

Portsdown Update

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Topics

- Project Status
- Recent developments
- New possibilities?





Status – Portsdown 2020

- RPi 3 with 3.5 inch or 7 inch Touchscreen
- Supported with current functionality
- Does not support PicoTuner
- Will live on for a few years yet
- If not updated will work forever



Status – Portsdown 4

- RPi 4 with 7 inch Touchscreen or web
- Supports PicoTuner
- Developments in test equipment
- Web control from a browser
- The latest fielded capability



Status – Portsdown 5

- RPi 5 with 7 inch Touchscreen, HDMI screen and mouse or web
- Currently still under development
- Does not yet transmit reliably
- Release in Q3 2025



Recent Developments – P4

- Noise Figure Meter works with Pluto
- Noise Meter works with Pluto
- Added File Menu
- Ryde receiver
- Boot Options
- Support for Muntjac SDR



File Menu

File Menu (4)

Select IQ File	Play IQ File	Play IQ File in loop	Mount USB Drive	
File Explorer	Update Ryde RX	List Network Raspberry Pis	List Network Devices	List USB Devices
Copy File for Paste	Paste File to Directory	Rename File		Exit



Recent Developments – P4

Start-up App Menu (34)

Boot to Portsdown	Boot to Langstone	Boot to Band Viewer	Boot to Meteor Viewer	
Boot to Test Menu	Boot to Transmit	Boot to Receive	Boot to Ryde RX	Exit



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Portsdown 5

- Extra row of buttons
- Mouse and HDMI option (not HDMI touchscreen)
- Possible video source switching without dropping TX
- New features



Main Menu

Portsdown 5 DATV Transceiver Main Menu

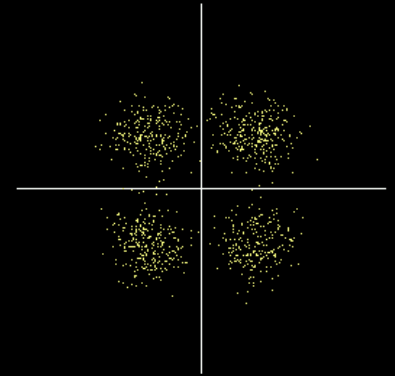
Transmit Select	Receive Menu	DATV Tools Menu	Config Menu	File Menu
Modulation DVB-S2 QPSK	Encoding H264	Output to Lime Mini	Format 16:9	Source Test Card
Freq 437.00	Sym Rate 333	FEC 2/3	Band/Tvtr 70cm	Lime Gain 85
EasyCap Comp Vid	Caption On	Audio Auto	Atten None	Att Level -10.00
Preset 1 146_333	Preset 2 437_Lime	Preset 3 1255_HD	Preset 4 437-Pluto	Store Preset
Shutdown System	Band Viewer	Test Equipment	Locator Calculator	Stream Viewer



Portsdown 5 RX Diagnostics

- Ability to display and measure phase noise
- Nulls

DVB-S2 Lock
10491.547 MHz
1500 kS
FEC 4/5
QPSK
A71A
QARS
H264 MPA
MER 9.1 (4.7 needed)
RF Input Level -50 dB
Nulls 1.4%
Touch Centre to Exit



Amplitude MER 8.9 dB
Phase MER 8.8 dB



Portsdown 5

- Raspberry Pi 5 not ideal for video
- H264 encoder not usable
- VLC image orientation locked
- Slow Progress

