



COMPARISON OF AMATEUR RADIO DIGITAL HOTSPOTS

My opinions based off personal experience with each 11-2016



DIGITAL RADIO HOTPOTS COMPARED

- DV Mega with Raspberry Pi / MMDVMHost Software
 - Modes tested DMR / DStar
 - Cost Approx: \$190 (total cost)
- DVMega with Bluestack / BlueDV Software
 - Modes tested DMR / DStar
 - Cost Approx: \$190 (Android/Windows device not included)
- Shark RF openSpot
 - Modes tested DMR / DStar / DMR to Fusion cross mode
 - Cost Approx: \$220 (total cost)
- DV4Mini on Raspberry Pi or Windows
 - Modes tested DMR / DStar / Fusion / P25
 - Cost Approx: \$130 (PC/Pi cost not included)

DV MEGA RASPBERRY PI W/MMDVMHOST

- Modes Supported: DMR / DStar / Fusion (YSF) / P25 (newly added)
- Hardware Required: DVMega (single or dual band) Raspberry Pi (2 or 3)
- Software Required: Raspian OS (Pi Linux), MMDVMHost, ircDDB Gateway (DStar), YSFGateway (Fusion)
- All the software can be set to start on boot for standalone headless ops
- Prebuilt images can be loaded to SD card then used in Pi
- Each mode can be enabled or disabled in the MMDVMHost ini file
- External screens supported by MMDVMHost to display info
- VNC can be used to remotely connect to Pi screen over network
- Can connect to any WiFi network or use Ethernet port

DVMEGA RASPBERRY PI W/MMDVMHOST ADVANTAGES

- Proven hardware, DVMega and Raspberry PI both have good track record
- WiFi support for mobile operation (built in on Pi-3)
- Can run standalone in headless mode (great for mobile operation)
- Can run all modes at one time with a user defined mode hang time
- Supports third party display screens like Nextion
- Pi can run other software (MMDVMHost Dashboard, MD380tools, etc...)
- Many prebuilt SD card images available for ease of setup
- Active development and support of MMDVMHost software
- Very good audio quality and reliability on all supported modes

DVMEGA RASPBERRY PI W/MMDVMHOST DISADVANTAGES

- Some assembly required
- Setup a little more complex than some other devices
- No direct last heard or info unless display or web dashboard used
- No cross-mode support
- Some Linux knowledge is helpful with setup and operation
- DVMega Firmware upgrade requires soldered wire or use of arduino uno

DVMEGA BLUESTACK / BLUEDV SOFTWARE

- Modes Supported: DMR / DStar / Fusion (YSF and FCS)
- Hardware Required: DVMega (single band) BlueStack (micro basic / micro plus) or DVMega (dual band) BlueStack1
- Windows or Android device required to run the BlueDV software
- Software Required: BlueDV Windows or BlueDV Android
- Attach DVMega to BlueStack and install in case
- BlueStack (micro plus) can connect via USB or Bluetooth to Windows
- For Android device: pair BlueStack device in Android settings
- Install BlueDV software on device, input required info in setup
- Connect to BlueStack in software then connect to desired Mode

DVMEGA BLUESTACK / BLUEDV SOFTWARE ADVANTAGES

- Proven hardware DVMega good track record
- BlueDV software available for Android and Windows (IOS is testing)
- Bluestack hardware with DVMega: small size good for mobile
- BlueDV software shows real time info: TG/Ref, callsign, name, last heard
- Very easy setup: connect Mega to BlueDV, install software, enter info
- Low power consumption of Bluestack/Mega good for mobile
- BlueDV uses internet connection of device, cell or WiFi on phone
- Active software development and good support available
- Very good audio quality and reliability on all supported modes

DVMEGA BLUESTACK / BLUEDV SOFTWARE DISADVANTAGES

- Minor assembly required
- Requires another device for BlueDV (Android or Windows device)
- BlueDV Android cannot run in background (disconnects with incoming call)
- No cross-mode support
- Only one mode can be used at a time
- DVMega Firmware upgrade requires soldered wire or use of arduino uno

SHARK RF OPENSLOT

- Modes Supported: DMR / DStar / Fusion (YSF / FCS) / Shark RF IPconn
- Hardware Required: openSPOT device
- Software Required: None, Firmware installed on openSPOT
- Connect openSPOT to Wired Ethernet port and Power supply
- Open Web interface of openSPOT with browser from any device
- Go through a few setup screens depending on which modes used
- Set Modem to match Radio and Connector to match Mode wanted
- If using mobile external WiFi Router, (client mode) is needed
- Router connects to desired hotspot and plugs into openSPOT ethernet

SHARK RF OPENSLOT

ADVANTAGES

- Only device supporting cross-mode DMR> Fusion and Fusion>DMR
- Easy setup through web page interface
- Comes fully assembled and with software loaded
- Update process for firmware pretty simple with USB connection from PC
- All updates done with one Firmware, others have multiple components
- Device is standalone, only requires power and internet connection
- Very active firmware development and good support through forum
- SMS Messaging included in device
- Developer has open API for others to integrate software to device
- Very good audio quality and reliability on all supported modes

SHARK RF OPENSLOT

DISADVANTAGES

- No built in WiFi support, only wired Ethernet (makes mobile more difficult)
- No Dashboard info or last heard support built in to device/software
- DMR mode can require different mode settings to optimize for radio
- Hardware relatively new, not much reliability history
- Hardware repair requires unit shipped back to Estonia

DV4MINI

ADVANTAGES

- Modes Supported: DMR / DStar / Fusion (FCS) / P25 / dPMR
- One of the first devices available when introduced
- USB based; can run on Windows, Linux or Pi
- No assembly, just plug in and install software
- Setup relatively simple (once you find the right software and firmware)
- Works pretty well on DSTAR, Fusion and P25
- Supports a large number of digital modes

DV4MINI

DISADVANTAGES

- Setup on DMR is very unstable (a lot of tweaking of QRG setting)
- Sends out bursts of audio periodically to reflector or TG in DMR
- Audio quality on DMR not up to standard of other devices
- Support from developer poor to non-existent
- Very confusing software and firmware combinations

GRADES OF DEVICES

Name	Mega/ Pi	Mega/Blue DV	OpenSPOT	DV4Mini
Ease of Setup	B	A+	A	B
Versatility	A	A-	A+	B
Portability	A	A	A-	B
Upgrade Process	B	A-	A	C
Support Available	A-	A	A+	D
Audio Quality DMR	A	A	A	C
Audio Quality DSTAR	A	A	A	B
Potential new features	B+	A-	A	C