



Futurecom Repeater Configurator (FRC) Release Notes – June 2024

FRC Software (6A083X06): New Version: **1.45** Old Version: **1.40**

Note: FRC 1.45 software supports all hardware platforms: DVR-LX®, DVR, VRX1000, PDR8000®.

FRC 1.45 contains three main components to service all hardware programming needs.

1. Configurator for VR (DVR-LX®, DVR, VRX1000), ver. 1.45
2. Configurator for PDR8000®, ver. 1.45
3. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

FRC Notes for VR release 1.90

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements:

- FRC introduces a new menu entry to create a Support package, enabling user to save EPR, DCD, DPD templates & log files for debug purposes into a single ZIP file. ^{DVR-495}
- FRC no longer requires a password to access “PSU IDs Allowed” window. ^{DVR-970}

FRC Issues Fixed:

- In ‘**Digital Setup**’, the default value for ‘**Telephone Interconnect CCT**’ is now changed to 10min ^{DVR-2172}
- In ‘**Repeater Channel Setup**’, the default value for ‘**CCT**’ is now changed to 10min ^{DVR-2172}

FRC Field Names Updates: N/A

FRC Known Issues: N/A

FRC Notes for VR Release 1.86

This new version add supports for VR Firmware version 1.86



FRC Notes for PDR8000® release 5.05

PDR8000® New Features / Enhancements:

- Adding support for PDR UHF 470-512MHz H/W

PDR8000® Issues Fixed:

- FRC does not restore some changed parameters (Rx/Tx frequency, Tx power, RSSI Off Hyst, RSSI Speed, Squelch Speed, Temperature Alarm) when exiting the Monitoring screen window. ^{PDR-968}
Workaround: manually restore any of those fields if changed, or restart PDR8000.
- FRC may not allow editing of the "Personality Description" field in the "Personality Information" window. ^{PDR-888}
Workaround: utilize keyboard <delete> key on this field first, then type the desired characters.

