (MHz):	VHF	450 - 470	450 - 470	700/800			
Separation (MHz):		4.5 - 5.5					
Max. bandpass (MHz):		≤0.3	≤0.3				

UHF 450-470MHz Simplex Frequency Plans

DVR-LX 450 - 470MHz CROSS BAND SIMPLEX PLAN A

	MSU TX/RX	DVR-LX TX/RX	MSU TX/RX	VM	SC	RM
				✔		
Valid freq. range (MHz):	VHF	450 - 470	700/800			
Max. bandpass (MHz):		≤0.3				

Main Models: Dropship to New Part Numbers Mapping

The table below shows the mapping between the old dropship part numbers and the new model and option numbers. To compare a new quote to an older quote with dropship part numbers, each dropship number will map to 1 or more of the following:

- Main Model
  - In-Band option (if applicable)
  - Suitcase option (if applicable)
  - Rackmount option (if applicable)
  - Custom Frequency Plan (if applicable) TT06580AA->QA09537AA
- APX Mobile Radio

Compatible Mobile Radio	Dropship #	Mobile Radio (CPQ)	Option #
APX™2500/4500/5500/6500	TT05715AA	Single Band	QA09259AA
APX™7500	TT05716AA	Dual Band (APX 7500)	QA09260AA
APX™8500	TT06279AA	All Band (APX 8500)	QA09261AA

700MHz	Dropship #	Main Model	In-Band Option	Suitcase or Rackmount Option
In-Band Plan A Vehicle Mount	TT3793A	M93USS9PW1AN	QA09344AA	
In-Band Plan B Vehicle Mount	TT3794A			
In-Band Plan C Vehicle Mount	TT3795A			
In-Band Plan A Suitcase	TT3796A	M93USS9PW1AN	QA09345AA or QA09346AA with APX8500	Depending on Voltage Supply and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan B Suitcase	TT3797A			
In-Band Plan C Suitcase	TT3798A			
Cross-Band Vehicle Mount	TT3799A	M93USS9PW1AN		
Cross-Band Suitcase	TT3800A	M93USS9PW1AN		Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09400AA QA09401AA QA09402AA QA09403AA QA09404AA QA09405AA QA09406AA QA09407AA

800MHz	Dropship #	Main Model	In-Band Option	Suitcase or Rackmount Option
In-Band Plan A Vehicle Mount	TT3887A	M93VSS9PW1AN	QA09344AA	
In-Band Plan B Vehicle Mount	TT3888A			
In-Band Plan C Vehicle Mount	TT3889A			
In-Band Plan A Suitcase	TT3890A	M93VSS9PW1AN	QA09345AA or QA09346AA with APX8500	Depending on Voltage Supply and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan B Suitcase	TT3891A			
In-Band Plan C Suitcase	TT3892A			
Cross-Band Vehicle Mount	TT3893A	M93VSS9PW1AN		
Cross-Band Suitcase	TT3894A	M93VSS9PW1AN		Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09400AA QA09401AA QA09402AA QA09403AA QA09404AA QA09405AA QA09406AA QA09407AA

VHF	Dropship #	Main Model	In-Band Option	Suitcase or Rackmount Option
In-Band Plan A Vehicle Mount	TT3859A	M93KSS9PW1AN	QA09272AA	
In-Band Plan B Vehicle Mount	TT3860A			
In-Band Plan C Vehicle Mount	TT3861A			
In-Band Plan A Suitcase	TT3864A	M93KSS9PW1AN	QA09351AA	Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan B Suitcase	TT3865A			
In-Band Plan C Suitcase	TT3866A			
In-Band Plan A Rackmount	TT3926A	M93KSS9PW1AN	QA09272AA	Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09612AA QA09613AA QA09614AA QA09615AA
In-Band Plan B Rackmount	TT3926A			
In-Band Plan C Rackmount	TT3926A			
In-Band Plan D Vehicle Mount	TT3862A	M93KSS9AW1AN (Simplex)	QA09348AA or QA09272AA (flat mount)	
In-Band Plan E Vehicle Mount	TT3863A			
In-Band Plan D Suitcase	TT3867A	M93KSS9AW1AN (Simplex)	QA09352AA	Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan E Suitcase	TT3868A			
Cross-Band Plan A Vehicle Mount	TT3869A	M93KSS9PW1AN		
Cross-Band Plan A Suitcase	TT3870A	M93KSS9PW1AN		Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09400AA QA09401AA QA09402AA QA09403AA QA09404AA QA09405AA QA09406AA QA09407AA
Cross-Band Plan A Rackmount	TT3928A	M93KSS9PW1AN		Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09616AA QA09617AA QA09618AA QA09619AA
Cross-Band Simplex Vehicle Mount	TT4007A	M93KSS9AW1AN (Simplex)		

