

Futurecom Systems Group, ULC

# Over the Air Programming Via Radio Management (RM-OTAP) User Guide

for DVR-LX®/DVR/VRX1000

Document: 8K083X64 Revision: R4.1 Date: May 2022

Rev	Date	Notes & References			
0	2020-07-27	Initial Release			
1	2020-08-07	ed DVR-LX®, RM-OTAP File Type Support			
2	2020-10-14	Added Helpful Hints			
2.1	2020-11-20	Updated DVR reference to VR, Updated support for FW-LMR			
3	2020-02-24	Added Helpful Hints: FW Compatibility, Enhancements			
		Clarification of license type support- now included RM-OTAP license			
3.1	2020-08-18	Updated information about saving DCD files and bundling license			
3.2	2021-10-13	Addition of How to Update VR ID, Replacing a VR, Overwriting			
		Temporary Config/FW Update			
4.1	2022-01-27	Feature License Notes information added			

## **Document Revisions**

## **Proprietary Statement**

© 2022 Futurecom Systems Group ULC. All Rights Reserved

Futurecom, PDR8000<sup>®</sup>, DVR-LX<sup>®</sup>, the Futurecom Logo and the Stylized FC logo are registered trademarks of Futurecom Systems Group, ULC. All other trademarks are the property of their respective owner.

This document is provided as is. This document may contain technical inaccuracies or typographical errors. Futurecom is not responsible for any changes made from original format.

Futurecom Systems Group ULC. reserves the right to make changes or improvements to the equipment, software or specification described in this document at any time and without prior notice. These changes will be incorporated in the new releases of this document.

Futurecom Systems Group ULC. waives responsibility for any labour, materials or costs incurred by any party as a result of using this document.

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners.

# **Table of Contents**

1.	. Over the Air Programming via Radio Management	5
2	. Feature Requirements	6
3.	. VR Firmware Update	8
4	. VR Configuration Update	9
	4.1 Creating a DCD File Creation of New File Modify an Existing File License File Application	10 11
	4.2 Importing DCD File in RM server	16
	4.3 Linking the Imported DCD file to an MSU template	17
	4.4 Selecting the Template to Write to MSU	18
	4.5 How to Initiate Automatic Update for a Replacement VR	20
	4.6 How to Overwrite a Temporary Configuration or Firmware Update for a VR	21
5.	Licensed Feature Upgrade	22
6.	. RM-OTAP File Type Support	23
7.	Contact Information	24

## 1. Over the Air Programming via Radio Management

Over the Air Programming via Radio Management (**RM-OTAP**) provides the radio technicians the ability to program or upgrade the firmware/features of a DVR-LX<sup>®</sup>/DVR/VRX1000 (**VR**) without physically connecting the devices to a computer.



Figure 1 – No Physical Connection to VR

The RM-OTAP feature leverages off the APX<sup>™</sup> Radio Management application. Firmware & configuration files are pushed to the VR via Mobile Subscriber Unit **(MSU)** through any of the following mediums:

- 1. Wi-Fi
- 2. P25 (LMR)
- 3. USB (or USB connected to LTE device/modem)

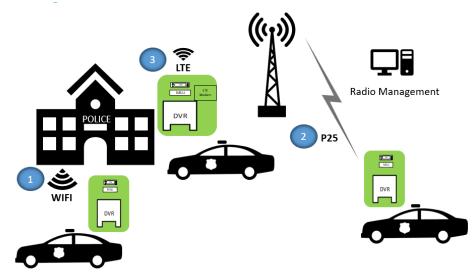


Figure 2 – Delivery Methods for RM-OTAP

RM-OTAP is a licensed feature and can be purchased at either time of order for the VR or purchased as a field upgrade. Please reference the Futurecom Ordering Guide by visiting Futurecom > Support > Documentation-Software > DVRS-VRX1000

## 2. Feature Requirements

Vehicular Repeater (**VR**): DVR-LX<sup>®</sup>, DVR and VRX1000

VR Configuration Tool: Tweaker 2.05 or later, FRC 1.0 or later Radio Management (**RM**): R21.00.01 or later

