Rafael Micro R840 - TV display V56 - LLV56 board - Projector

Autor:
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https://sites.google.com/site/lcd4hobby/6-lcd-as-pc-vga-hdmi-av-tv-display-tsumv59

Universal led lcd controller board tsumv59 - YouTube

? 1:31

https://www.youtube.com/watch?v=qYia8I4pz7w

25 d'ag. 2016 - Penjat per ps3,ps4,xbox 360 and xbox one reballing service

This is universal lcd led controller board for any lcd led tv .this is the video how we install this tuner board to lg ...

Tsumv59 display set for FPV - YouTube

? 1:00

https://www.youtube.com/watch?v=QuwfrBtwHB8

18 de març 2014 - Penjat per Yegor S

HD ??????? ??? FPV ?? ??????????? T.VST29.03 ?? ???? ???? TSUMV59. ??????????? ?????? ?? ?????? ???????.

Headplay with Tsumv59 chipset LCD driver board - YouTube

https://www.youtube.com/watch?v=6mM3YC4VnCA

29 d'oct. 2015 - Penjat per Jefte Puente

Headplay with Tsumv59 chipset LCD driver board ... Show more ... V59 Universal LCD TV Controller Driver ...

6. LCD as PC VGA, HDMI, AV, TV display TSUMV59

There are also boards available on TSUMV59 chip, this controller offers also a player from USB pendrive or HDD, as source of various movie formats and pictures. It is another controller, I can call "amazing" board.

Manual for this controller is available for download at bottom of THIS SIDE .

Model: LA.MV9.P V59

(lastly I got news, that chip TSUMV59 is discontinued and next one have name TSUMV56, in short V56 ,

latest boards named as LLV56 or LA.MV56U.A or VST56.03 or T.V56.03 using chip TSUMV56,

as from my personal experience - LLV56 and LA.MV56U.A looks fine and working very well with many screens)

TSUMV59 / TSUMV56 version lastly become quite cheap and available IN THIS SHOP

This board on picture have new updated TV tuner with R840 chip, so it use new firmware (software package must have in name "R840"), if is used firmware for old type of board, then TV tuner not works at all. With new firmware for R840, TV works surprisingly clean and nice, with analog channels of cable network.

After some testing, with new firmware package, looks like this board supports a big number of screens, resolutions and LVDS types.

So that is the biggest screen support I ever seen.

It have switchable 4 aspect ratios as 4:3, 16:9, zoom1 and zoom2, so it is like a real big TV set.

To access "service menu" please open Menu and then type 1147 from remote control - that all , you are in "service menu"

You can change connected keyboard type, 7 or 5 keys in "service menu", as is possible to change many other parameters of controller.

Firmware programming and connection of TV to controller is the same as for TSUMV29 described here 5. LCD as PC VGA,HDMI,AV,TV multifunction display

However, TSUMV59 have much better functionality.

All other inputs, as PC HDMI and AV, works also in the same way. Is possible to turn OFF Blue Screen for FPV modelers.

HDMI input, most useful for Raspberry PI fun, as for other hobby use, or as for external monitor for portable HD camera.

HDMI scaling 16:9 picture to the screen connected to controller even 16:10 , so geometry can be corrected by "overscan" option in "service menu".

Remote control have more buttons as there is ability to play from USB source movies, music and pictures.

In fact, movies are played well with good sound, in some codecs, player do not recognize sound track, so few movies was silent.

I tested pictures and movies, using as source pendrive and 2.5" HDD in USB case, both working well, so USB port have not problem to use HDD as movie-music-pictures source.

Programming is very simple, we must choose proper *.bin file and copy it to pendrive at root directory, plug pendrive into USB, then plug power cord, status LED will made some flashes and software upgrade is done.

So, always consider and think twice before buy any board, choose seller fully supporting latest firmware files for his board, if he is not - simply DO NOT buy, because you will have useless piece of junk.

You can buy controller from shop recommended on this webside, the firmwares for download are correct and work well with them.

Two words about HDMI input, most useful for Raspberry PI freaks, as for other hobbyist.