UHF 380-430MHz	Dropship #	Main Model	In-Band Option	Suitcase or Rackmount Option
In-Band Plan A Vehicle Mount	TT3871A	M93PSS9PW1AN	QA09272AA	
In-Band Plan B Vehicle Mount	TT3872A			
In-Band Plan C Vehicle Mount	TT3873A			
In-Band Plan D Vehicle Mount	TT3874A			
In-Band Plan A Suitcase	TT3875A	M93PSS9PW1AN	QA09355AA	Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan B Suitcase	TT3876A			
In-Band Plan C Suitcase	TT3877A			
In-Band Plan D Suitcase	TT3878A			
In-Band Plan A Rackmount	TT3929A	M93PSS9PW1AN	QA09741AA or QA09773AA (depending on frequency plan)	Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09612AA QA09613AA QA09614AA QA09615AA
In-Band Plan B Rackmount	TT3929A			
In-Band Plan C Rackmount	TT3929A			
In-Band Plan D Rackmount	TT3929A			
Cross-Band Plan A Vehicle Mount	TT3879A	M93PSS9PW1AN		
Cross-Band Plan B Vehicle Mount	TT3880A			
Cross-Band Plan A Suitcase	TT3897A	M93PSS9PW1AN		Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09400AA QA09401AA QA09402AA QA09403AA QA09404AA QA09405AA QA09406AA QA09407AA
Cross-Band Plan B Suitcase	TT3898A			
Cross-Band Plan A Rackmount	TT3930A	M93PSS9PW1AN		Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09616AA QA09617AA QA09618AA QA09619AA
Cross-Band Plan B Rackmount	TT3930A			
Cross-Band Simplex Vehicle Mount	TT4008A	M93PSS9AW1AN (Simplex)		

UHF 450-470MHz	Dropship #	Main Model	In-Band Option	Suitcase or Rackmount Option
In-Band Plan A Vehicle Mount	TT3881A	M93RSS9PW1AN	QA09272AA	
In-Band Plan B Vehicle Mount	TT3882A			
In-Band Plan A Suitcase	TT3883A	M93RSS9PW1AN	QA09355AA	Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09408AA QA09409AA QA09412AA QA09413AA
In-Band Plan B Suitcase	TT3884A			
In-Band Plan A Rackmount	TT3931A	M93RSS9PW1AN	QA09773AA or QA09742AA (depending on frequency plan)	Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09612AA QA09613AA QA09614AA QA09615AA
In-Band Plan B Rackmount	TT3931A			
Cross-Band Plan A Vehicle Mount	TT3885A	M93RSS9PW1AN		
Cross-Band Plan A Suitcase	TT3886A	M93RSS9PW1AN		Depending on Voltage Supply, Mobile Radio and Control Head, one of the following: QA09400AA QA09401AA QA09402AA QA09403AA QA09404AA QA09405AA QA09406AA QA09407AA
Cross-Band Plan A Rackmount	TT3932A	M93RSS9PW1AN		Depending on Duplexer, Alarm Capability and Power Amplifier, one of the following: QA09616AA QA09617AA QA09618AA QA09619AA
Cross-Band Simplex Vehicle Mount	TT4009A	M93RSS9AW1AN (Simplex)		

Standalone Accessories

Feature Licenses

NOTES: All serial numbers must be provided at the time of order on the Required Information tab.
Feature license(s) are not transferable between units and if lost, must be re-purchased.