VR Firmware: 1.60 or later Mobile Firmware: R21.00.01 or later

VR Feature License: RM-OTAP Mobile Feature License: DVRS MSU Operation

To verify which mobile models support firmware/configuration updates, see **RM-OTAP File Type Support** 



#### HELPFUL HINT

When using RM-OTAP for firmware updates, please note that firmware compatibility is always enforced. Compatible MSU and VR firmware versions are bundled together in the MSU firmware. If MSU is updated with a specific firmware, compatible (bundled) VR firmware will be applied to the attached VR. For a list of VR-MSU firmware version bundles, please reference the Futurecom Compatibility Charts by visiting Futurecom > Support > Documentation-Software > DVRS-VRX1000



#### HELPFUL HINT

Do not mix RM-OTAP configuration with FRC configuration. RM-OTAP and FRC do not communicate and tracking configurations will be confusing. One method must be selected.



#### **HELPFUL HINT**

After the initial launch of RM-OTAP support for the VR, there have been subsequent enhancements to improve the user experience. Please see below to determine what capability was introduced and when.

<b>RM VERSION</b>	DESCRIPTION
R21.00.01	User is always required to link a dcd file with a mobile radio template
(Initial Launch)	when using Radio Management.
	a. With RM-OTAP feature license- linked dcd file is applied to the VR.
	<ul> <li>b. Without RM-OTAP feature license- linked dcd file is not applied to the VR.</li> </ul>
R21.40.00	User no longer needs to link a dcd file when working with mobile
	firmware prior to R21.00.01.
	Manage->Templates->DVRS Files field, select "None" (see Section 4.3)
R23.00.00	User no longer needs to link a dcd file when they do not have RM-
	OTAP feature license for VR (regardless of mobile firmware).
	Manage->Templates->DVRS Files field, select "None" (see Section 4.3)
R23.00.00	User can apply an RM-OTAP license to a VR using RM.
R26.00.00	Support added for VR ID only change in SR2021.4

# 3. VR Firmware Update

When updating the MSU firmware, there is no user action required to update the VR firmware. The VR firmware update software (**DFB**) is bundled with the MSU firmware and will automatically update the VR firmware during an MSU firmware update. Please refer to Motorola Radio Management Training if you have questions regarding an MSU update.

https://learning.motorolasolutions.com/

# 4. VR Configuration Update

A VR configuration update using RM-OTAP is a four-step procedure:

Step 1: Creating a DCD file from Tweaker/FRC

- Creation of New File
- Modify an Existing File
- Bundling with License File

Step 2: Importing DCD File in RM server

Step 3: Linking the imported DCD file to an MSU template

Step 4: Selecting the template to write to MSU

### **4.1 Creating a DCD File**

To create a DCD file, there are two options: create a new file or modify an existing file.

**NOTE:** Remember to follow programming sequence outlined in VR Programming Guidelines to ensure the MSU and VR are synchronized.



#### HELPFUL HINT

It is always recommended to save each DCD file to enable future configuration changes for a particular VR(s).

#### Creation of New File

- 1. Establish communications with VR
- 2. Read the VR: select Repeater → Load Data from APX Repeater (F2)
- 3. Make configuration changes (as needed) for this new DCD file
- 4. Save the data as DCD: select *File* → *DCD Files* → *Save DCD File*
- 5. Enter data into Save window and click SAVE
- 6. Enter data into DCD Options window and click OK (Serial numbers are optional)

CD Options			>
Configuration Data Name Des	cription		_
ist the serial numbers of the repeaters you wish to a his DCD file to be applied to all repeaters.	llow this DCD file to be applied to.	Leave the list empty to allow	
eparate serial numbers with special characters , ;   o	or newlines.		
erial numbers should be written either as a single va st below can contain a mixture of individual values ar	ue (eg: 12345678) or as a range ( 1d ranges.	(eg: 1234000-1235000). The	
Load TXT File			
			^
			v
Encryption			
Default     Custom			
Password			
Confirm			

**Configuration Data Name:** Filename displayed after importing into Radio Management (max 23 alphanumeric chars)

**Description:** Additional text to clarify content; displayed in Preview File Header section in Open File window (max 1024 alphanumeric chars)