Other Projects

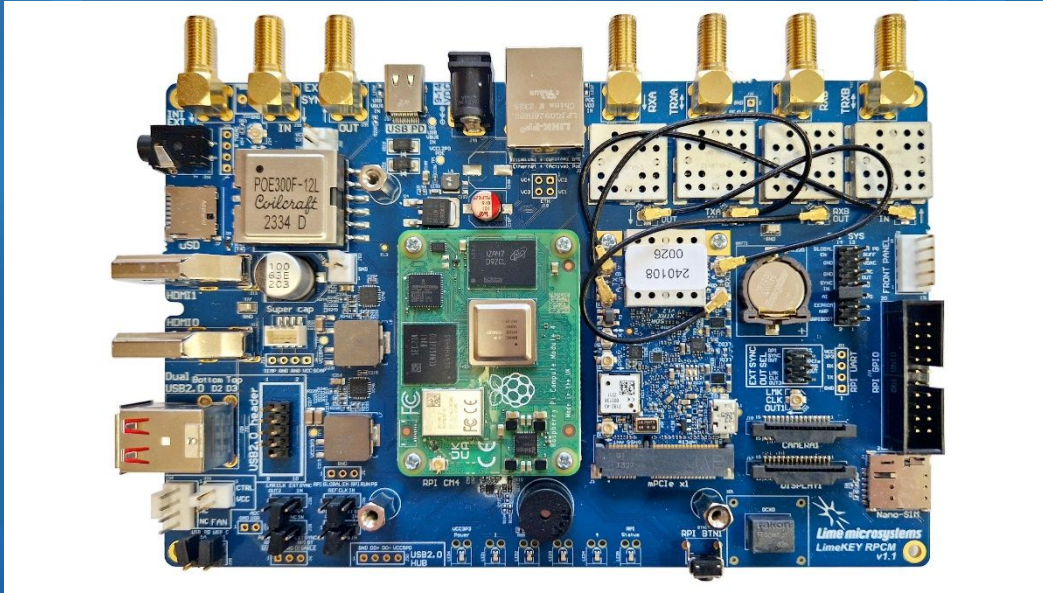


- LimeNET Micro 2.0 DE
- Spectrum Analyser IF using LimeSDR



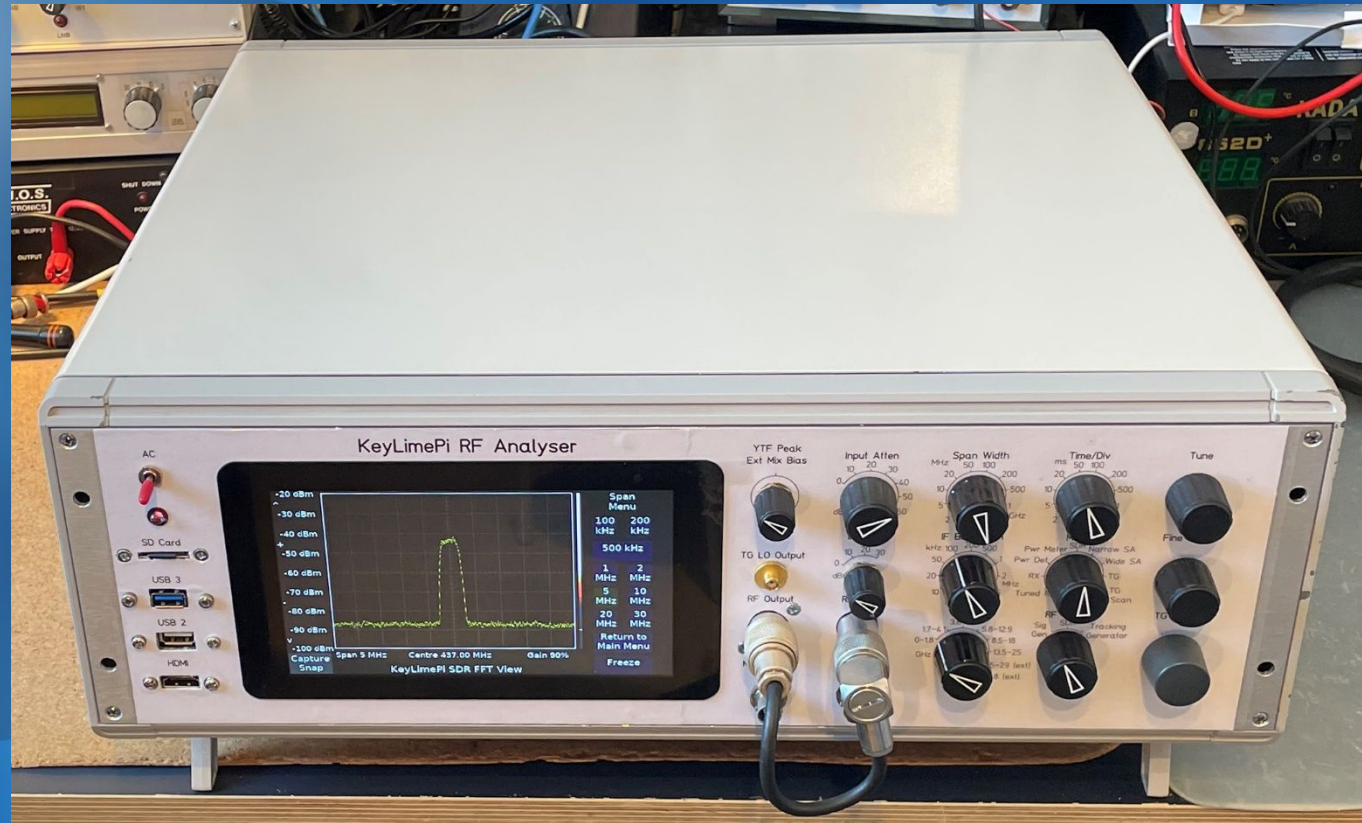
Other Projects

- LimeNET Micro 2.0 DE



BATC

RF Analyser





RF Analyser

- Based on an HP 8565A – extended to 25 GHz
- LimeSDR IF
- Raspberry Pi 5 and touchscreen (Portsmouth 5)
- Includes
 - Sig Gen
 - Noise Figure Meter
 - Tracking Generator to 15 GHz

The BATC logo is a dark blue square with the letters "BATC" in white, bold, sans-serif font. It is positioned in the top left corner of the slide, partially overlapping a large, stylized blue arrow that points towards the right. The background of the slide is a solid blue color with a subtle gradient and some faint, curved lines.

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Questions