

<https://www.RigPi.com>



- Remote Station Server
 - HF / 2m, - CW
 - SSB - Data
- Over the Internet
- Local & Remote

FT8 / FT 4 WITH MFJ-1234 RASPBERRY PI WITH [WSJT-X](#) AND [VNC](#)



Introduced Spring of
2019

“Remote Station
Server”

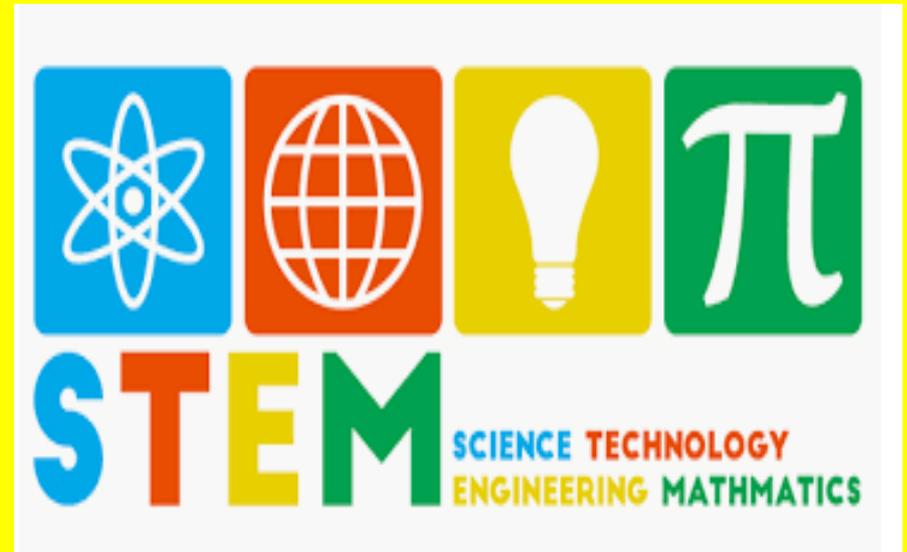
Review by Dale Finley
KB5NFT



HOWARD NURSE, W6HN

RIGPI STATION SERVER

MY Reasons for Remote Base Operations





RIGPI STATION SERVER

APPLICATIONS

- ▶ Local station control with logging and call lookup
- ▶ Remote or Mobile radio control
- ▶ Field Day
- ▶ Go Box
- ▶ DXpeditions
- ▶ Emergency communications

Lots
of
Applications
Preloaded &
Installed



RIGPI STATION SERVER

EMERGENCY COMMUNICATIONS

- ▶ Communicate when there is no power, Internet or Cell
- ▶ "Last mile" message delivery
- ▶ Texting and 2-way audio between users
- ▶ Network 5-10 users located in a 1-mile radius
- ▶ Gateway to outside services using radio





GOALS

- ▶ Rig and Rotor Control
- ▶ Logging
- ▶ Callbook Lookup
- ▶ DX Spot Management
- ▶ Morse Code Keyer
- ▶ Audio through VoIP
- ▶ Multi-User
- ▶ Open Source



But how much does it cost?

Boards & Drivers Preinstalled

RIGPI AUDIO

- ▶ Add-on board for RigPi Station Server
- ▶ Appears as standard audio device
- ▶ Compatible with popular VoIP programs and digital modes
- ▶ Transformer isolation
- ▶ I/Q Input
- ▶ PTT options
- ▶ Included with RSS from MFJ



RIGPI KEYS

- ▶ Add-on board for RigPi Station Server
- ▶ Uses popular K1EL WinKeyer chip
- ▶ Included with RSS from MFJ



- ~ \$80.00 Each
- ? Software/Drivers
- - Setup
- \$40 Preloaded SD

Home > MFJ-1234 RigPi Station Server

MFJ-1234 RigPi Station Server

SKU: ZMF-1234

Please note that this is the complete kit, all that is needed is the power supply listed below and your own amateur radio station.