Name	Description	Part # (Old Dropship#)
Authentication	Portable Link Layer authentication through the DVR-LX® prevents unauthorized portables accessing the radio network (per unit) **Required:** ● Tier 3: P25 Enhanced Trunking Operation ● DVR-LX® software release 1.51 or greater ● Mobile and portable to be running compatible firmware version (R20.02.00)	**DVR-LX:** HKVN4960A (DDN3117A) **DVR:** HKVN4969A (DDN3114A)
RM-OTAP	Enables the operator to perform firmware and configuration updates on each DVR-LX® unit using Motorola Radio Management via the Mobile Radio. **Required:** ● DVR-LX® software release 1.60 or greater ● Mobile to be running compatible firmware version (R21.01.00 or greater)	**DVR-LX:** HKVN4961A (DDN3118A) **DVR:** HKVN4968A (DDN3115A)
PSU Conventional Scan (Bulk Order)	Enables an enhanced PSU to support conventional scan while the DVR-LX® is configured as its system type. **Required:** ● PSU Option DVRS Enabled PSU QA00631 ● PSU Option DVRS PSU Conventional Scan HA00677 ● DVR-LX® software release 1.61 or greater ● Mobile and portable to be running compatible firmware version (R21.20.00 or greater) **Note:** To qualify for bulk order, all serial numbers must be provided at the time of order. This license will only be applicable to the serial numbers provided. Should the customer fail to provide the serial numbers for all units at the time of order, the customer must place a new order when the remaining serial numbers are available.	**DVR-LX:** HKVN4965A (DDN3175A) **DVR:** HKVN4967A (DDN3173A)

SmartConnect In-Vehicle Range Extension	Enables a "DVRS enabled" PSU to maintain voice and emergency services when SmartConnect MSU is connected via broadband (LTE, SAT, Wi-Fi) (per unit) **Required:** ● SmartConnect GA01630 ● DVRS MSU GA00631 ● Y CABLE GA01779 ● DVR-LX® software release 1.24 or greater ● Mobile and portable to be running compatible firmware version (R23.00.00 or greater)	**DVR-LX:** HKVN4963A (DDN3230A)
GPS Driven Deactivation	Enables a DVR-LX® to be deactivated by a pre-configured GPS based (Speed & Distance) threshold to decide when to deactivate the primary DVR-LX®. (Per Unit) **Required:** ● DVR-LX® compatibility software release 1.27 or greater ● Mobile to be running compatible firmware version (R24.00.00 or greater) ● Mobile GPS Activation GA00229	**DVR-LX:** HKVN4964A (DDN3263A) **DVR:** HKVN4966A (DDN3261A)