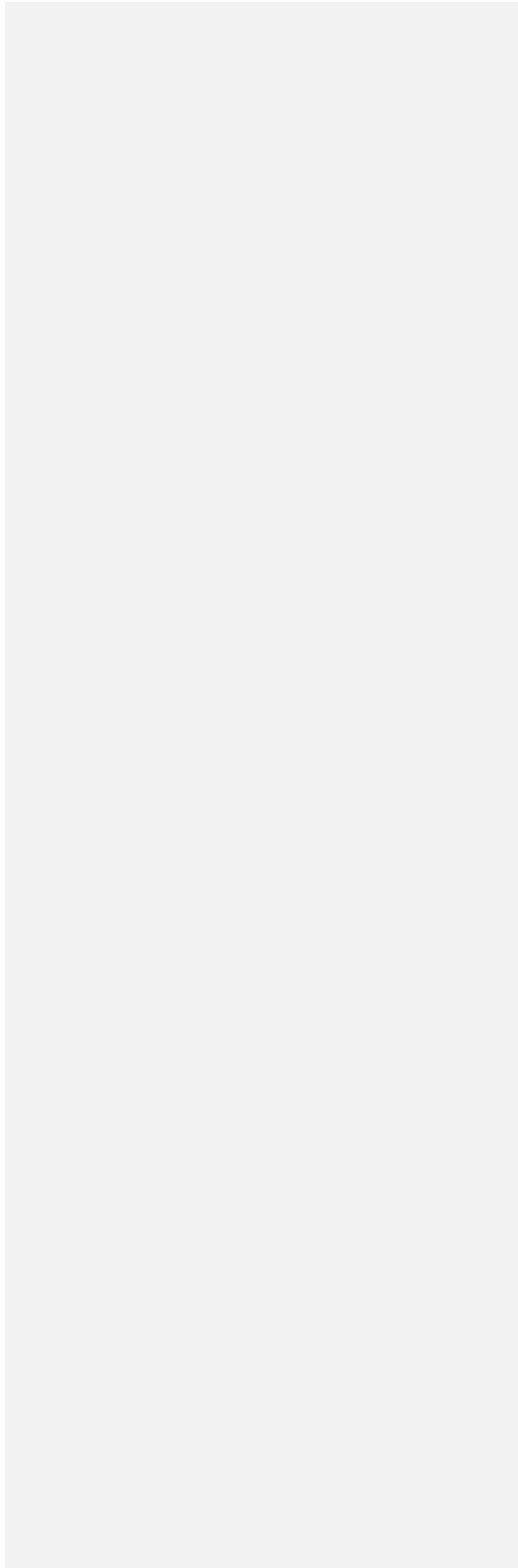
PDR8000® Field Names Updates: N/A

PDR8000® Known Issues: N/A

HISTORICAL RELEASE NOTES FOR REFERENCE



Document 8M083X65 1.45
FRC Release Notes





Futurecom Repeater Configurator (FRC) Release Notes – January 2024

FRC Software (6A083X06): New Version: **1.40** Old Version: **1.36**

Note: FRC 1.40 software supports all hardware platforms: DVR-LX®, DVR, VRX1000, PDR8000®.

FRC 1.40 contains three main components to service all hardware programming needs.

4. Configurator for VR (DVR-LX®, DVR, VRX1000), ver. 1.40
5. Configurator for PDR8000®, ver. 1.40
6. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

FRC Notes for VR release 1.85

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements:

- FRC introduces a new menu entry to create a Support package, enabling user to save EPR, DCD, DPD templates & log files for debug purposes into a single ZIP file. ^{DVR-495}
- FRC no longer requires a password to access “PSU IDs Allowed” window. ^{DVR-970}

FRC Issues Fixed:

- In ‘**Digital Setup**’, the default value for ‘**Telephone Interconnect CCT**’ is now changed to 10min ^{DVR-2172}
- In ‘**Repeater Channel Setup**’, the default value for ‘**CCT**’ is now changed to 10min ^{DVR-2172}

FRC Field Names Updates: N/A

FRC Known Issues: N/A

FRC Notes for PDR8000® release 5.05



PDR8000® New Features / Enhancements:

- FRC now saves its version info in Repeater image & configuration templates. ^{PDR-696}
- FRC introduces a new menu entry to create a Support package enabling user to save EPR, DPD templates & log files for debug purposes into a single ZIP file. ^{PDR-973}
- FRC allows user to access "Rx Duplexer Losses" & "Tx Duplexer Losses" fields in each Deployment Profile's "General Configuration" window, to configure PDRs according to the duplexer being used. ^{PDR-942}

PDR8000® Issues Fixed:

- FRC hides some Deployment Profiles when loading multiple DPD templates having conflicting license information. ^{PDR-943}

PDR8000® Field Names Updates: N/A

PDR8000® Known Issues:

- FRC does not restore some changed parameters (Rx/Tx frequency, Tx power, RSSI Off Hyst. RSSI Speed, Squelch Speed, Temperature Alarm) when exiting the Monitoring screen window. ^{PDR-968}
Workaround: manually restore any of those fields if changed, or restart PDR8000.
- FRC may not allow editing of the "Personality Description" field in the "Personality Information" window. ^{PDR-888}
Workaround: utilize keyboard <delete> key on this field first, then type the desired characters.

Futurecom Repeater Configurator (FRC) Release Notes – October 2023

FRC Software (6A083X06): New Version: **1.36** Old Version: **1.35**

Note: **FRC 1.36** software supports all hardware platforms: DVR-LX[®], DVR, VRX1000, PDR8000[®].

FRC 1.36 contains three main components to service all hardware programming needs.

7. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.36
8. Configurator for PDR8000[®], ver. 1.36
9. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

FRC Notes for VR release 1.85

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements: N/A

FRC Issues Fixed:

- In 'VR Common Setup' under 'Power Up Options', if 'Mode' is selected as 'Fixed' the field below 'Fixed Mode' is greyed out ^{DVR-2367}
- When disabling the field 'VR Local Mode Allowed' in the 'VR Common Setup' menu, the configuration tool, FRC, shuts down unexpectedly ^{DVR-2359}
- The incorrect function call implementation was fixed in the **RSSI Setup screen**. The **Local Mode Allowed** and Operating Mode fields were enabled in the RSSI Setup screen ^{DVR-2380}

FRC Field Names Updates: N/A

FRC Known Issues: N/A

FRC Notes for PDR8000® release 5.04**PDR8000® New Features / Enhancements:**

- N/A

PDR8000® Issues Fixed:

- N/A

Commented [JL1]:**PDR8000® Field Names Updates: N/A****PDR8000® Known Issues:**

- FRC may not allow editing of the "Personality Description" field in the "Personality Information" window. PDR-888
Workaround: utilize keyboard <delete> key on this field first, then type the desired characters.