Add to Cart

PayPal

CREDIT

Two easy ways to pay

\$279.90 *Free Shipping!*

10

MFJ-1234 Prewired Interface cables

Cable Part #	Description	For these radios . . .
MFJ-5704P	For 4-Pin Round Mic Connector	4-Pin Round Mic Connector transceivers
MFJ-5708P	For 8-Pin Round Mic Connector	Icom 728/735/738/746Pro/751/756Pro/761/765/775/781
MFJ-5711J	For RJ-11 Mic Connector	Radios with RJ-11 Microphone connectors
MFJ-5745J	For RJ-45 Mic Connector	Icom IC-706 microphone port
MFJ-5705D	For 5-Pin DIN Data / Accessory Port Connector	Ten-Tec, ArgoV, Jupiter,Omni-VII, Pegasus
MFJ-5708D	For 8-Pin DIN Data / Accessory Port Connector	Radios with 8-pin DIN accessory port
MFJ-5713DI	For ICOM 13-Pin DIN Accessory Port Connector	Icom IC-706/718/7000/7200/7300/7410/9100
MFJ-5713DK	For Kenwood 13-Pin DIN Accessory Port Connector	Kenwood TS-140/450S/850/870/950/57D/590S/990/2000
MFJ-5713DK	Kenwood 140/450S/850/870/950/57D/590S/660/2000	Kenwood TS-140/450S/850/870/950/57D/590S/990/2000
MFJ-5713DK	Kenwood TS-440/690	Kenwood TS-440, TS-690
MFJ-5713DK	Kenwood TS-940	Kenwood TS-940
MFJ-5706MD	For 6-Pin mini DIN Data / Accessory Port Connector	Yaesu: FT-100/817/657/897/950/991, Icom IC-706/746/7000/7100
MFJ-5700K3	For Elecraft K3's rear panel Audio In/Out & PTT jacks	Elecraft K-3
MFJ-5700KX3	For the Elecraft KX3's Mic and Phones jacks	Elecraft KX-3
MFJ-5700K	For various Baofeng, Wouxun and Kenwood HTs	Chinese HTs, Kenwood UV-5R, etc.
MFJ-5700R	For various Yaesu HTs including the FT-60R, VX-8GR	Yaesu HTs, FT-50R, VX-8GR
MFJ-5700UT	For building your own cable (bare wires on radio end)	Un-terminated cable
MFJ-5704P	For USB to rig sound card interface with 4 pin	



RIGPI REMOTE

- ▶ Control your station from anywhere
- ▶ Compatible with any browser
- ▶ Compatible with CommCat (Windows) and CommCat Mobile (free iOS app, on the Apple App Store)
- ▶ Battery powered field operation
- ▶ No Internet required



Remote Control Software
VNC (Server / RealVNC Viewer Client)
Teamviewer, SplashTop

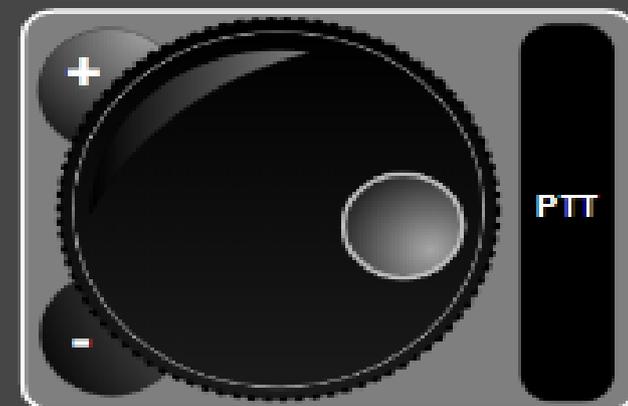
RigPi Operations

MAIN 20m 22:48 UTC
14.195.000
SUB KX3 LSB RCV
14.195.000

1 2 3 4 5 6 7 8 9 0



W6HN



Radio: KX3
CW: RigPi Keyer

Log: ALL Logs
Spots: K1TTT

▶ Connect Radio

■ Disconnect Radio

A>B

A>M

M>A

A<>B

☐ SPLIT

160

17

WAIT 1 (AS)

QRZ

BK

MACRO 25

80

15

MY CALL

THIS DE MINE

w test

MACRO 26

60

12

SNN

CANCEL

SWITCH OFF

MACRO 27

40

10

ESC

PWR ON

SWITCH ON

MACRO 28

30

6

ERROR (-)

PWR OFF

MACRO 21

MACRO 29

20

2

TUNE

HAMLIB TEST (F)