HDMI input recognize in proper way only aspect ratio 16:9 resolutions.

That means, device detect 16:9 ratio resolution and then scaling it to resolution of screen used with LVDS , so any native 16:9 resolution sent by HDMI, will be scaled to resolution of screen connected to device even not matched 16:9. That little odd but works.

So, if you plan a mostly to use HDMI , look for screens with native 16:9 ratio resolution, that way you will be able to see a native resolution of HDMI 16:9, at native of screen, what gives the best results in picture geometry (circle is circle not ellipse).

What if you have 16:10 screen and you are not happy with circle looking like ellipse ?

Well, there is sophisticated solution:

- SERVICE MENU - this is option for advanced users

Press MENU and type 1147 to enter into "Service Menu" , in this menu find "Overscan", you can made picture wider (and then center) and a bit flattened (and also centered), helps using testing picture of 16:9.

So, by this way, is possible to get picture with proper geometry, like in 16:9 native screen.

There are also many other options, if you are interested, then look and test them by yourself.

If you mess the settings, always you can made "factory reset"

Other practical tips of Service Menu are also in this manual

Keyboard for controller

Notice that 5 keys or 7 keys are possible to use with board so also firmware must be for 5 or 7 keys mode.

In TSUMV59 is possible to change keypad 5 or 7 keys in "service menu".

5 keys looks not much but works really nice,

when first pressed key "<" than volume is triggered for regulation,

when first pressed key ">" than channel changing is available.

Keyboard can be easily done on universal prototyping board, using microswitches and wires.

Controller supports A/D type keyboard (Analog to Digital converter is used at keyboard input) , so is possible to use only two wires for 7 keys. In such case we connect only GND and K0 input for keys. That work with 7 and 5 keyboard style.

Each function is determined by proper resistor connected in series with switch, as follow :

no. resistance function

k0   0   on/off

k1 680   V+

k2 1.5k   V-

k3 2.7k   source

k4 4.7k   menu

k5 8.2k   ch+

k6 15k   ch-

k7 38k   reserved

However, for those who do not want too much soldering work, HERE IS ready to use 7 keys keyboard, you need only to soldered IR receiver, as on picture below

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New boards and some TV tuner problems.

Looks like there are two types of V59 boards, both works well with analog TV channels but needs different firmwares.

One type is with TV tuner, what I call OLD'er board,

TV tuner looks like on picture below

The firmwares for TSUMV59 chip with older TV tuner can be downloaded HERE_59 and another package HERE 59

It looks like older board is made typically for 16:9 and 4:3 aspect ratio screens.

There is not firmware support for other laptop's typical 16:10 ratio screens (ex. no support for 1280x800) , this resolution is supported in another firmware pack added above.

However, I was able to find firmwares for 16:10 screens, unfortunate remote control was not working with them :(.

I hope to find a bigger firmware package, for particular remote control with bigger support of resolutions.

Firmwares are described as 7 key keyboards but it works also with 5 key keyboard.

You can change connected keyboard type, 7 or 5 keys, in "Service Menu".

And there another type TV tuners updated by manufacturer, what I call NEWer board

TV tuner looks like on picture below, made on chip R840 or R842 - Warning - needs different firmwares.

The firmwares for TSUMV59 chip with newer TV tuner can be downloaded HERE GD_V59_R840 or the same HERE R840_59 or New_V59_R842 or the same HERE_R842

NEWer board, have much better firmwares pack, supporting many screens missing in OLD version. However, still missing some rare types, still available in NEW V29 controller version.

Usually new TV tuner made on R840 , newest are R842 chip of Rafael Micro brandt.

I have not idea about this chip ability, but with new software it works well as analog TV.

 It looks like it is matter of luck (or no luck), what type of TV tuner you will got.

So I recommend before buy, contact seller and be sure what kind of tuner you need and ask for it.