**Load TXT File:** Command button that loads an external file that contains a list of the serial numbers. All data imported will be placed into the List of Serial Numbers field

**List of Serial Numbers:** List of serial numbers of the repeaters that this DCD file should apply to. If left BLANK, this DCD file will be applicable to all repeaters (max 65000 alphanumeric characters)

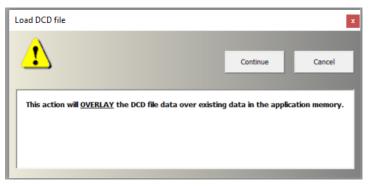
**Encryption:** If custom encryption is used, loading the DCD file in FRC will require the custom password to be entered (min 4, max 12 characters)

**Bundle License File:** Command button that selects a License File to be bundled to the DCD. The text field next to the button displays the License File to be bundled.

#### Modify an Existing File

**NOTE:** DPD files are not meant to be used for this purpose- only DCD files may be modified to create another DCD file.

1. Select File → DCD Files → Load DCD File



- 2. Click Continue.
- 3. Specify the DCD file location and name then click Open.

**NOTE:** If original DCD file was saved with a description, it will be displayed in the Preview File Header section.

Look in:	🖈 Quick acces	5	👻 💠 🚯 🛙	f 🔲 🕶	
-	***** *		× ×		
*		uments	Pictures		
uick access	Onel	Drive - McWane, Inc	OneDrive -	Mc\Documents	
	Dem	10	DVRS		
Desktop	Wind	dows (C:)\Data\D,_\OTAP	Windows (	C:)\Pro\Common	
-	Trace		upf		
Libraries		e dows (C:)\Dat\SR2020.3		C:)\Data\D\OTAP	
This PC	Recent files (1				^
-		o.dcd			
Network		dows (C:)_\DVRS-Testing			
	File name:	Demo dcd		• Ope	n
		DCD file (* dcd)		▼ Canc	el
	Files of type:	DCD file (* dcd)		• Canc	el
		DCD file (*.dcd)		▼ Canc	el
	Files of type:			• Canc	el
Preview File Hea	Files of type:			• Canc	el
Preview File Hea Data\DVRS-Test no DCD File	Files of type:		*	Canc	el:
Data\DVRS-Test	Files of type:		~	Canc	el
Data\DVRS-Test	Files of type:		~	▼ Canc	el
Data\DVRS-Test	Files of type:		^	Canc	el
Data\DVRS-Test	Files of type:		~	Canc	el
Data\DVRS-Test	Files of type:		~	▼ Canc	el
Data\DVRS-Test	Files of type:		*	Canc	el
Data\DVRS-Test	Files of type:		*	• Canc	:el
Data\DVRS-Test	Files of type:		^	• Canc	el
Data\DVRS-Test	Files of type:		*	▼ Cane	el
Data\DVRS-Test	Files of type:		6	▼ Cane	el

4. Unselect any screens with data that is not desired to be loaded and then click OK.

Select screens to load from DCD	>
Only selected screens will be updated !	Cancel OK
Screens :	
✓ User Info	
Frequency Band Configuration	
Repeater Channel Setup	
Mobile Radio Channel Setup	
✓ Hardware Setup	
✓ Analog Setup	
VR Common Setup	
✓ Emergency Setup	
✓ MSU Interface Setup	
✓ Tone Setup	
✓ Station ID Setup	
✓ RSSI Setup	
✓ Digital Setup	
✓ MSU Data	
✓ PSU IDs Allowed	
VR Remote Activation IDs	
✓ TG Translation Table	
VRS-EP Compatible Mode: User Options	
VRS-EP Compatible Mode: User Option Tables	
Semi Permanent Master	
Primary/Secondary Setup	
✓ OTAP Setup	

- 5. Make configuration changes for this new DCD file.
- 6. Save the data as DCD: select *File* → *DCD Files* → *Save DCD File*
- 7. Enter data into Save window and click SAVE
- 8. Enter data into DCD Options window and click OK (Serial numbers are optional)
  - Refer to Step 6 in Creation of New File

#### License File Application

All feature license files, including the RM-OTAP license file, may be sent using RM-OTAP by bundling with a DCD file.