Futurecom Repeater Configurator (FRC) Release Notes – August 2023

FRC Software (6A083X06): New Version: **1.35** Old Version: **1.34**

Note: FRC 1.35 software supports all hardware platforms: DVR-LX[®], DVR, VRX1000, PDR8000[®].

FRC 1.35 contains three main components to service all hardware programming needs.

10. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.35
11. Configurator for PDR8000[®], ver. 1.35
12. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

FRC Notes for VR release 1.85

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements:

- Announcing Legacy Template DPD is nearing end of support, recommendation is switched to use DCD template. DVR-2241
- Legacy features, VRS-EP Options window & Tables window will no longer be accessible with firmware version 1.85 or later. DVR-2201

FRC Issues Fixed:

- Resume displaying Channel-0 Base Frequency & Channel No. Spacing in Frequency Band Window DVR-1914
- Copy button issue in Repeater Channel Setup window DVR-2214
- Primary/Secondary window Business rule not forced even when Pri/Sec Processing is disabled DVR-1984

FRC Field Names Updates: N/A

FRC Known Issues:

- When disabling the field 'VR Local Mode Allowed' in the 'VR Common Setup' menu, the configuration tool, FRC, shuts down unexpectedly DVR-2359
- The incorrect function call implementation was fixed in the 'RSSI Setup screen'. The 'Local Mode Allowed' and 'Operating Mode' fields were enabled in 'RSSI setup screen' DVR-2380

Workaround for the above issues (DVR-2359 & DVR-2380):

- Load data from repeater



- Open RSSI Setup window and ensure '**Operating Mode**' field is set to "OFF" or "SYSTEM"
- Close RSSI Setup window
- Load dcd/dpd file (overlays template onto current FRC displayed config) or change '**Local Mode Allowed**' field if not using a dcd/dpd file
- Save changes to repeater



FRC Notes for PDR8000® release 5.04

PDR8000® New Features / Enhancements:

- Improve Network Health status label in Monitoring window ^{PDR-916}
- Improve File handling when overlaying license file on template during offline editing ^{PDR-699}
- Improve the displayed labels around FM Deviation fields in Deployment General Configuration ^{PDR-706}
- Cosmetic improvement where we no longer generate errors or warnings against unused Deployment ^{PDR-872}

PDR8000® Issues Fixed:

- Toggle Gate Status Button in Monitoring Window disabled by mistake under some conditions ^{PDR-673}
- Correct the status string displayed for Synthesizer field in Monitoring window ^{PDR-818}
- Analog or Mixed-mode channel should not be allowed on V.24 Deployment Profile ^{PDR-857}

PDR8000® Field Names Updates: N/A

PDR8000® Known Issues:

- FRC may not allow editing of the "Personality Description" field in the "Personality Information" window. ^{PDR-888}
Workaround: utilize keyboard <delete> key on this field first, then type the desired characters.

**Futurecom Repeater Configurator (FRC)
Release Notes – May 2023**

FRC Software (6A083X06): New Version: **1.34** Old Version: **1.32**

Note: **FRC 1.34** software supports all hardware platforms: DVR-LX[®], DVR, VRX1000, PDR8000[®].

FRC 1.34 contains three main components to service all hardware programming needs.

13. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.34
14. Configurator for PDR8000[®], ver. 1.34
15. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

FRC Notes for VR release 1.80

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements:

- FRC support to VR when factory calibration failure is detected ^{DVR-1783}
- More meaningful name for User Info window ^{DVR-1447}

FRC Issues Fixed:

- Permanent Primary text box doesn't update ^{DVR-2012}
- Cosmetic FRC issue when creating channels in DVR ^{DVR-2056}
- When loading an OLD. dcd template file, Date of Programming fields are all zeroes ^{DVR-2081}
- Modify pop up message when loading newer DCD to repeater with f/w on older map ^{DVR-2119}
- Applying License file may cause FRC to no longer function ^{DVR-1979}

FRC Field Names Updates: N/A

FRC Known Issues:

- ~~Transmission initiated from the Monitoring window may not work~~ ^{DVR-2251}
- When disabling the field 'VR Local Mode Allowed' in the 'VR Common Setup' menu, the configuration tool, FRC, shuts down unexpectedly ^{DVR-2359}
- The incorrect function call implementation was fixed in the 'RSSI Setup screen'. The 'Local Mode Allowed' and 'Operating Mode' fields were enabled in 'RSSI setup screen' ^{DVR-2380}

Workaround for the above issues (DVR-2359 & DVR-2380):

- Load data from repeater



- Open RSSI Setup window and ensure '**Operating Mode**' field is set to "OFF" or "SYSTEM"
- Close RSSI Setup window
- Load dcd/dpd file (overlays template onto current FRC displayed config) or change '**Local Mode Allowed**' field if not using a dcd/dpd file
- Save changes to repeater



FRC Notes for PDR8000® release 5.03

PDR8000® New Features / Enhancements:

- Update FRC with latest company Logo^{DVR-2023}
- Extend the FRC support to PDR when factory calibration failure is detected^{PDR-809 and PDR-816}
- FRC to block navigation to online monitoring/logging windows during offline editing session^{PDR-697}

PDR8000® Issues Fixed:

- FRC to add more fields to the DPD template^{PDR-704}
- Update PDR Default Values in FRC^{PDR-757}
- FRC to allow standard user access to Channel Number Spacing^{PDR-805}
- FRC to restrict Rackmount Booster to specific channel/duplexer configurations^{PDR-810}
- Update PDR Defaults for Reset Deployment^{PDR-759}
- Clarify error message when creating channels in PDR^{PDR-828}
- Certain Fields Marked with ☒ Symbol are Propagated Through Template File^{PDR-860}
- Improve error handling when invalid input is entered to certain fields^{PDR-679, PDR-680}

PDR8000® Field Names Updates: N/A

PDR8000® Known Issues:

- FRC may not allow editing of the "Personality Description" field in the "Personality Information" window.^{PDR-888}
Workaround: utilize keyboard <delete> key on this field first, then type the desired characters.
- Customer sees warning message for unused Deployments^{PDR-872}



Futurecom Repeater Configurator (FRC) Release Notes – December 2022

FRC Software (6A083X06): New Version: **1.32** Old Version: **1.31**

Note: **FRC 1.32** software supports all hardware platforms: DVR-LX[®], DVR, VRX1000, PDR8000[®].

FRC 1.32 contains three main components to service all hardware programming needs

16. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.32
17. Configurator for PDR8000[®], ver. 1.32
18. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

VR Release Notes

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

FRC New Features / Enhancements:

- Modify FRC menus to help understand DCD/DPD templates^{DVR-1796}
- Added MSU RF Bypass Switch Extension field^{DVR-1714}
- RSSI Setup: Change a few Threshold-related fields to read-only^{DVR-1777}
- Socket fields from Menu Bar in FRC were removed^{DVR-1881}

VR Issues Fixed:

- Added Missing Channel Offset/Deviation choice for NPSPAC^{DVR-1665}
- NAC Linking should not be enabled on a Tier 2 VRX1000^{DVR-1935}
- DCD files do not propagate fields in the upper section of the Frequency Band Configuration screen^{DVR-1883}

FRC Field Names Updates

- Modify field labels in RSSI Setup window^{DVR-1745}

FRC Known Issues: N/A

PDR8000® Release 5.02**PDR8000® Product Tested:**

Repeater Module Firmware:	4C088X01 R5.02
Repeater Module Boot Firmware:	4C088X02 R5.00
Transceiver DSP:	4C083X03 R1.18
Baseband DSP:	4C083X04 R1.54
IF Module Firmware:	4C088X05 R5.02
IF Module Boot Firmware:	4C088X06 R5.02