MACRO 22

MACRO 30

LSB

USB

T/R

ROTATE

MACRO 23

MACRO 31

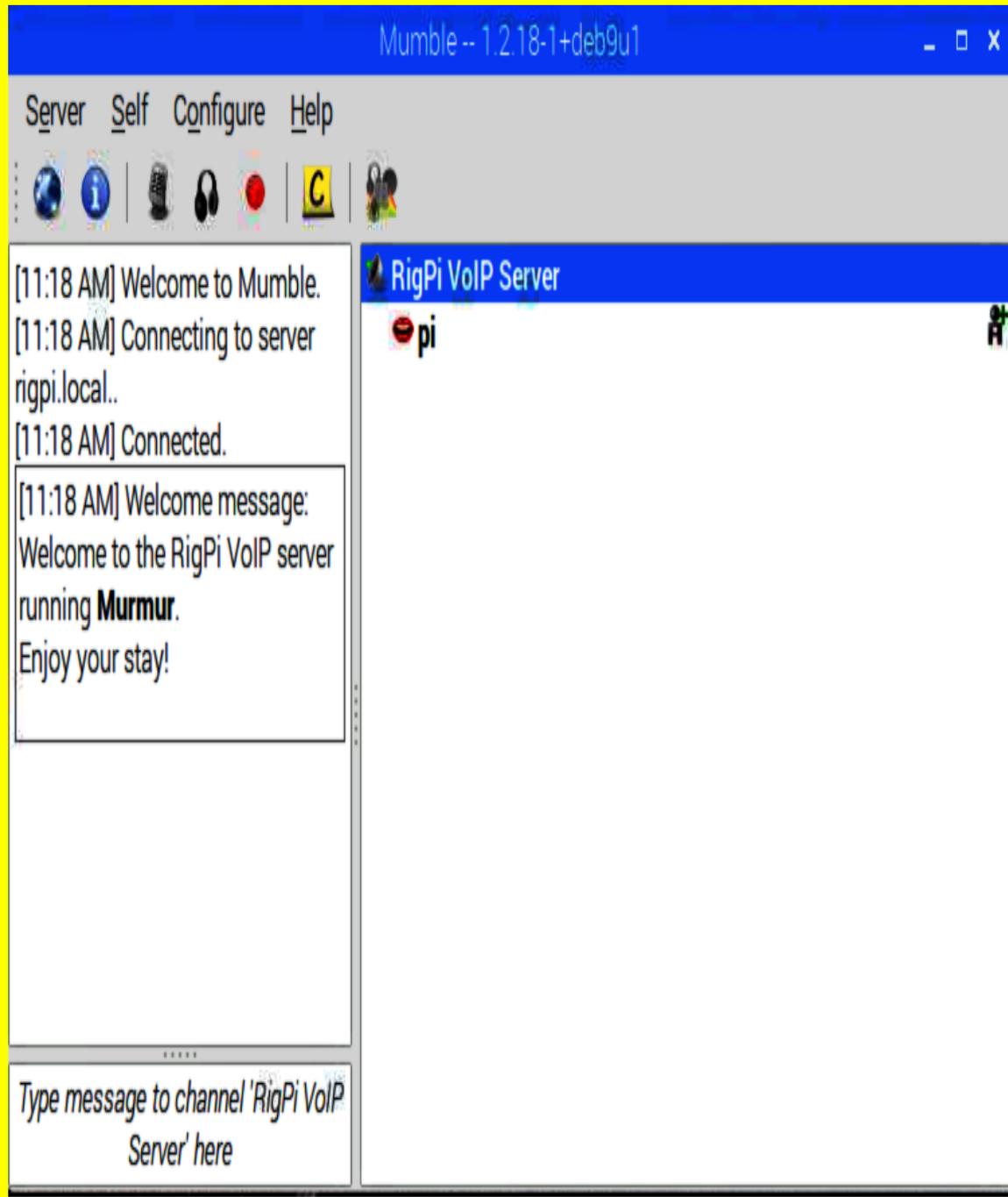
1025 x 774
Main: 14.195.000 mHz

Mode: LSB

User: W6HN (Admin)

22:48z

Mumble Setup



Over the Internet



Advanced Features

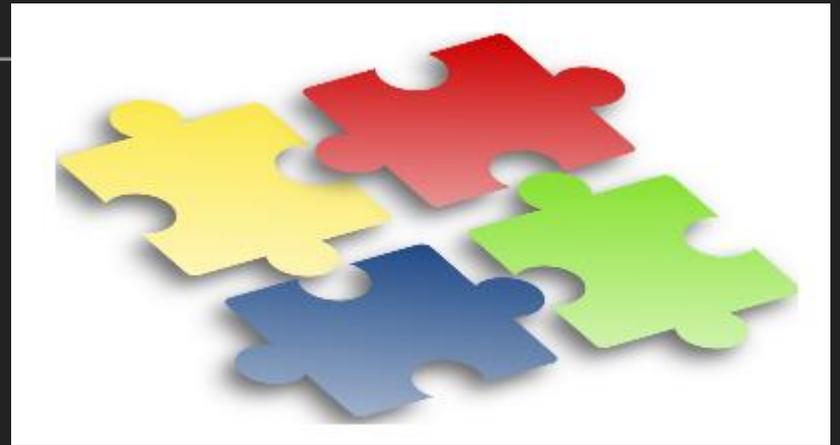
- Winlink with PAT client (<https://getpat.io/>)
- RigPi across AREDN thru an AREDN Gateway