A license file is bundled in as part of creation or modification of a DCD file. See **Bundle License File** (DCD Options window, bottom left)

DCD Options	×
Configuration Data Name	Description
this DCD file to be applied to all repeaters. Separate serial numbers with special characters, Serial numbers should be written either as a singl	le value (eg: 12345678) or as a range (eg: 1234000-1235000). The
list below can contain a mixture of individual valu	es and ranges.
	^
	v
Encryption © Default C Custom Password Confirm Bundle License File June License File bun	died OK Cancel

#### **HELPFUL HINT**

Older versions of Tweaker/FRC have a separate menu option for saving DCD files with license: select *File*  $\rightarrow$  *DCD Files*  $\rightarrow$  *Save DCD File with License* 

#### **Bundling License to Template Files**

User can bundle a license file to template file. This can be delivered to a single repeater or fleet of repeaters via Radio Manager. Any repeater's S/N that matches a S/N in the bundled license file will have that feature enabled and take in the configurations in the corresponding template file.

#### Preview License Info Bundled to (DCD) Template File

User can **bundle** a license file to DCD file for deployment via Radio Management. FRC shows preview of info prior to loading the DCD file

#### **Procedures:**

#### 1. Select File $\rightarrow$ DCD Files (Templates) $\rightarrow$ Load DCD File

😴 Futurecom Repeater Configurator 1.29 (VR) (Default) - 18032700 -				
File	Repeater Application User	Options	Help	
	DPD Files (Templates)	>_[		
	DCD Files (Templates)	>	Apply DCD to Repeater	
	EPR Files (Futurecom Support)	>	Save DCD File	
	Import	>	Load DCD File	
	Apply Rescue File to Repeater Apply License File		E:\Temp\18032700-PSUScan_37-ch4.dcd E:\Temp\18032700-all_lic_off.dcd E:\Temp\18032700-all_wBM0TAP.dcd	

2. Enable checkbox Preview File Header in the Open File dialog window

	▼	← 🗈 💣 📰▼ Date modified	Ty ^
🗋 18032700-a	II_lic_off.dcd		Ty ^
	ll_lic_off.dcd		
18032700-D		11/25/2021 1:10 PM	DC
	CD-1_w_2lic.dcd	11/25/2021 12:41 PM	DC
18032700-o	nly-RMOTAP.dcd	11/19/2021 10:39 AM	D
18032700-P	SUScan_37-ch4_w_lic.dcd	11/17/2021 3:24 PM	DC
18032700-P	SUScan_37-ch4.dcd	11/17/2021 2:51 PM	DC
🗋 18032700-P	SUScan_39.dcd	11/17/2021 12:05 PM	DC
🗋 18032700-P	SUScan.dcd	11/17/2021 11:56 AM	DC
18032700-D	CD-1.dcd	11/5/2021 9:17 AM	DC
18032700_A	II_Feature.dcd	11/1/2021 3:38 PM	DC
18116176-2	11027.dcd	10/27/2021 11:06 AM	DC
📋 18116176-a	nalog_SN.dcd	10/25/2021 10:11 AM	D( 🗸
<			>
File name:	18032700-PSUScan_37-ch4_w_lic	▼ 0;	pen
Files of type:	DCD file (*.dcd)	✓ Ca	ncel
Header			
2700-PSUScan_37-ch	14_w_lic.dcd:		^
s] Data Name: PSUScar er 17, 2021 15:11:1 tware Part Number: Number: 7V083X03 sion: 01.00	 1 Ch4 w lic 7		
ir Programming: Ena ntional Scan: Enable	d ed		
	il 18032700-P il 18032700-P il 18032700-D il 18032700-D il 18032700_A il 18116176-2 il 18116176-2 il 18116176-3 il 18116176-3 il 18116176-3 il 18116176-3 il 18116176-3 il 181076-3 il 181	☐ 18032700-PSUScan_39.dcd         ☐ 18032700-PSUScan.dcd         ☐ 18032700-DCD-1.dcd         ☐ 18032700_All_Feature.dcd         ☐ 18116176-211027.dcd         ☐ 18116176-analog_SN.dcd         ✓         File name:       18032700-PSUScan_37-ch4_w_lic         Files of type:       DCD file (*.dcd)         ✓       Open as read-only         Header       2700-PSUScan_37-ch4_w_lic.dcd:         asj       Data Name: PSUScan Ch4 w lic         er 17, 2021 15:11:17       Hware Part Number: 4C083X11         Number: 7V083X03       ision: 01.00         18032700       tion: Enabled         tion: Enabled       tion: Enabled	☐ 18032700-PSUScan_39.dcd       11/17/2021 12:05 PM         ☐ 18032700-PSUScan.dcd       11/17/2021 11:06 AM         ☐ 18032700-DCD-1.dcd       11/5/2021 9:17 AM         ☐ 18032700_All_Feature.dcd       11/17/2021 13:38 PM         ☐ 18116176-211027.dcd       10/27/2021 11:06 AM         ☐ 18116176-analog_SN.dcd       10/27/2021 10:11 AM         ✓       File name:       18032700-PSUScan_37-ch4_w_lic         ✓       ✓       ✓         Files of type:       DCD file (*.dcd)       ✓         ✓       ✓       ✓         Files of type:       DCD file (*.dcd)       ✓         ✓       ✓       ✓         Header       2700-PSUScan_37-ch4_w_lic.dcd:         2s]       Data Name: PSUScan Ch4 w lic          er 17, 2021 15:11:17       Tware Part Number: 4C083X11         Number: 7V083X03       3ision: 01.00       18032700         18032700       Ison: Enabled       If programming: Enabled         tion: Enabled       ir programming: Enabled       Itonal Scan: Enabled