Cables

Name	Description	Part # (Old Dropship#)
Programming Cable	For use with DVR/DVR-LX® **Details:** 10ft (PN AK672-3-R)	VKN0039A (DDN9025A)
Options Cable (Stacked) SPARE	For use with stacked vehicle mount DVR/DVR-LX® **Details:** 2.5ft (PN 7W083X06-01)	VKN0029A (DDN9031A)
Options Cable (Flat) SPARE	For use with flat vehicle mount DVR/DVR-LX® **Details:** 2.5ft (PN 7W083X84-01)	VKN0030A
RF Switch Cable SPARE	For use with in-band vehicle mount DVR/DVR-LX® **Details:** 1ft (PN 7W083X09-01)	VKN0028A (DDN9032A)
VR to MSU Control Cable (Stacked Mount) SPARE	Connects a stacked vehicle mount DVR/DVR-LX® to the APX mobile radio **Details:** 3ft (PN 7W083X05-01= 1W083B13-01)	3ft: VKN0038A 5ft: VKN0036A 10ft: VKN0035A 15ft: VKN0034A 20ft: VKN0033A 25ft: VKN0037A (DDN9028B)
VR to MSU Control Cable (Flat Mount) SPARE	Connects a flat vehicle mount DVR/DVR-LX® to the APX mobile radio **Details:** 3ft (PN 7W083X83-01)	3ft: VKN0047A 5ft: VKN0045A 10ft: VKN0044A 15ft: VKN0043A 20ft: VKN0042A 25ft: VKN0046A (DDN2645A)
Control Head to MSU Cable SPARE	Connects the control head to the MSU; Ideal for Suitcase **Details:** 2ft	HKN6245A
VR to VR Notch Filter Cable SPARE	Connects the vehicle mount DVR/DVR-LX® to DVR/DVR-LX® in-band filter **Details:** 3ft (PN 7W083X16-01)	VKN0027A (DDN9033A)
MSU to MSU Notch Filter Cable SPARE	Connects the vehicle mount non-APX™8500 MSU to the MSU in-band filter **Details:** 3ft (PN 7W083X17-01)	VKN0026A (DDN9034A)
APX™8500 to MSU Notch Filter Cable SPARE	Connects the vehicle mount APX™8500 MSU to the MSU in-band filter **Details:** 3ft (PN 7W900X94-02)	VKN0040A (DDN2719A)
DC Power Cable (Stacked) SPARE	For use with stacked vehicle mount **Details:** 18ft (PN 1W083A01-01)	VKN0031A (DDN9030A)
DC Power Cable (Flat) SPARE	For use with flat vehicle mount **Details:** 18ft (PN 1W083A02-01)	VKN0032A

Vehicle Installation Kits

NOTE: Spare installation kit includes fuse installation kit, DVR-LX® power cable and a mini UHF Male RA connector (PN 7K093X01).

Name	Description	Part # (Old Dropship#)
Cross-band Stacked Installation Kit SPARE	Operation Mode: Cross-band Mount Type: Stacked Freq Band: Any band except Simplex	VBN0011A (DDN3274A)
In-band Stacked Installation Kit SPARE	Operation Mode: In-band Mount Type: Stacked Freq Band: Any band except Simplex	VBN0010A (DDN3274A)
Cross-band Simplex Stacked Installation Kit SPARE	Operation Mode: Cross-band Mount Type: Stacked Freq Band: VHF Simplex, UHF 380-430MHz Simplex, UHF 450-470MHz Simplex	VBN0009A (DDN3274A)
Cross-band Flat Installation Kit SPARE	Operation Mode: Cross-band Mount Type: Flat Freq Band: Any band except Simplex	VBN0008A (DDN3274A)
In-band Flat Installation Kit SPARE	Operation Mode: Cross-band Mount Type: Flat Freq Band: Any band except Simplex	VBN0007A (DDN3274A)
Cross-band Flat Simplex Installation Kit SPARE	Operation Mode: Cross-band Mount Type: Flat Freq Band: VHF Simplex, UHF 380-430MHz Simplex, UHF 450-470MHz Simplex	VBN0006A (DDN3274A)

