



APX P25 Interfaced VR Firmware Release 2.00 – Release Notes December 2024

	New Version	Old Version
VR Application Software (4C083X11):	2.00	1.95
VR Boot Firmware (4C083X02):	1.80	1.80
VR BB DSP (4C083x04):	1.74	1.74
DVR/DVR-LX® TR DSP (4C083x03):	1.18	1.18
VRX1000 TR DSP (4C087x05):	1.07	1.07
Futurecom Repeater Configurator Software (6A083X06):	1.55	1.50

Note: New firmware and FRC software support all hardware platforms - DVR-LX®, DVR and VRX1000.

Compatible with following Motorola Radio Firmware Versions:

DVR	APX4000/6000/6500/7000/7500/8000/8500	R35.00.00 or later
DVR-LX®	APX4000/6000/6500/7000/7500/8000/8500	R35.00.00 or later
VRX1000	APX2500/4000/4500/5500/6000/6500/7000/7500/8000/8500	R35.00.00 or later

NOTES:

- Older MSU firmware is not compatible with this release - **VR FW MISMATCH** message is displayed on control head if older MSU firmware is used with this version VR.
- Please check Compatibility Chart bundled in Firmware Upgrade Package.
- Requires FRC version **R1.55-0003** or later.

New Features / Enhancements:

- Support Alias Update through VR on TDMA MSU channels DEVASTRO-4462, DVR-2540
- Support Group Text Messaging through VR on TDMA MSU channels DEVASTRO-2419, DVR-2540
These two features allow PSU users operating through VR to receive Alias Update and Group Text Messages while MSU is on TDMA channel / system.
Note: On Simplex VR channels both features are configurable, disabled by default.

Issues fixed:

- Activate Only AVRA setting - If AVRA changes to deactivate state while on disabled channel, when returning to enabled channel DVR will be in OFF mode DVR-2597

Known issues:

- When MSU is operating over SmartConnect and Emergency Ack Type is configured for Site Ack, PSU user may experience delay in Emergency Hot MIC activation DVR-2634



HISTORICAL RELEASE NOTES FOR REFERENCE



APX P25 Interfaced VR Firmware Release 1.95 – Release Notes August 2024

Compatible with following Motorola Radio Firmware Versions: 34.00.00 or later

New Features / Enhancements:

- SmartConnect (Range Extension) Enhancements for DVR/VRX DEVASTRO-3053, DVR-1279
PSU operating through DVR/VRX while MSU is on SmartConnect is now capable of using most of trunking features as if the MSU is on LMR. This includes PSU attachment, PSU ID pass-through, group calls, patch calls and P25 signalling. Features not supported are Packet Data (OTAR), Group Data Services (Alias and Group Text messaging) and Individual calls (Unit to Unit and Telephone interconnect calls). PSU displays an indication of MSU operation via SmartConnect.

Issues fixed:

- When queued call is granted, talkgroup translated PSU uses programmed CKR ID instead of MSU CKR ID DVR-2539
- AVRA gets out of sync when AVRA state changes while VR is Disabled DVR-2534
- Inconsistent power-up outcome under the following configuration conditions: Independent Channel Change is disabled, VR Activation via MSU is enabled, Power UP Options set to Fixed Mode: OFF, and MR/VR channel TG/VR Mode set to User DVR-2469

Known issues:

- Activate Only AVRA setting - If AVRA changes to deactivate state while on disabled channel when returning to enabled channel DVR will be in OFF mode



APX P25 Interfaced VR

Firmware Release 1.90 – Release Notes June 2024

Compatible with following Motorola Radio Firmware Versions: 33.00.00 or later

New Features / Enhancements:

- None

Issues fixed:

- No local repeat fallback when FDMA-only PSU tries to talk on TDMA-only talkgroup ^{DVR-2510}
- After switching from one TDMA outbound call to another ongoing outbound call, PSU may fail to unmute ^{DVR-2472}
- When MSU scans to the secondary system, PSU may fail to unmute to outbound call (beginning of the voice is lost) ^{DVR-2458}
- When Unit ID translation is enabled on VR channel and MSU is on FDMA channel, inbound PSU call is not unmuting SSU ^{DVR-2440}

Known issues:

- None



APX P25 Interfaced VR Firmware Release 1.85 – Release Notes August 2023

Compatible with following Motorola Radio Firmware Versions: 31.00.00 or later

New Features / Enhancements:

- Improved Alternate Mode VR Status reporting feature ^{DVR-2246}

Features no longer supported:

- VRS-EP feature support is terminated ^{DVR-2200}

Issues fixed:

- DVR does not repeat MIC call in LOC Mode when “Local repeat in SYS mode” is disabled and “MSU System PTT In Local Mode” is enabled ^{DVR-2061}
- OTAP firmware update does not lock Flash sectors ^{DVR-2170}

Known issues:

- None



APX P25 Interfaced VR Firmware Release 1.80 – Release Notes May 2023

Compatible with following Motorola Radio Firmware Versions: 30.00.00 or later

New Features / Enhancements:

- Extended maximum size of VR firmware upgrade file that could be applied via RM OTAP
DVR-2070, DVR-2156

Issues fixed:

- When Unit ID translation is enabled on VR channel and MSU is on TDMA only talk group, PTT from non-TDMA capable DVRS Enabled PSU produces system talk-permit tones even though VR performs Local-only repeat ^{DVR-2095}
- If NAC Linking is enabled, VR emergency activation gets delayed if PSU repeats Emergency Alarm requests too quickly ^{DVR-1991}
- Multiple VR errors are not displayed cyclically on Control Head ^{DVR-2053}
- When MSU is on P25 Conventional or P25 Trunking channel, and VR is on Analog channel, if programmed "MDC PTT ID Offset" + PSU ID is greater than 65,535 (0xFFFF), then MSU ID is used to proxy Emergency Alarm ^{DVR-2021}
- When MSU is on P25 Conventional or P25 Trunking channel, VR is on Forced Analog or Mixed VR channel, and Talkgroup translation is used, if PSU ID is greater than 65,535 then MSU ID is used to proxy Emergency Alarm instead of PSU ID. In similar case if Talkgroup Proxying is used, Emergency Alarm is not sent. ^{DVR-2021}

Known issues:

- Generate Status on VR Mode Change is set to Alternate Mode (APX MSU – DVRS Profile)
When DVRS (VR + MSU) is on trunking system and there is an ongoing (active) call, if a secondary VR's mode changes (Secondary to Off or Off to Secondary), this secondary VR sends an alternate VR status message (if enabled) in between a call creating a audio hole. This issue is also observed when a Primary VR changes its mode to Off during an active call.



APX P25 Interfaced VR

Firmware Release 1.76 – Release Notes December 2022

Compatible with following Motorola Radio Firmware Versions: 29.00.00 or later

New Features / Enhancements:

- Support “Alternate Mode” when generating status on VR Mode change ^{DVR-1924}
If “Generate Status on VR Mode Change” and “Generate Status Alternate Mode” is enabled for a given DVRS Profile (in the APX MSU), DVRS sends VR mode change status indication to the Console Dispatcher quietly - no control head status display, no acknowledgement tones on speaker, delay status indication while VR is active.
- Support NAC Linking on Forced Analog channels ^{DVR-1697}
If NAC Linking is enabled on a VR Forced Analog channel, VR provides NAC Linking support while MSU is operating on P25 Conventional or Trunking system and disables NAC Linking while MSU is operating on Analog Conventional or Type II trunking system.
- Support PSU Duplicate NAC detection ^{DVR-1764}
If NAC Linking is enabled on a VR channel, PSU monitors and informs VR if same NAC is used by multiple VRs. Upon receiving such notification from PSU, VR changes to a different NAC and reattaches PSUs.

Issues fixed:

- If NAC Linking Compatibility Mode is enabled and NAC Linking is downgraded by PSU Talk Around call, PSU Talk Around call is not repeated ^{DVR-1988}
- If NAC Linking Compatibility Mode is enabled, downgraded NAC Linking VR with Rx NAC F7E may proxy late entry voice call from PSU attached to another VR ^{DVR-1989}
- Attempt to enable OTAP licence via RM-OTAP fails on DVR repeaters manufactured before October 2018 ^{DVR-1972}
- TDMA system outbound emergency call is displayed on PSU as ID instead of EID ^{DVR-1877}
- Analog Fallback Local Repeat calls are upgraded to system calls even though Local to System Upgrade option is not enabled ^{DVR-1919}
- DVRS Menu Timeout timer may turn VR OFF shortly after AVRA activation - if external mode change is triggered by AVRA while DVRS Menu is active, accept user’s VR channel selection and terminate DVRS Menu ^{DVR-1690}
- Ignore VR channel and VR mode selection if remote mode change initiated while DVRS Menu is active - if VR mode change is triggered by PSU Call Alert, MSU Call Alert or DTMF activation while DVRS Menu is active, VR ignores user selections and terminates DVRS Menu ^{DVR-1871}
- System Subscriber call on TDMA system, VR on simplex TPS channel, ID of calling radio shows on PSU display for a very short time ^{DVR-1858}
- Replaced 'SYNC ERROR' error message with 'RESYNC VR-MSU' message ^{DVR-207}

