

# RockRouter-S (idea to play)

Sep 2020

alkorismus

Sep '20

Hi.

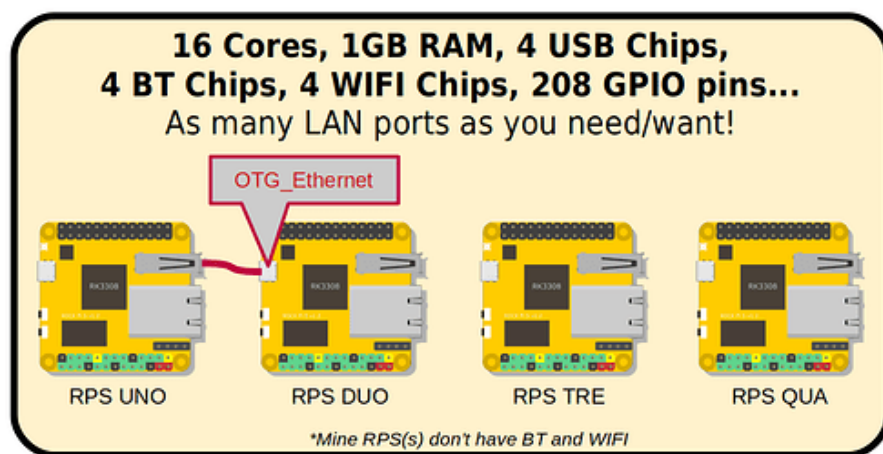
Just want to share one idea that I am playing with for many years, doing/testing bits and pieces, of what I believe NEED TO BE a platform...

The subject is ROUTING.

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## RockRouter-S Modular



Sep 2020

Well, 3 days ago I just “found” the PERFECT hardware module to use, this time not for testing, instead, RockPI-S collection of features allows me to put into concrete practice this idea to have a ROUTING PLATFORM, made of many devices, instead of just using a monolithic home/office router devices (the one that we have today)...

Of course, we will continue to use monolithic home/office routers, but in the era of multiple PCs, Smartdevices, SBCs, PER PERSON, having many more routing devices makes a lot of sense, and, I believe, help to to extract the full utility and power of all the devices that we have...

More important, by using ONLY monolithic routers, WE FACE LIMITATIONS IN MANY WAYS...

These limitations are bad because it include limitations on our ability to “see” the possibilities, and of course, to seek them...

I believe we need to have a Routing Platform which is fully open, fully programmable (API) and fully controllable by the user... the current devices that exists are creating BARRIERS for the users to fully use and live the age of “net of everything”...

I think that an era of “net of everything” can only exist when we achieve a True Routing Control, so that we can control what routes data will take, how, when, etc...

The word “net” means “routes connected”, and when we are not in control of the net, then we are NOT users...

RPS

I am already convinced that RPS (RockPI-S) is something special because its combination of features,

and yet, I was surprised to see how easy and powerful is the use of OTG-ETHER as Link Between RPS(s) when (and if) we thing RPS(s) as MODULES...

On RPS everything is SIMPLE!  
This simplicity helps us to focus on doing things, creating something new...  
We waste very little time setting things up...

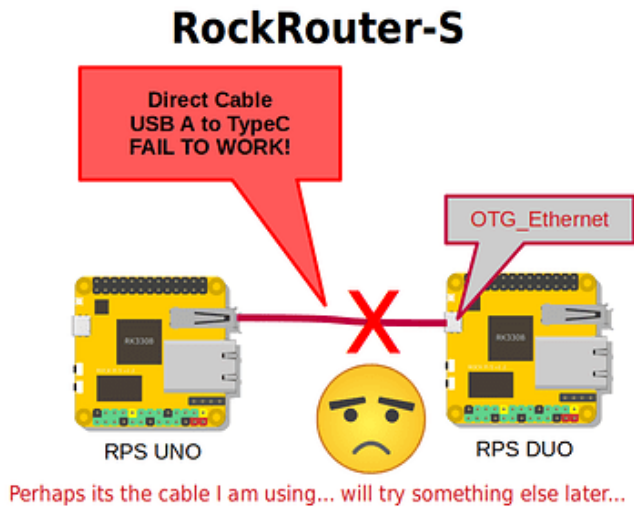
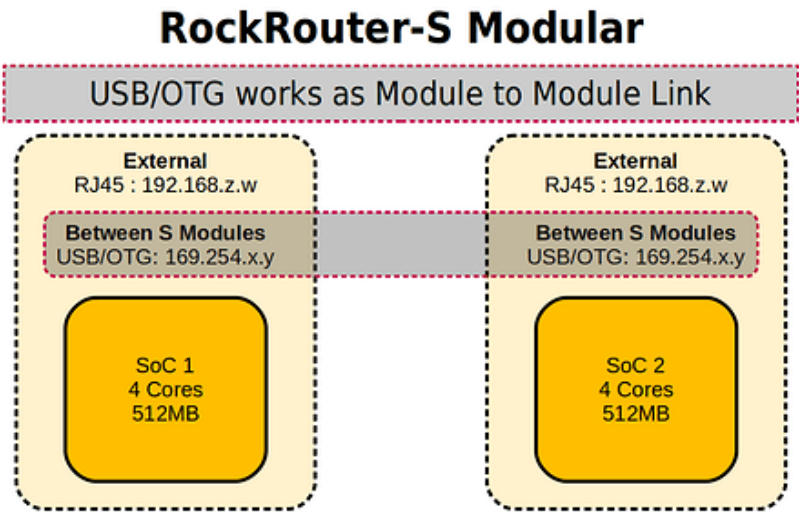
Regards,  
Valter

PS. I have NOT, connected 4 units as depicted on the picture 1, I think it can be done...

