# Orix/Twilighte Manual

v2022.3

(rev 20/07/2022)

## EXTRA DOCUMENTATION

==========

### Rom loader and firmware twilighte board menu

https://raw.githubusercontent.com/orix-software/systemd/master/doc/pdf/systemd.pdf

# INTRODUCTION

### What is new (v2022.3) ?

https://orix-software.github.io/update/2022_3/

### General informations

This documentation must be use when you have installed orix version **2022.1** (see at the top of the banner on the oric at boot).

On http://orix.oric.org, you will have some youtube videos links showiint how to use some functionnality.

The board has a firmware version. This firmware can be upgarded see « Hardware and firmware upgrade » section.

The board can be upgarded too but you have to send it to upgrade the board see «  Hardware and firmware upgrade » section » too.

The card has a 512KB of eeprom, and 512KB of RAM. This RAM is saved with a battery. For instance, only bank 4, 3, 2 and 1 can be switched to see others sets. It's a software limit. In the future, you will be able to displays all bank and starts any binary from theses banks. If you wants to change the set, you can use twil command. This command can switch to eeprom bank or ram bank and can switch to any set.

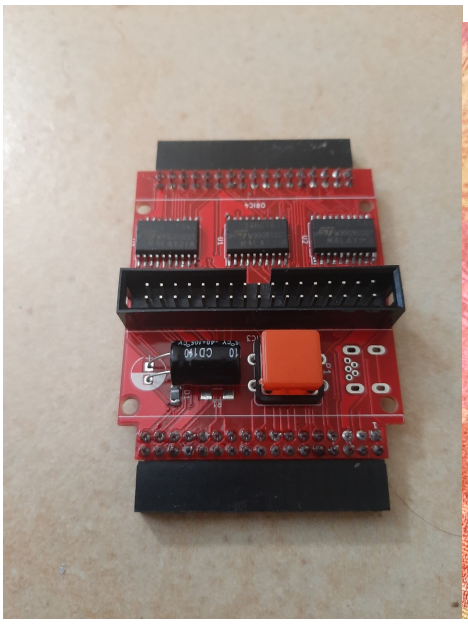
Some extra devices (TOM2, logitech joypad) are explained a bit in this manual, but it's not adverts, we don't ear anything:) It explains some ways to use joystick, others hardware exists in the same way)

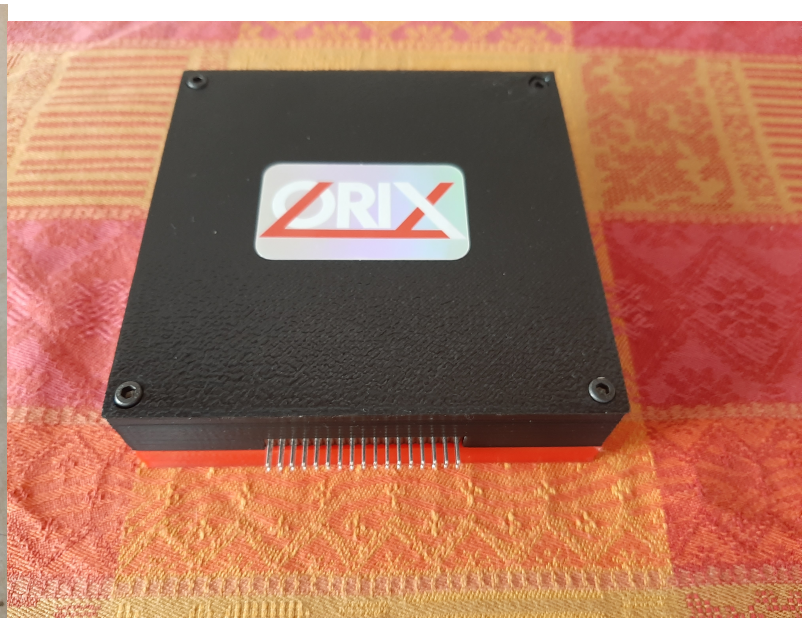
### Features

- .tap file fast loading (with multitap files)
- – Joysticks support for a lot of games on atmos mode
  – the hobbit, defence-force (and others games) works without any patch for loading
- in system : kernel update, roms and ram update (with orixcfg binary)
- 2 DB9 Joysticks (atari)
- 512KB of EEPROM (banking mode)
- 512KB of RAM (banking mode)
- read/write from sdcard (MAX 64GB) or usb drive (mass storage)
- drag and drop from the PC to the oric : It will be available on the oric (with WIFI connexion) : It requires extra hardware with a raspberry pi zero
- fast loading : 46KB per second. A game require less than one second to load and start
- cumulus compatible with the help of an other amplibus board (not provided)

# GETTING STARTED

## Content






## Physicals ports

## Hardware limits

The usb controler manage FAT32 only. Sdcard and usb key must be formatted with FAT32 filesystem. If you want to use pi zero gadget trick, you need to do a mkfs to FAT32 file system.