Antennas

Name	Description	Part # (Old Dropship#)
VEHICLE ROOF/TRUNK MOUNT ANTENNAS- UNITY GAIN (0dBd)		
VHF Unity Gain Antenna	136 – 144MHz	HAD4006A
VHF Unity Gain Antenna	144 – 150.8MHz	HAD4007A
VHF Unity Gain Antenna	150.8 – 162MHz	HAD4008A
VHF Unity Gain Antenna	162 – 174MHz	HAD4009A
UHF Unity Gain Antenna	380 – 433MHz	HAE6012A
UHF Unity Gain Antenna	450 – 470MHz	HAE4003A
700/800MHz Unity Gain Antenna	764 – 870MHz	HAF4016A
MAG MOUNT ANTENNAS- UNITY GAIN (0dBd)		
VHF Unity Gain Mag Mount Antenna	For use with vehicle mount APX8500 mobile radio **Freq Range:** 136 – 174MHz	VAD0001A (DDN9014A)
VHF Unity Gain Mag Mount Antenna	For use with vehicle mount DVR-LX and non-APX8500 mobile radio **Freq Range:** 136 – 174MHz	VAD0002A (DDN9014A)
VHF Unity Gain Mag Mount Antenna	For use with suitcase DVR-LX and mobile radio **Freq Range:** 136 – 174MHz	VAD0003A (DDN9014A)
UHF Unity Gain Mag Mount Antenna	For use with vehicle mount APX8500 mobile radio **Freq Range:** 380 – 520MHz	VAE0001A (DDN9015A)
UHF Unity Gain Mag Mount Antenna	For use with vehicle mount DVR-LX and non-APX8500 mobile radio **Freq Range:** 380 – 520MHz	VAE0002A (DDN9015A)
UHF Unity Gain Mag Mount Antenna	For use with suitcase DVR-LX and mobile radio **Freq Range:** 380 – 520MHz	VAE0003A (DDN9015A)
700/800MHz Unity Gain Mag Mount Antenna	For use with vehicle mount APX8500 mobile radio **Freq Range:** 764 – 869MHz	VAF0001A (DDN9016A)
700/800MHz Unity Gain Mag Mount Antenna	For use with vehicle mount DVR-LX and non-APX8500 mobile radio **Freq Range:** 764 – 869MHz	VAF0002A (DDN9016A)
700/800MHz Unity Gain Mag Mount Antenna	For use with suitcase DVR-LX and mobile radio **Freq Range:** 764 – 869MHz	VAF0003A (DDN9016A)

Suitcase Accessories

Name	Description	Part # (Old Dropship#)
Suitcase AC Power Cable 120VAC SPARE	(PN 7W077X17-01)	VKN0048A (DDN9525A)
Suitcase AC Power Cable 220VAC SPARE	(PN 7W077X44-01)	VKN0049A (DDN9525A)
Suitcase DC Power Cable SPARE	(PN 7W077X32-01)	VKN0025A (DDN9524A)
Suitcase Battery Backup	with Universal Charger, 2HRS (50:50 TX-RX DUTY RATIO)	VBN0004A (DDN9011A)
Battery Backup DC Power Cable	(PN 7W077X11-01)	VKN0041A (DDN2646A)
Battery Backup Charger		VPN0001A (DDN2334A)
Zippered Pouch	For accessory cables (PN 3Y088B01-01)	VLN0001A (DDN2335A)

APX™8500 Interface Kits

Use the Interface Kit Selection tool [available here for download](#) under Ordering Guide header to determine which (if any) kit and installation drawing are required. Installation drawing number required at time of order.

Name	Description	Standalone Accessory Part # / Internal Option # (Old Dropship#) *Internal Option # generated by kit selection tool*
Single Triplexer Kit		H1919
Single Triplexer w Relay Kit	For use with VHF Cross-Band	VFN0006A / QA09482AA (DDN2658A)
Single Triplexer w Relay Kit	For use with UHF Cross-Band	VFN0005A / QA09483AA (DDN2658A)
Single Triplexer w Relay Kit	For use with 700/800MHz Cross-Band	VFN0004A / QA09449AA (DDN2658A)
Dual Triplexer Kit	For use with Cross-Band	VFN0008A / QA09447AA (DDN2657A)
Dual Triplexer Kit	For use with In-Band	VFN0007A / QA09448AA (DDN2657A)
Dual Triplexer w Relay Kit	For use with VHF Cross-Band	VFN0003A / QA09487AA (DDN2659A)
Dual Triplexer w Relay Kit	For use with UHF Cross-Band	VFN0002A / QA09488AA (DDN2659A)
Dual Triplexer w Relay Kit	For use with 700/800MHz Cross-Band	VFN0001A / QA09445AA (DDN2659A)
Relay Kit	For use with Cross-Band	VLN0005A / QA09446AA (DDN2808A)