3. License enabled & corresponding S/N are shown (see purple box above)

#### Applying License to Repeater via Radio Manager

In general, repeater must have RM-OTAP license already enabled for it to support DCD updates from Radio Manager. One exception is that user can enable RM-OTAP license when using a bundled license file together with a DCD file update.

Note: cannot update another feature license via RM without RM-OTAP license already enabled or included in the bundled license file

Failed Configuration ×	Enable Auth lic only	20211125-113609
Configuration Errors	LIC UPDT FAIL: RM-OTAP license i	installation failed

#### Procedures:

- 1. Create a DCD file on FRC with bundled license file
  - a) Select File  $\rightarrow$  DCD Files (Templates)  $\rightarrow$  Save DCD File
  - b) Follow prompt & specify DCD filename
  - c) Enter specifics about the DCD file

OCD Options				>
Configuration Data Nar	ne	Description		
' List the serial numbers of this DCD file to be appli	of the repeaters you w ed to all repeaters.	, ish to allow this DCD file to be appl	ed to. Leave the list emp	oty to allow
Separate serial numbers	s with special character	rs , ;   or newlines.		
Serial numbers should b ist below can contain a	e written either as a si mixture of individual va	ngle value (eg: 12345678) or as a salues and ranges.	range (eg: 1234000-123	5000). The
Load TXT File				
				^
				, ,
				~
				v
Encryption				v
Encryption © Default	C Custom			~
	C Custom	_		~
Default	C Custom			~
Default     Password			OK	Cancel

- d) Click Bundle License File to pick up the appropriate .upf file
- 2. Import the newly created DCD file into Radio Manager
- 3. Link the DCD file to the mobile radio's corresponding Template
- 4. Schedule a Write job on RM for the mobile radio to push the update
- 5. MSU & Repeater will process the DCD update
- 6. Feature licenses specified in the bundled license file will be applied

### 4.2 Importing DCD File in RM server

1. Using RM, in the Radio View, go to Settings-> Manage-> DVRS Files

*				
New Radios	Alt+N			
Import	MILTIN	,		
Export		÷.		
Print				
Restore	Ctrl+R		Model Number	Template Firmw
Reset Identifiers	Ctrl+Shift+I		M37TSS9PW1AN D	21.15.54
Manage		•	Templates	Alt+T
Settings	Alt+E		Licenses	•
View tasks	Ctrl+K		Firmware	Alt+F
Help	F1		Language Packs	Alt+L
About	Alt+B		Voice Announcements	Alt+V
	0,925,025		CA Certificates	Ctrl+B
			DVRS Files	Alt+U