There are available now "new" boards model: LLV56 or LA.MV56U.A , made with chip TSUMV56 and TV tuner R842,

so firmware for V56 version is there , I checked it personally and works well with board LLV56

However, this "new" V56, there is no support for most popular laptop's screens, like for example: 1280x800_SI6L, 1600x900_DO6L , 1920x1080_DO6L and many more etc. etc. Anyway, there is way to made them work, for example for screen 1280x800_SI6L use firmware "1280x800" and "SI8L" and then, if still not working, in "Service Menu" change LVDS MAP value, that way screen works well as SI6L . The same can be done for other resolutions and LVDS signal types, as described in this document . So before buy of this V56 , always check if your screen type is supported in firmware pack.

WARNING

Beware of buying similar looking boards but without full firmware support from unverified sellers, or not providing proper firmware pack.

This is for example board named as VST59.031 , this board needs special firmware files and have different boot-loader, firmware pack is here.

If you have such unsupported board, you can read here the problem story, proper firmware solution is here however the number of supported screens is not impressed, and about results read here .

Similar problem is with board named VST56.03 or T.VST56.03 , so if you have that one, use this firmware pack.

So, always consider and think twice, before buy any board, choose seller fully supporting latest firmware files for his board, if he is not - simply DO NOT buy, because you will have useless piece of junk.

You can buy controller from shop recommended on this web-side, the firmware for download are correct, tested and works well with them.

Programming is very simple, we must choose proper .bin file and copy it to USB pen-drive at root directory, plug pen-drive into USB, then plug power cord, status LED will made some flashes, first slower and at end faster, and software upgrade is done, you will see picture on LCD screen.

Flashing is easy and work reliable, more time consuming to choose proper .bin file.

There was reports about some pen-drives not working with board, as solution simply change pen-drive to other brand.

Attention: Sometimes, when playing with firmware, if there be power cut/brake during programming and flash will not finish programming, than the board become dead.

To repair/fix the board, need to be reprogrammed SPI flash chip (small 8 leg chip) in any external SPI programmer.

To do that, we must unsolder flash chip from board, put it into programmer and program the .bin file what is placed at end of this page.

After program, resolder chip in his place at board, the controller will become live, so is possible to start programming again.

Direct link for download chip content need for repairing V59 controller type only.

Testing TV with 1280x800 laptop's screen

A nice result of DIY FPV gear, and comprehensive review of controller's functions and abilities done by user Joshua Meyer

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Problems.

If you have any problems, please look here b. Possible problems

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In progress

Subpages (2): a. How to made 22" LED TV b. How to made 20' HP TV

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ND-LA.MV9.P-2.pdf
(357k)

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Users guide of V59 TV controller board_V1.1.pdf
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V59_dump.rar
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Dec 28, 2015, 1:44 PM

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Rafael Sanzio da Urbino (or Raffaello / Raphael) and Da Vinci, Michelangelo

During the revival of the three painters, style influence far behind. We are a radio chip design company, working with the painter

Is a creative industry, and the constant pursuit of innovation and breakthrough, and Raphael full name Rafael Sanzio da Urbino and the company focused

RadioFrequency (RFFrequency, RF) has a common abbreviation letters, so in the name of Rafael Micro.

R afael Micro was founded in November 2006 and is comprised of senior RF professionals from the semiconductor industry.

RF chip design of the global leader, is also the only cross-strait has the ability to cross the high-end home appliances radio frequency

Chip supplier. Accumulated more than 200 million shipments not only to obtain customer trust, but also for the product reliability and the most stringent

Inspection and certification. Macro Microelectronics All RF chip products have their own patented technology and intellectual property. Which silicon

Tuner to own patented FM technology, filtering technology and advanced broadband RF circuit technology , the development of the competitive advantage is not easy to go beyond, but also Taiwan's IC design industry can only provide the TV and the box used by the high-end RF chip Company, shipments beyond Japan and South Korea wafer design plant

Business squeeze into the world's top three silicon crystal tuner chip suppliers, the product has successfully entered Europe, the United States, China, Japan, the major supply chain system.

Our belief is continuous technological innovation, and the use of innovative technology to bring human high-performance, high-quality RF chip solutions.