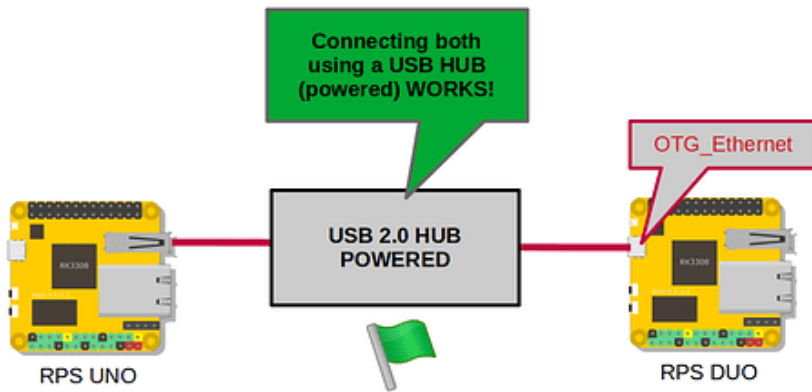
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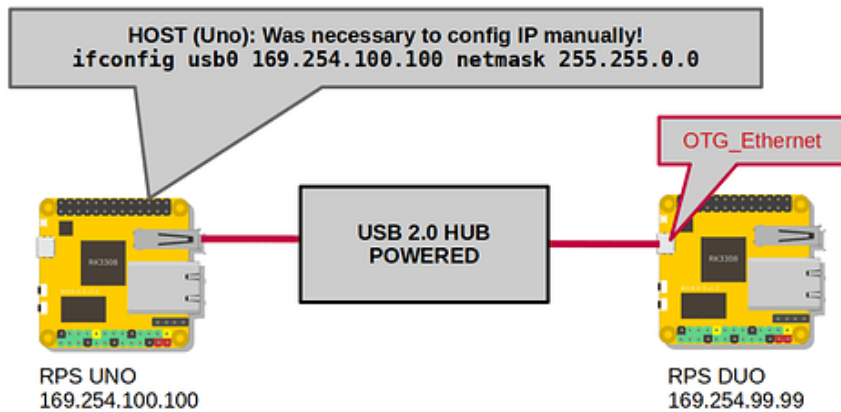


## RockRouter-S

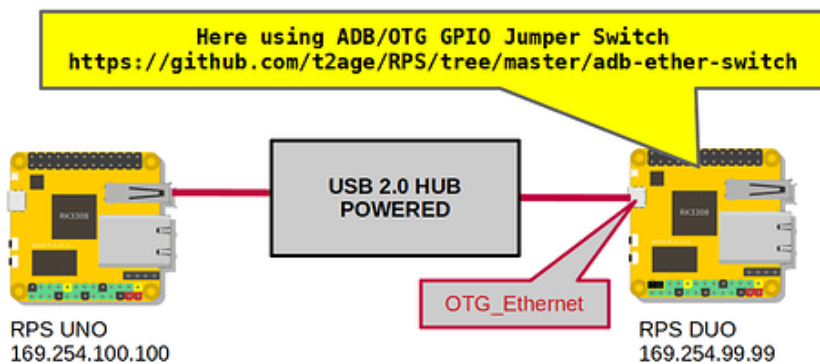


\*See: <https://forum.radxa.com/t/strange-behavior-with-usb-hub/738>

## RockRouter-S

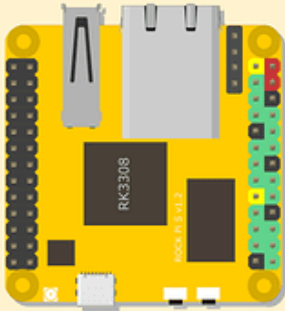


## RockRouter



## RockRouter-S Modular

### GPIO Monitor/Signals



Developing mechanism to have physical signals using GPIO when the admin LOGON, when there are changes to configuration, certain kinds of activities, will be a nice feature to have....

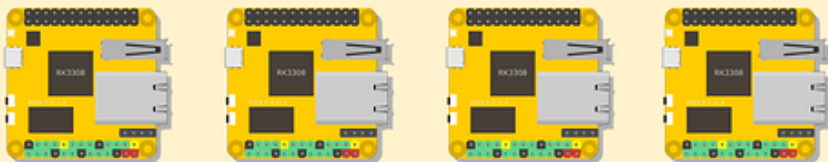
Signal what station (device) is ACTIVE also can be good features to have...