PDR8000® New Features / Enhancements:

- File handling enhancements - Change labels on menu entries ^{PDR-698}
- FRC field labels improved to indicate Configuration fields that are not propagated through template files ^{PDR-700}
- Remove access to fields not propagated via template files when doing offline editing of template ^{PDR-701}
- FRC field labels improved to indicate Configuration fields affecting FRC application, stored locally ^{PDR-702}
- Provide warning if user overlays a template file onto a repeater with different feature licenses ^{PDR-703}
- Improve management of IP-based configuration fields (e.g., DFSI-related fields) ^{PDR-708}
- User can access the Display Unit field ^{PDR-731}
- Add necessary protection for FM Dev. Limit & PL FM Deviation when reading DPD files ^{PDR-655}

PDR8000® Issues Fixed:

- Added Missing Channel Offset/Deviation choice for NPSPAC ^{PDR-705}
- Fan control got disabled when older DPD template file was loaded in PDR as default user ^{PDR-583}
- File History was not being updated in FRC ^{PDR-781}
- Default values not being set for Frequency Set 3 ^{PDR-754}
- Clarified meaning of Backlight Timeout field for PDR display ^{PDR-773}

PDR8000® Known Issues: N/A



Futurecom Repeater Configurator (FRC) Release Notes – August 2022

FRC Software (6A083X06): New Version: **1.31** Old Version: **1.30**

FRC 1.31 contains three main components to service all hardware programming needs

1. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.31
2. Configurator for PDR8000[®], ver. 1.31
3. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX and PDR repeater firmware versions**. It supports reading and writing to all previously configured devices.

VR Release

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

VR New Features / Enhancements:

- DCD Improvements: DCDs, Offline Template Editing ^{DVR-1015}
- Update FRC pull down menu to reference Compatibility Chart ^{DVR-1437}
- Add FRC support for Power Limit in Rackmount DVR w Power Booster ^{DVR-1476}
- Added serial number restrictions to DCDs applied via FRC ^{DVR-1437}
- Changed Temperature Alarm Default to 70 in FRC ^{DVR-1794}
- Added warning when loading DCD created from different model repeater ^{DVR-1855}
- Changed default VR ID value to 0 (zero) ^{DVR-1579}
- Improve handling of template created from incompatible repeater ^{DVR-1857}

VR Issues Fixed:

- When configuration with Speed in km/h & Distance in m, FRC may reports error in EEPROM maintenance icon when saving the configuration ^{DVR-1443}
- Corrected Busy Lock. Thresh. min/default values in RSSI Setup window for 800MHz band DVR/DVR-LX ^{DVR-1679, DVR-1485}
- Analog steering violates channel restrictions and rules of precedence ^{DVR-401}
- Fixed truncation of text in the FRC Primary Secondary Setup window ^{DVR-1609}
- Removed unexpected values in DPD file for RF/Analog Setup screen ^{DVR-879}
- Applying wrong frequency band DCD file using FRC changes Hardware Part Number ^{DVR-1848}
- FRC does not prevent writing incorrect GPS driven deactivation configuration to DVR ^{DVR-1388}
- VR Ch. List and MSU TG Names not loaded properly when overwriting with DCD ^{DVR-1621}
- User Info screen licenses are being changed after applying a DCD with no bundled licenses via RM-OTAP ^{DVR-1614}



VR Field Names Updates

- "VRS-EP Compatible Mode Enabled" changed to "VRS-EP Compatible Mode" ^{DVR-1872}
- "Rep. Ch. Steering Enable" changed to "Rep. Ch. Steering" ^{DVR-1872}
- "Rep. Ch. Steering Revert Enable" changed to "Rep. Ch. Steering Revert" ^{DVR-1872}
- "Rep. Ch. UID Translation Enable" changed to "Rep. Ch. UID Translation" ^{DVR-1872}
- "Inband Calls Enable" changed to "Inband Calls" ^{DVR-1872}
- "Fallback in Analog Simplex Mode Enable" changed to "Fallback in Analog Simplex Mode" ^{DVR-1872}
- "Local to System Call Upgrade Enable" changed to "Local to System Call Upgrade" ^{DVR-1872}
- "VR Emergency Echo Ack Enable" changed to "VR Emergency Echo Ack" ^{DVR-1872}
- "TG1 Translation Enable" changed to "TG1 Translation" ^{DVR-1872}
- "Adaptive Power Control Enable" changed to "Adaptive Power Control" ^{DVR-1872}
- "Block TG Proxy" changed to "Enforce TG Matching" ^{DVR-1377}