All tests had been done with samsung evo sdcard and sandisk usb key. A lot of sdcard works, and we did not see incompatibility with sdcard.

Sdcard controler and usb key controler can work with 32GB storage Max. But it can handle 64 GB sdcard (tested). It can handle larger sdcard/usb key reader, but only 32 and 64 GB devices was used.

## Software limits

The sdcard/usb controler can handle long filename, but Orix handles 8+3 filename only.

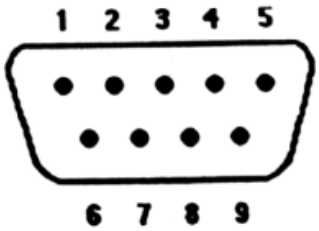
## Information about joysticks part

The left port has only 1 button. The right port has 3 buttons. The joystick pinout is atari pinout. You can use standard DB9 joystick. You can also plug « TOM2 » hardware (not provided), it can connect a usb mouse or usb joypad (wireless) to theses ports. For example, logitech joypad F710 (wireless) works with TOM2.

Please note that TOM2 can only handle 2 buttons. It means that the third button can't work with TOM2 connected.

**Prise Joystick**

1 . ⇑
2 . ⇓
3 . ⇐
4 . ⇒
5 . Souris bouton n°3
6 . Souris bouton n°1
7 . + 5 V.
8 . Masse
9 . Souris bouton n°2





### First boot : Initialize the storage

When the card is sent, kernel is built with a default storage. In order to know which device is the default one, you can type « mount ». You can only use one device at the same time, but you can swap easily theses devices from command line.

If you see « sdcard », then sdcard will be read by default. You can change it, with a command : « twil -u », it will switch to usbdrive. If you want to have usb drive by default, you can program kernel with the tool « orixcfg ». See Orixcfg section.

Now, if you know which device you will use by default, you can install all software on it.

Plug the device on your PC (sdcard or usb key). If you have a pi zero w, you can do this with drag and drop solution from the PC.

Download sdcard.tgz from this : http://repo.orix.oric.org/dists/official/tgz/6502/

It contains all software for orix there is others which are not available in this archive.

Now, use 7zip on your PC (or tar/gzip under linux), and unzip all files from this sdcard.tgz. Put all theses new files in your device root folder.

Now, you can insert the device (sdcard or usbkey – or pi zero) in the twilighte board and play.

## Upgrade from v2022.1 to v2022.3

If your orix version is below v2022.1 version, please go to annexes part at the end of this document, before you try to upgrade to v2022.3

- Download http://repo.orix.oric.org/dists/official/tgz/6502/sdcard.tgz
- untar/gunzip sdcard.tgz (use 7zip under windows) on your device usb or sdcard : It could require some time to copy because there is a lot of small files (tap, hlp etc)
- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2022.3*

If you want to usr usb drive for default device :

*/usr/share/carts/2022.3#orixcfg -r -s 4 kernelus.r64*

If you want to use sdcard for default device :

/usr/share/carts/2022.3#orixcfg -r -s 4 kernelsd.r64

- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

## Optionnal step for upgrade

Now bank displays all banks from l to 64. It means that you should have some strange bank signature for eeprom. Now an empty set is provided in */usr/share/carts/2021.3* folder. With Orixcfg you can initialize your set with this cart. Don't use « -s 4 » flag for orixcfg when you want to load emptyset.

## First step : type a command

You can access to available command from many ways :

- From /bin folders, there is binary available on current device, 'ls' will show you available commands
- From banks : type « help -b5 » you will see available commands