RIGPI STATION SERVER

RIGPI NETWORK

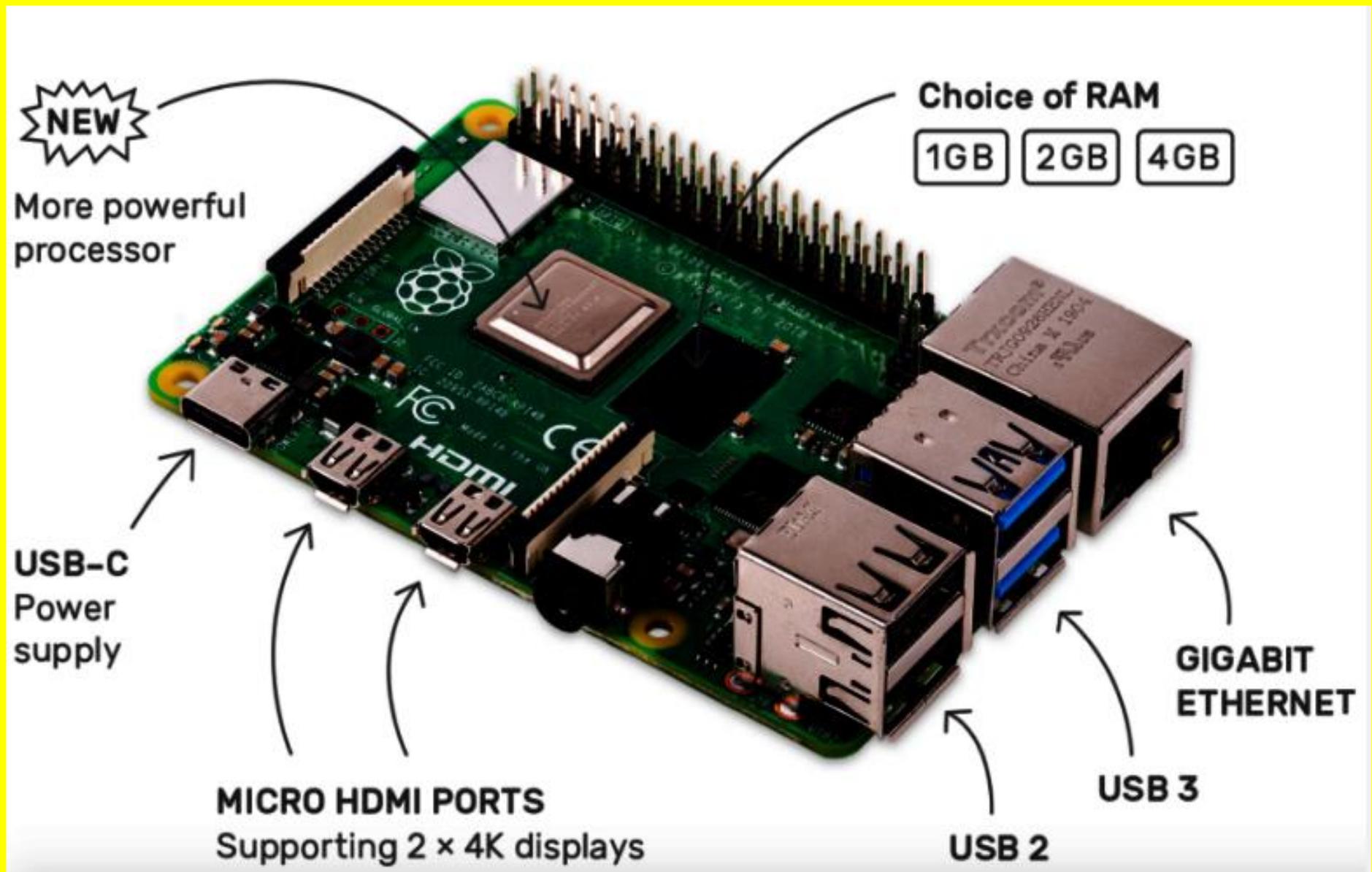
- ▶ Multiple remote users
- ▶ Mumble VoIP and texting
- ▶ Connect to repeater
- ▶ Link to other RigPi nodes
- ▶ Wide area RigPi Network (WARP)
- ▶ WinLink2000



Other Local/Remote Solutions

- RemoteTX (limited radios) Pi Kit \$60 + subscription fee (<https://www.remotetx.net/>)
- Icom RS-BA1 (Icom only radios) Windows
- RigExpert (W I-1) Expensive
- RemoteHamShack (Telephone no internet)
- Kenwood (ARCP software) Windows
- HRD (host & remote but not 2m/440) & Skype Windows
- Raspberry Pi 3B+ (open source Linux)Mumble Audio, remote control (See Next Slide)