2. From the DVRS Files screen, click Import (icon with three dots inside circle).

Import Import	re() () 7 7	Imported Date 14/05/2020 10:38 AM 14/05/2020 4:18 PM	In-Use Templates and Radios 0	In-Use Templates (F	Q emplate
no biboff	re(0.5) 7 7 7	14/05/2020 10:38 AM	0	0	emplate
no biboff	7 7 7	14/05/2020 10:38 AM	0	0	emplate
	7				
	7	14/05/2020 4:18 PM			
Number	7				
		14/05/2020 4:20 PM		0	
	7	15/05/2020 2:43 PM		0	
	7	21/05/2020 1:56 PM		0	
Number	7	15/06/2020 9:50 AM		0	
lpdate					
ade					
adeScanOff2	3	07/06/2020 1:39 PM	1	1	
	ade adeScanOff2	Ipdate 7 7 3 ade 3 3 3 3 3 3 3	Ipdate         7         15,06,203.0 58. AM           7         17,06,202.0 10:48 AM           3         18,06,202.0 11:6 AM           ade         3         18,06,202.0 11:4 AM           3         23,006,202.0 11:6 AM           3         23,006,202.0 11:6 AM           3         23,006,202.0 22:4 M           3         07,06,202.0 12:4 M           3         07,06,202.0 12:4 I PM           3         07,06,202.0 12:4 I PM	Ipdate         7         15/06/2020 958 MA         0           7         15/06/2020 10:48 AM         0           3         18/06/2020 10:48 AM         0           ade         3         18/06/2020 11:16 AM         0           3         18/06/2020 11:16 AM         0           3         0.706/2020 12:44 PM         0           3         0.706/2020 12:44 PM         0           3         0.706/2020 12:41 PM         0	Ipdate         7         Ipdat/2020 954 MM         0         0           7         17/06/2020 10:48 AM         0         0           3         12/06/2020 11:16 AM         0         0           ade         3         12/06/2020 11:16 AM         0         0           3         12/06/2020 11:16 AM         0         0         0           3         2/06/2020 12:41 PM         0         0         0           3         0/706/2020 12:41 PM         0         0         0           3         07/06/2020 12:41 PM         0         0         0           3         07/06/2020 12:41 PM         0         0         0

- 3. Select the DCD file previously saved from Tweaker/FRC and click open.
- 4. In the Job View, confirm the DCD file has imported successfully.

#### **HELPFUL HINTS**



It is always recommended to use a new DCD file name. When reusing an existing DCD file name, delete first from DVRS Files view in Radio Management (pictured above) to ensure it will be properly imported.

Also note that a DCD created prior to FRC 1.18 cannot be used.

### 4.3 Linking the Imported DCD file to an MSU template

 To associate the DCD file with a specific MSU connected to the VR, navigate to Settings->Manage->Templates.

Radio Management			
<b>Ö</b>			
New Radios	Alt+N	]	
Import	•		
Export	•		
Print	Þ	$\checkmark \oplus \ominus \Theta$	
Restore	Ctrl+R	Name	Size
Reset Identifiers	Ctrl+Shift+I	OtapTest	7
Manage	•	Templates	Alt+T
Settings	Alt+E	Licenses	•
View tasks	Ctrl+K	Firmware	Alt+F
Help	F1	Language Packs	Alt+L
About	Alt+B	Voice Announcements	Alt+V
		CA Certificates	Ctrl+B
		DVRS Files	Alt+U

2. Select the MSU template and scroll to the right and locate the "DVRS File" column and select the DCD file from the drop-down menu.