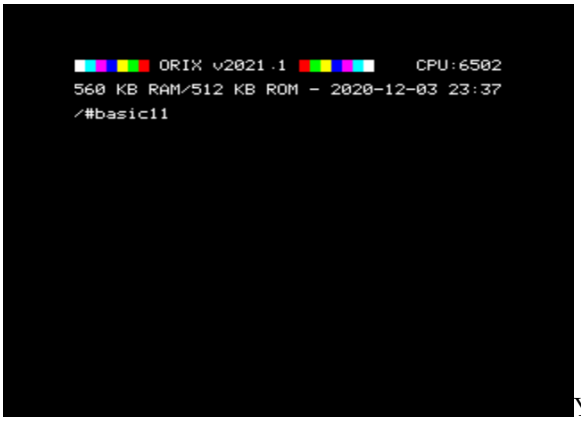
# BASIC11

## Launch

You can type basic11 or press FUNCT+B to start

## Load a personal .tap file

When you starts basic11 commands, the default path is *« /home/basic11/ ». Each action on the basic11 mode will be done in this folder (cload/csave). If you cload a tape file, it must be in « /home/basic11 » folder.*




You have downloaded a .tap file, and want to use it. Then, you can create a folder /*home*/basic11/

Under Orix

/#mkdir home
/#cd home
/home#mkdir basic11
/home#cd basic11

Put you file in this folder from your PC, and start basic11 (you don't need to be in the «/home/basic11 » folder to start basic11 with no parameter. By default, basic11 starts in « /home/basic11/ »

## Oric.org tape file

When you downloaded sdcard.tgz and unzip it into sdcard or usbkey device, there is many tape file included in this archive. You don't need to move these type file, if you know the key, you can starts it from commands line. In this case, it will load the correct basic1.1 rom to start the tape file (see below), and the correct joystick configuration if it's correct.

## Oric.org tape file update

Each week a new software.tgz is generated. You can download it from « repo » and unzip it on the device. It will generate last tape file and last joysticks configuration.

## Search a tape file from command line


Basic11 has also many.tap files inserted in sdcard.tgz

Try to find the software with option -l

/# basic11 -l

If you find your software, you can do perform **ctrl+c.**

You can type space to do a pause.

On that case, you can launch the tape file like :

/# basic11 «KEYDISPLAYED

When KEYDISPLAYED is the key displayed in key column. Please note that the key must be in **UPPERCASE**

## Load a tap file from command line

Note that MYFILE must be in **UPPERCASE**

/# basic11 «MYFILE

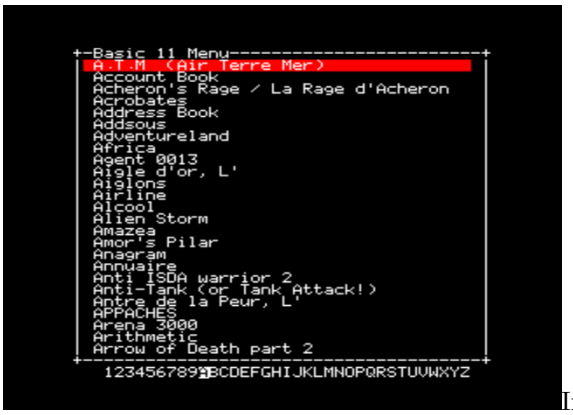
If MYFILE is in the oric.org database, it will launch the software with the filename MYFILE.

If basic11 command does not find MYFILE in the oric.org database, it will try to load it from /home/basic11/ folder.

## Save your program

If you start « basic11 » with no options, basic rom will starts and each csave (or cload) actions will store files in « */home/basic11* » *folder*

## Start basic11 menu




If you type « basic11 -g » on command line or FUNCT+G, you will have a menu with all software which have a download link on oric.org (only atmos version and when a tape file is available).

/#basic11 -g

You can use left and right letters to change to a new letter. If the letter is empty, it means that there is no available tap file for this letter.

You can use up and down link to navigate into software. If you press enter, the software will starts.

Note that not all games are working yet. Some times, chars are corrupted. If the joysticks does not works, there is two case :

- the game does not call rom routine to manage keyboard
- keyboard mapping is not done yet

You can use arrows to navigate into the menu :

- up and down to select the software
- right and left to switch to the menu letters

Some letters are empty. It means that there is no software with tape file available on oric.org for this letter

## Quit basic11

If you want to quit basic11 from interpreter command line, you can type « QUIT ». This will force to reboot to Orix (you can also use reset button)

## How the .tap file starts

If you only type « basic11 », this will start bank 6 (normal basic rom). The default folder in that case is «*/home/basic11 »*

If you type « basic11 » with a tape file as an argument, there is 2 cases

1. The tape file (key) is already known in oric.org website, then basic11 try to find it in its databank file (/var/cache/basic11/ folder). If the key is found, it will start the tape file located in «/usr/share/basic11/... »
2. If the key is unknown, it will try to find it in «/home/basic11 »