Raspberry Pi 3B, 3B+ or Pi4 with Pi-Build “Another Cheaper Way”



\$\$ and Time

- \$35 to \$60 for Pi4 + power adapter USB-C
- Manual install of all packages
- Does not include the MFJ 2 modules
- You need an HDMI monitor
- You need a USB keyboard & mouse
- You need a case & radio cables
- Is it worth the time to learn Raspberry Pi OS and how to install packages?
- Install VNC Server
- <https://dl2gkk.com/setup-raspberry-pi-for-ham-radio/>

Links & Support

- Pi-Build from KM4ACK & LCGreenwald

→ <https://github.com/lcgreenwald/pi-build-2>

This includes the AutoHotspot & Tools

This is the latest from KM4ACK Customized

- Pi-Gen from

→ <https://github.com/RPI-Distro/pi-gen>

- Google Groups.io Forum

→ <https://groups.io/g/RigPi>

Free Stuff

Sample Screens of Pi-Build Pi4

The screenshot shows a Raspberry Pi desktop environment with a VNC Viewer window. The desktop background is a sunset scene. On the left, there are icons for 'Wastebasket', 'Settings', 'mountain', and 'Pi Store'. The main window is titled 'Build a Pi by KM4ACK' and contains a list of applications to be installed. The list includes: HOTSPOT, GPS, CONKY, FL_Suite, PAT, ARDOPC, ARDOPGUI, PATMENU, DIREWOLF, AX25, HAMLIB, PULSE, JS8CALL, MOIAX, and WSJTX. The 'Install Selected' button is highlighted. A second window of the same application is also visible, showing a different set of applications: PYQSO, GPREDICT, CORLOG, CHRP, EES, GARIM, QSSTV, GRIDTRACKER, PROPAGATION, YAAC, and XASTIR. The 'Install Selected' button is also visible here.

Decision time.....
The FLDIGI suite can be built from source or downloaded from the repository. Building from source will give you the very latest and greatest FLDIGI suite. It will also add roughly an hour to the build time of this script. If you choose to build from source, many of FLDIGI tools will be installed. The tools this script includes is FLRIG, FLDIGI, FLARQ, FLMSG, FLAMP.
Build FL suite from source? y/n y

KM4ACK

Gridsquare NO GPS

LOCAL ZULU

15:05:38 15:05:38

02-18-20 02-18-20

SYSTEM

Frequency 1.50Ghz

Uptime 0h 5m 13s

Temp: 40.0 C

cpu 8%

MEM 229MB / 3.81GB 8%

SWAP 80 / 100MB 0%

HDD 4.9GB / 8.9GB 39%

NETWORK/HOTSPOT

Wireless IP address 10.10.10.10

Wired IP address 10.3.35.102

DHCP ADDRESSES FOR HOTSPOT

RADIO TOOLS

FLRIG OFF

FLDIGI OFF

FLARQ OFF

FLMSG OFF

FLAMP OFF

PAT ACTIVE

RECENT LOG ENTRIES

Mon 17 Feb 14:15:20 GMT 2020 RMS Gateway Ext download Six

Winlink (<http://getpat.io>)

Email over ham radio

Look on YouTube for
KM4ACK's Videos
for running PAT on PI
(PAT runs on Linux,
Apple, Windows & Pi)
Windows uses Winlink
Express



Also read: QST April 2020, Page 48 for a written review.

<https://groups.io/g/RigPi>



MFJ-1234 RigPi Support Forum RigPi@groups.io

Support forum for MFJ-1234 RigPi Station Server

Group Information

- <https://rigpi.net>
- 1,252 Members
- 1,050 Topics, Last Post: 8:52am
- Started on 11/28/18
- [Feed](#)

Group Email Addresses

Post: RigPi@groups.io
Subscribe: RigPi+subscribe@groups.io
Unsubscribe: RigPi+unsubscribe@groups.io
Group Owner: RigPi+owner@groups.io
Help: RigPi+help@groups.io

Group Settings

- All members can post to the group.
- Posts to this group do not require approval from the moderators.
- Posts from new users require approval from the moderators.
- Messages are set to reply to group.
- Subscriptions to this group do not require approval from the moderators.
- Archive is visible to anyone.
- Wiki is visible to anyone.
- Members can edit their messages.
- Members can set their subscriptions to no email.

“That's all folks”. KB5NFT Dale Finley
214-244-2100 or kb5nft@gmail.com