mplate View	Radio Management					- 0
Image: Control of Control					E	¶ (?) ■
Template         Model Number         Template Firmware Version         Language Pack         DVRS File         Voice Announcements           681CTZ2196(21)         M37TSS9PW1AN         D21.15.54         English         None         2 Voice Announcements           APX8500 KSP-ROAD 1.6(1)         M37TSS9PW1AN         D21.15.54         English         None         2 Voice Announcements           681CTZ2196(21)_200706_12555704         M37TSS9PW1AN         D21.15.54         English         None         2 Voice Announcements           FeatureUpgrade         dcd1_22         InvalidSN         test1         VoidSN         test1         VoidSN	mplate View					
681CTZ2196(21)     M37TSS9PW1AN     D21.15.54     English     None     2 Voice Announcements       AVX8000 KSP-R0AD 1.6(1)     M37TSS9PW1AN     R2103.00     English     None     2 Voice Announcements       681CTZ2196(21)_200706_12555704     M37TSS9PW1AN     D21.15.54     English     Demo-Test     0 Voice Announcements       Restruct/prode     dcd1_22     InvalidSN     test1     Voice None     Voice Announcements	∕ ⊕ ⊝					٥
APX8500 KSP-ROAD 1.6(1) M3TTXS9PW1AN R2103.00 English None 2 Voice Announcements 681CTZ2196(21)_200706_12555704 M3TTSS9PW1AN D21.15.54 English Demo-Test 2 Voice Announcements None Demo-Test 2 Voice Announcements None Component Pesture Voice Announcements Voice Announcements	Template	Model Number	Template Firmware Version	Language Pac	DVRS File	Voice Announcements
681CTZ2196(21)_200706_12555704 M37TSS9PW1AN D21.15.54 English Demo-Test • 0.Voice Announcements None Permo-Test FeatureUpgade dcd1_22 InValidSN test1 ValidSN	681CTZ2196(21)	M37TSS9PW1AN	D21.15.54	English	Vonest	0 Voice Announcements
None Demo-Test FestureUpgrade dod1_22 InValidSN test1 ValidSN	APX8500 KSP-ROAD 1.6(1)	M37TXS9PW1AN	R21.03.00	English	None	2 Voice Announcements
Demo-Test Feature/Uprade dcd1_22 InvalidSN test1 ValidSN	681CTZ2196(21)_200706_12555704	M37TSS9PW1AN	D21.15.54	English	Demo-Test	0 Voice Announcements
					dcd1_22 InValidSN test1 ValidSN	



#### HELPFUL HINT

If DCD file does not appear as expected in the DVRS File drop down menu, one possible solution is to export mobile xml to FRC, save DCD, and import DCD into RM again.

### 4.4 Selecting the Template to Write to MSU

1. Before scheduling the job, in the Radio View, confirm the VR ID is correct in the "VR ID" column.

**Note:** The purpose of having the VR ID as a separate column for each radio is that the DCD is a template to be used for multiple radios and does not contain the VR ID.

📻 Radio Management						- 0	×
<b>‡</b> 🕓					<b>i x</b> '	'î'' 目	1
Radio View							
Groups 7				_	Show Details	Schedule Job	
	$\checkmark \oplus \Theta \odot$	9 6 6				$\sim$	Q ~
	Serial Number	Model Number	Codeplug Version	Firmware Version	FLASHcode	VR ID 👻	Мо
	681CVK6918	M37TXS9PW1AN	R21.00.01	R21.03.00	98XY8g-89H680-3-000000-000000	0x100	
	► 681CTZ2196	M37TSS9PW1AN	R21.00.01	D21.15.54	10X048-091490-0-000000-000000		



#### HELPFUL HINT

VR ID- displayed in Hex- if you enter VR ID as decimal, it will automatically convert to hex.



#### **HELPFUL HINT**

VR ID Change Only: To change the VR ID only, a DCD must still be attached to the job even if there are no configuration changes. An attempt to change the VR ID without an attached DCD will have no effect. If NONE is selected, RM will block with a pop-up error message and revert the VR ID.