Known issues:

- None



APX P25 Interfaced VR Firmware Release 1.74 – Release Notes August 2022

Compatible with following Motorola Radio Firmware Versions: 28.00.00 or later

New Features / Enhancements:

- Support TPS signaling on MSU Conventional Mixed Rx/ASTRO Tx channel with TPS enabled, and Non-ASTRO Signaling Type set to None ^{DVR-1124}
DVR uses TPS signaling to proxy radio IDs for inbound, outbound and MIC calls
- Rackmount DVR-LX Booster PA support ^{DVR-454}
To prevent damage of Booster PA, DVR output power is limited to 1.78 W
Note: Primary/Secondary and Busy Lockout features are not supported on Rackmount DVR with Booster PA.

Issues fixed:

- MIC PTT on TPS channel - MSU ID not displayed properly on PSU ^{DVR-1854}
- Late entry PSU call not proxied on TPS VR channel ^{DVR-1803}
- Minimize possibility of simplex analog audio looping on P25 Trunking system when "On/Off Trigger" is configured for RSSI ^{DVR-1839, DVR-1833}
- Disallow Private Call setup between local PSUs on Forced Analog All VR channel ^{DVR-1756}
- "Block TG Proxy" ("Enforce TG Matching") configuration prevents PSU initiated VR Mode Change ^{DVR-1708}
- "Analog Encryption Warning Tones" do not work when MSU is on TDMA channel ^{DVR-1722}
- If "Fallback to Local Repeat" is disabled, VR may try to initiate inbound call again even though initial attempt was denied by P25 Trunking system (call interrupt not allowed) ^{DVR-1626}
- "VR Emergency Echo Ack Enable" configuration option not working as expected ^{DVR-1603}
- After sending Call Alert from a local PSU to a secondary DVR in System mode, the operating mode may toggle to Local mode ^{DVR-1571}

Known issues:

- None



APX P25 Interfaced VR Firmware Release 1.73 – Release Notes

Compatible with following Motorola Radio Firmware Versions: 27.00.00 or later

New Features / Enhancements:

- Support NAC Linking Compatibility Mode^{DVR-846} if enabled VR would automatically downgrade NAC Linking operation when presence of older, non-NAC linking capable PSUs are detected (DVRs-enabled subscriber units: XTL PSUs or APX PSUs with older R23 or prior firmware). Once downgraded, VR would handle both types of PSUs by using default/programmed Rx/Tx NACs. NAC Linking operation will automatically resume on subsequent VR activation (VR channel change, Mode change from Off to Local/System or power-up).

Issues fixed:

- Permanent Primary on standby takes longer to activate after active Permanent Primary downgrades its status to regular Primary^{DVR-1249}
- When VR is set to Forced Analog ALL (FA-All) channel, and MSU is on digital system, PSU calls are repeated as local-only calls^{DVR-1479}
- Inconsistent behavior of PM button and DVRs long button press when both Permanent Primary Status and Control are enabled^{DVR-1316}
- When “Steering Revert” on analog VR channel and “VR Activation via MSU Mode Change” is enabled, traffic on selected PL/DPL may change VR mode^{DVR-1455}
- VR configuration write progress report is done in two consecutive 50% sessions^{DVR-862}
- Auth Demand not sent to PSU after MSU roams from Foreign System back to Home System^{DVR-1440}
- VR does not transmit activation tones when moving from analog VR channel to digital VR channel^{DVR-1433}
- When PL steering is enabled, VR fails to activate on DTMF tone sequence received from PSU^{DVR-1383}
- PSU not affiliated after VR channel is changed from UID translated channel to non-UID translated channel^{DVR-1260}
- On TDMA system and Analog VR channel, ID of System Subscriber initiating outbound call not passed to PSU^{DVR-905}
- VR is not performing Primary/Secondary Preference if AVRA is disabled^{DVR-1397}
- MDC Emergency PSU ID being passed when “Use MSU Emergency ID” is enabled^{DVR-1281}
Note: “Emergency Setup → Use MSU Emergency ID” is now obsolete, removed from FRC
When operating on systems with reduced ID range (MDC, Type II) “Mobile Radio Channel Setup → PTT ID” setting will determine if MSU or PSU ID is used to proxy PSU Emergency Alarm to system

Known issues:

- None