"Press GPIO Button to allow SSH Login" is simple to implement, adding another layer of protection...

Routing deserves more attention, more "transparency"... GPIO can help in many ways...

## RockRouter-S Modular

APIs,  
Many Levels of Passwords/Permissions,  
Many Hardware Blocks (boards),  
Many Software Systems



## Monolithic Devices can only solves certain kind of needs/problems...

Monolithos Devices  
One Box to have it ALL



Micro Lithos Devices  
"Do One Thing, Well"



Since each module has a full GNU/Linux/FOSS Stack, there are MANY functions possible, beyond what a monolithos router can offer...

MicroLithos is the opposite of MONOLITHOS

## PLATFORM ROUTING

A **LIVE** Interactive Entity w/ Many Layers,  
A Full **PLATFORM** w/ Many Functions/Tools

Monolithos Devices  
One Box to have it ALL



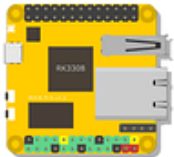
Micro Lithos Devices  
"Do One Thing, Well"



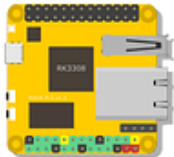
*In the Age of "Everything is on the Net  
(SmartDevices, SBC, IoT)", routing **MUST**  
become a **LIVE PLATFORM**!*

## RockRouter-S, Zero Waste!

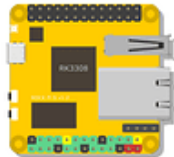
DON'T need your router anymore?  
Then you have 4 (n) RockPI S to use...



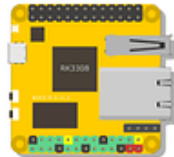
RPS UNO



RPS DUO

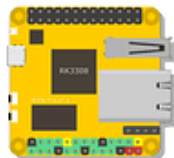


RPS TRE



RPS QUA

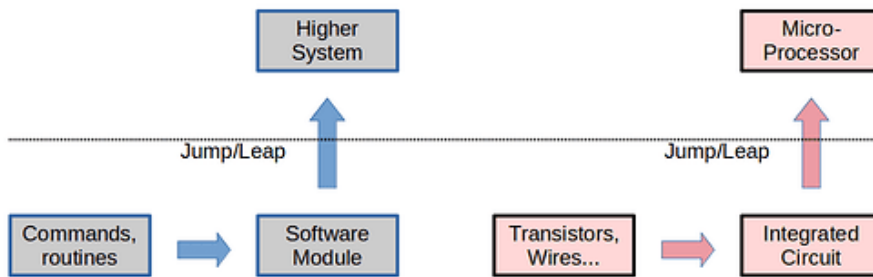
**Simple, Cheap, Easy Hardware,  
allow us to play/test/develop/create  
NEW ideas...**



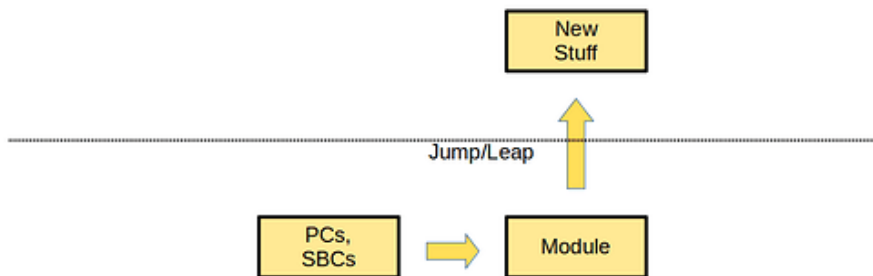
*"Perfection is finally attained not when there is no longer anything to add,  
but when there is no longer anything to take away."*

Antoine de Saint-Exupery

A Module is a reduction of the complexity of a system into more manageable levels...



Modules free the human mind from unnecessary data (noise), and allows for higher creation...



### "Small Is Beautiful"



**This little yellow baby, is, in reality,**

(have the potential to...)



**a Great Yellow King**

(become)

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Ok, so clearly you've put a lot of time and effort into this, BUT, there is a problem with your writeup:

You haven't actually demonstrated any utility in this configuration.

For example, you said "WE FACE LIMITATIONS IN MANY WAYS..."

Well... can you give a few examples of these limitations that you have in mind and how this daisy chaining of SBC's can address them?

You also said "I believe we need to have a Routing Platform which is fully open, fully programmable (API) and fully controllable by the user... the current devices that exists are creating BARRIERS for the users to fully use and live the age of "net of everything"..."

Again, this isn't at all clear, and you haven't demonstrated how your daisy chained SBC's will advance over, for example, RouterX running OpenWRT. Can you provide an example of something you can do with your string of SBC's that can't be done with a decent piece of hardware running OpenWRT?

You also said (in one of the pictures): "A module is a reduction of the complexity of a system into more manageable levels..." – But rather than reducing complexity, your approach appears (at first glance) to actually INCREASE complexity for no apparent reason, since now it is not only necessary to configure the software on the router, but it is also necessary to figure out how to connect these boards together, and how the data will flow between them.