If the tap file is in the oric.org db file, basic11 will load the software configuration from the db software file (as joystick configuration, and the id of the rom). Basic11 load the right rom into ram bank, override the default basic11 path to the tape file folder (« *usr/share/basic11/[firstletter software].*

It means that if you load this kind of software and you can quit the software, each file action in basic11 rom, will be performed in « usr/share/basic11/[firstletter software]. »

## Not working tapes (for instance)

- All Oric-1 games can be started with FUNCT+L in ROM menu : start oric-1 (depending of your device), and put .tap files in /home/basic10
- Software which does not work (25), but the number can be reduced in future release.

| | | |
|---|---|---|
| cobra | Cobra pinball | Damsel in distress |
| Rush hour 4K | | |
| Le diamant de l'ile maudite | Durendal | HU*BERT |
| Hunchback | Schtroumpfs | Stanley (ROM 0,1 tested) |
| Them | Titan | Visif |
| Xenon III | Dig Dog | Elektro Storm |
| Kilburn Encounter | Le tresor du pirate | L'aigle d'or (ROM 0,1 tested) |
| Compatible (micropuce) | Volcanic demo | Clavidact |
| DAO Cobra Soft | CW-Morse | The Hellion |
| MARC | Caspak | Kryllis : when we lost one life, the game does not restart |

## Tape with altered charset

| | | |
|---|---|---|
| Fire flash | Scuba Dive | 3D fongus (i,f letters) |

## Joysticks issues

We did keyboard/joystick mapping for a lot of games, but we did not set the keyboard mapping for all software. If you want to help us, contact us.

Some game does not work because they handle their own keyboard routine. It could be handle with hardware tricks but, it's not done.

Some others games uses special keys (SHIFT, CTRL) for direction or the first button. Theses cases are not handle yet : but it could in the future.

## Software update changelog

You need to download software.tgz in the official repo for :

- Mr wimpy added to the archive (takes effect 20/01/2021)
- Airfox added to the archive (takes effect 20/01/2021)
- Atlantid added to the archive (takes effect 20/01/2021)
- Centrale nucléaire added to the archive (takes effect 20/01/2021)
- Cobra invaders added to the archive (takes effect 20/01/2021)
- Coctail Recipies added to the archive (takes effect 20/01/2021)
- Crusher added to the archive (takes effect 20/01/2021)
- Death Driver added to the archive (takes effect 20/01/2021)
- Challenge voile added to the archive (takes effect 20/01/2021)

- Breakout 1K added to the archive (takes effect 20/01/2021)
- DAO added to the archive (takes effect 20/01/2021)
- echecs asn
- dialogue

« added to the archive » means that you need to download softwares.tgz from the repo after the displayed date to get it in the archive

# BOOTFD

## Introduction

bootfd is a tool to boot the boot sector when a drive is connected. Insert a disk and type :

/#bootfd

The binary is located to bin folder. It will load microdisc rom and start it. If the binary displays that it does not found microdis.rom, then place microdis.rom file in the right folder.

If you have firmware 1, you will be able to load « blake's 7 ». If you have firmware 2, all sedoric .dsk should start.

For instance, only Space99 does not work, it stops after intro.

# DF

## Usage

It displays available blocks on current device

# DSK-UTIL

## Introduction

This tool is useful to extract files from dsk file. You can extract it, and uses command line tool to use it. For example, if you extract a basic program (.bas in FTDOS .dsk file), you can see it with « list » binary. If it's a .hrs/.hir file, you can read it with viewhrs file.

You can create a «*/home/sedoric/ »* folder and adds .dsk sedoric files in this folder

Some .dsk files are imported in sdcard.tgz. For sedoric, you can have a look to «/usr/share/sedoric/ » and for ftdos : « */usr/share/ftdos »*

## List files from .dsk (sedoric)

/home/sedoric# dsk-util -s ls sed.dsk

## Extract a file from sedoric .dsk file

/home/sedoric# dsk-util -s e sed.dsk myfile.hrs

## Extract only .hrs files from sedoric .dsk file

/home/sedoric# dsk-util -s e sed.dsk *.hrs

# FORTH

## Use forth

You can use forth language. It works the same ways than Tele forth (it's teleforth but it write file on sdcard/usbdrive).

You can download Teleforth langage in order to see how to program in forth.

When you type « forth » forth starts with the current folder directory.

If you were in /, forth will load and save file in this folder.