VR Field Names Removed

- "MBX2 Compatibility" removed ^{DVR-1377}
- "ID" removed ^{DVR-1377}
- "Mstr Bit Clr Time" removed ^{DVR-1377}
- "Channel-0 Base Frequency" removed ^{DVR-1817}
- "Close Socket Connection" removed ^{DVR-1881}
- "Repair Socket Connection" removed ^{DVR-1881}
- "Rx Mobile Gain" removed ^{DVR-1569}
- "Mobile FM Deviation" removed ^{DVR-1569}
- "Mobile Microphone Gain" removed ^{DVR-1569}
- "Temp" removed ^{DVR-1458}
- "PA_t" removed ^{DVR-1458}

VR Known Issues/Limitations: N/A

PDR Release 5.01

Product Tested:

Repeater Module Firmware:	4C088X01 R5.01
Repeater Module Boot Firmware:	4C088X02 R5.00
Transceiver DSP:	4C083X03 R1.18
Baseband DSP:	4C083X04 R1.54
IF Module Firmware:	4C088X05 R5.00
IF Module Boot Firmware:	4C088X06 R5.00

Futurecom Repeater Configurator (FRC) Release Notes – May 2022

FRC Software (6A083X06): New Version: **1.30** Old Version: **1.29**

FRC 1.30 contains three main components to service all hardware programming needs

1. Configurator for VR (DVR-LX[®], DVR, VRX1000), ver. 1.30
2. Configurator for PDR8000[®], ver. 1.30
3. Flash Downloader Utility, ver. 2.00

This release of FRC is **backwards compatible with all APX repeater and PDR firmware versions**. It supports reading and writing to all previously configured devices.

VR Release

To access new features/enhancements/improvements listed below, the repeater must be using applicable firmware version as identified in Compatibility Chart located on the Futurecom Website in the Support Portal: Home → Support → Documentation and Software

VR New Features / Enhancements:

- NAC Linking Compatibility option shown when detecting firmware version 1.73 or later. ^{DVR-1515}
- Eliminated incorrect warning message when loading DPD/DCDs created from a sibling DVR/DVR-LX, allowing user to move easily between DVR and DVR-LX units ^{DVR-1398}

VR Issues Fixed

- FRC now warns user of mismatched licensing options ^{DVR-1053, DVR-1298}
- PDR - Error shown when loading previously saved DPD file ^{PDR-686}
- Offline editing DCD file does not allow creation of new Repeater Channel (issue since FRC 1.27) ^{DVR-1372}

VR Field Names Updates

- FRC "Save DCD File" menu option changed from Attach to Bundle ^{DVR-1489}
- Removed "Use MSU Emergency ID" on FRC Emergency Setup Window ^{DVR-1460}
- "Morse Code" Sub-folder is called "Station ID Setup" in the window FRC ^{DVR-1389}
- AVRA, Primary/Secondary Preference input name replaces AVRA/Primary/Secondary Preference ^{DVR-1399}

VR Known Issues/Limitations: N/A



PDR8000® Release 5.00

Product Tested:

Repeater Module Firmware:	4C088X01 R5.00
Repeater Module Boot Firmware:	4C088X02 R5.00
Transceiver DSP:	4C083X03 R1.18
Baseband DSP:	4C083X04 R1.54
IF Module Firmware:	4C088X07 R5.00
IF Module Boot Firmware:	4C088X08 R5.00

Tested With:

PSU Type: APX7000
PSU Firmware: D15.71.55
Modems: Motorola UDS V.3225, Raymar-Telenetics V3600
GCM 8000 Comparator: CvCM_R07.17.005
Digital Conventional Gateway: DCG 9000
MLC AGU: R060027