Error	×
[#2049] VR ID cannot be changed since the radio's temp have a DVRS file assigned.	late doesn't
	ОК

2. Right click on the row and schedule a write job to complete the configuration update on the VR.

📅 Radio Management							- 0	>
<b>* O</b>						<b>i T</b> '	°°" 目	1
Radio View								
Groups	à					Show Details	Schedule Job	
All		· A A			Ē			<b>ک</b> ب
All	12	0.50 000 1	∋ <b>୯ ୯</b>	<i>c</i>	[			<b>ک</b> ب
All		Serial Number	Model Number	Codeplug Version	Firmware Version	FLASHcode	VR ID 🔻	
All		0.50 000 1			Firmware Version R21.03.00	FLASHcode 98XY8g-89H680-3-000000-000000	VR ID 🔻	

3. Proceed to Job View to see the status of the configuration update. Once it is shown as complete in the job status column, the MSU control head will display "Updating DVRS" and restart.

### 4.5 How to Initiate Automatic Update for a Replacement VR

Prerequisite\*:

- RM-OTAP must have been successfully used to send firmware and configuration to the VR being replaced
- 1. Remove old VR from installation.
- 2. Prepare new VR by installing RM-OTAP license via FRC (See *License File Application*).
- 3. Connect new VR to original MSU.
- 4. Power up original MSU & new VR.
  - Observe DVRS Update
    - Firmware version bundled inside MSU will be pushed to VR
    - If MSU has previously saved configuration, that will be pushed to VR as well
    - VR ID is updated
- 5. MSU will reset.

\*If prerequisite is not met, refer to Section 4.5 *Error! Reference source not found.*.

### 4.6 How to Overwrite a Temporary Configuration or Firmware Update for a VR

Prerequisites:

- RM-OTAP must have been successfully used to send firmware and configuration to the VR
- Firmware and/or configuration and/or VR ID have been updated using FRC after RM-OTAP was last used

To restore VR to last configuration and firmware sent using RM-OTAP:

- 1. Connect laptop to new VR via USB programming cable.
- 2. Launch FRC.
- 3. Go to **Update Info** screen.

Update Info	<b>-</b> (a			×
	Name	Timestamp	Access Time	
Local Configuration ×			2021-10-23 10:14:21	
Local Firmware ×			2021-11-05 09:23:41	
OTAP Configuration ×	DCD-1	20211105-091734		876ebd4d
OTAP Firmware ×	APXDVR-17D-5028	20211015-161804		7e63a8ef
Last Configuratio Last Firmware ×	in × MSU Local	Reload OTAP Confi Reload OTAP Fin		
<				>

- Click Reload OTAP Configuration from MSU button.
- Click Reload OTAP Firmware from MSU button.
- 4. Power down VR.
- 5. Power up MSU & VR.
  - Observe DVRS Update (applicable when swapping in new repeater with RM-OTAP license enabled).
    - Firmware version bundled inside MSU will be pushed to VR.
  - If MSU has previously saved configuration, that will be pushed to VR as well.
  - VR ID is updated.

# **5. Licensed Feature Upgrade**

If a feature has been purchased from Futurecom (i.e. Authentication), a license file is provided by Futurecom. To bundle this file with a DCD, refer to Section 4.1 **License File Application** 

# 6. RM-OTAP File Type Support

#### VR Configuration and License Files

VR Remote Configuration and License File Updates (RM R21.00.00)

MSU Models (AN/BN)	Тга	MSU)	
	USB	WiFi	P25 (LMR)
APX 7500AN APX 6500AN APX 4500AN APX 2500AN	Supported	Not Supported	Supported
APX 8500 APX 6500BN APX 4500BN APX 2500BN	Supported	Supported	Supported

#### VR Firmware

VR Remote Firmware Update (RM R21.00.00)							
MSU Models (AN/BN)	Transport Method (RM to MSU)						
	USB	WiFi	P25 (LMR)				
APX 7500AN APX 6500AN APX 4500AN APX 2500AN	Not Supported	Not Supported	Not Supported				
APX 8500 APX 6500BN APX 4500BN APX 2500BN	Supported	Supported	Supported				

NOTE: Not all above model pairings are offered in all regions.

## 7. Contact Information



Subscribe to our newsletter if you want to be informed about new releases and updates. Please visit <u>http://futurecom.com/support/newsletter/</u>



Futurecom Systems Group, ULC. 3277 Langstaff Rd Concord, Ontario L4K 5P8 Canada 1-800-701-9180 https://www.futurecom.com/

© 2021 Futurecom Systems Group, ULC