Training

Name	Description	Part # (Old Dropship#)
Basic Training (1 Day)	Includes soft copy of training materials. Customized training available subject to content and price negotiation. **Training the Trainer/End User** Provides a general overview of Mobile Repeater solutions with respect to the agency's particular use case. Best practices highlighted for common deployment scenarios. Participants will receive hands-on training for practical operation and control. **Requirements:** a minimum of 1 DVR-LX® to be tested and in use on the system. **OR** **Technical and Programming Training** Provides radio technicians an in-depth understanding on how the DVR-LX® is integrated into the everyday operation of the agency. Focuses on code plug compatibility, Futurecom Repeater Configurator (FRC) software functionality and programming for optimal end user experience. **Requirements:** a minimum of two fully functioning Portable radios (PSUs) programmed to the current system and at least one functional DVRS setup. DVRS setup includes a DVR-LX® and a mobile radio (MSU) set. **Requirement:** Contact debra.oster@motorolasolutions.com or maria.tabladillo@motorolasolutions.com from the Worldwide Education organization to coordinate a training session. Please note that the lead time is ~180 days.	PSV01S04246A (DDN3699A)
Extended Training	1 additional day of on-site and/or virtual training **Requirements:** Basic Training	PSV01S04247A (DDN3700A)

Warranties & Services

NOTE: Warranties can be ordered as standalone up to 90 days after product purchase through after the fact purchase process.

Name	Description	Part #
Essential Services	Available for vehicle, suitcase and rackmount	LSV01S04105A
Essential Services with Accidental Damage	Available for vehicle and suitcase	LSV01S04108A
Installation Services		LSV01Q03645A
Programming Services		LSV01Q03648A
Professional Services	Deployment Optimization	LSV01Q03650A

When Additional Information Is Required for a Standalone Accessory: Feature Licenses, Interface Kits

Step 1. Search for the Standalone Item from the Product Selection page or from the Quote page.

Step 2. Select the item and enter a quantity. A reminder appears below when additional information is required.

Example Screenshot for Quantity 3

Selected Items

Below is a list of items ready to be added to your Quote. Changes can be made to the Selected Items table by either changing quantities or checking the Remove checkbox, followed by clicking the "Update" button.

	Qty	Selected Item	Description	List Price	Data Requirement	Extended Price	Remove
1	2	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	$10.00	Non-frequency	$20.00	

Attention: 1 or more accessories requires additional information to complete the quote. Go to the Required Order Information tab and complete the required fields if the information is available. If not, this information will be required at the time of order.

Step 3. At the top left of the page, there is a tab for REQUIRED ORDER INFORMATION where the additional information (Serial Numbers and contact information) must be entered. The valid range and format for each value is indicated in the Help text provided for each.

NOTE 1: There is one line per serial number, determined by the quantity in Item Selection->Selected Items.

NOTE 2: There is a delay of approx 20 seconds after entering each value.

Example Screenshot with 2 Serial Numbers

ITEM SELECTION	REQUIRED ORDER INFORMATION	DEV

Non-Frequency Data

	Item	Description	Required Info.	Text Value	Help
1	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	Technical Contact Email Address	contact@email.com	Entered value must be at least 12 characters. If more than 1 email address is required, separate the email addresses by a comma. Example: test1@motorolasolutions.com,test2@motorolasolutions.com. Entered value must not be more than 100 characters.
2	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	Last Name	NAME	Entered value must be at least 0 characters.Entered value must not be more than 20 characters.All characters must be uppercase in case of alphabets.Value cannot contains spaces.
3	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	Admin Phone Number	123-456-7890	Entered value must be at least 1 characters.Entered value must not be more than 500 characters.Value cannot contains spaces.
4	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	First Name	CONTACT	Entered value must be at least 0 characters.Entered value must not be more than 20 characters.All characters must be uppercase in case of alphabets.Value cannot contains spaces.
5	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	Factory Serial Number 8-10 CHAR - 1	11111111	Entered value must be at least 8 characters.Entered value must not be more than 10 characters.All characters must be uppercase in case of alphabets.Value cannot contains spaces.
6	HKVN4960A	LICENSE,DVR-LX AUTHENTICATION	Factory Serial Number 8-10 CHAR - 2	22222222	Entered value must be at least 8 characters.Entered value must not be more than 10 characters.All characters must be uppercase in case of alphabets.Value cannot contains spaces.