In others cases, you can create a forth folder in home and goes into it in forth for example :

/#mkdir home
/#cd home
/#mkdir forth
/#forth

if you type « cd forth» in forth environnement, all files actions will be perform in « /*home*/forth »

# bank

## Introduction

Displays bank or switch a bank

## SYNOPSYS

- bank

## DESCRIPTION

This command displays bank when the command is called without parameter. WIth a parameter, you can switch to a the id of the bank passed to the argument :

bank : displays all the bank (if a signature is found) bank 4 : switch to bank 4 bank -a : displauys all bank (empty bank too)

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/bank.asm

# Command: cksum

**checksum utility**

## SYNOPSYS

- cksum file [...]
- cksum @batchfile
- cksum -h

## EXAMPLES

- cksum /bin/cksum

## DESCRIPTION

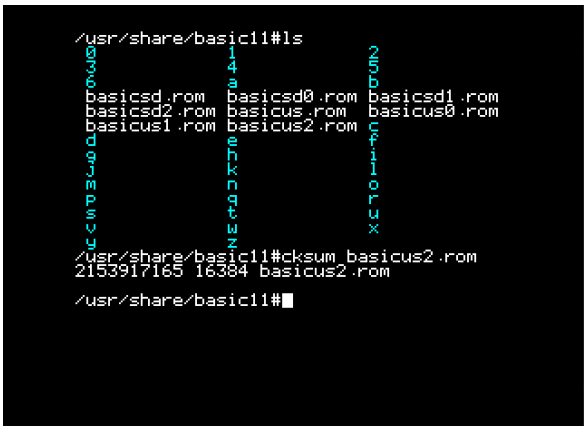
checksum and count the bytes in a file

## OPTIONS

- -h show this help message and exit

## SOURCE

https://github.com/orix-software/cksum



# help

## Introduction

Display commands

## SYNOPSYS

- help

## DESCRIPTION

- No parameter : Displays all internals shell command
- bX parameter : Displays all internals commands in bank X

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/help.asm

# Command: hexdump

**hexdump utility**

## SYNOPSYS

- hexdump file

## EXAMPLES

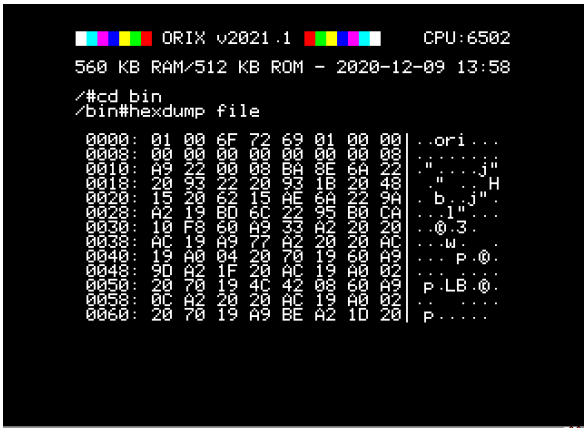
- hexdump /bin/hexdump

## DESCRIPTION

Display file contents in hexadecimal. You can use [SPACE] to pause the display ou [CTRL]+C to abort.

## SOURCE

https://github.com/orix-software/hexdump



# ioports

## Introduction

Display I/O Ports

## SYNOPSYS

- #ioports

## DESCRIPTION

Displays I/O ports.

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/ioports.asm

# ls

**Display catalog**

## SYNOPSYS

- ls
- ls *.tap
- ls -l

## DESCRIPTION

Directories are in FBLUEG color. It manages '-l' and Pattern works in different ways : ls *.tap

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/ls.asm

# lscpu

## Introduction

Displays cpu info

## SYNOPSYS

- #lscpu

## DESCRIPTION

Displays cpu info

## EXAMPLES

- lscpu

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/lscpu.asm

# lsmem

## Introduction

Displays malloc table

## SYNOPSYS

- #lsmem

## DESCRIPTION

Displays malloc table. Free chunks and busy chuncks are displayed with ranges.

## EXAMPLES

- lsmem

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/lsmem.asm

# man

## Introduction

display manual pages

## SYNOPSYS

-

# man lsmem

## DESCRIPTION

Displays manual. All .hlp files are located in /usr/share/man/. It manages multiples text screen (if .hlp is bigger than a screen when space is pressed, it switch to next page).

### Keys

- SPACE to switch to next page
- ESC to exit

## EXAMPLES

- man ls

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/man.asm

# mkdir

## Introduction

Create a folder

## SYNOPSYS

- /#mkdir PATH

## DESCRIPTION

Create a folder. -p (recursive mode) option is not available

## EXAMPLES

- mkdir /opt

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/mkdir.asm

# mount

## Introduction

Displays mounts

## SYNOPSYS

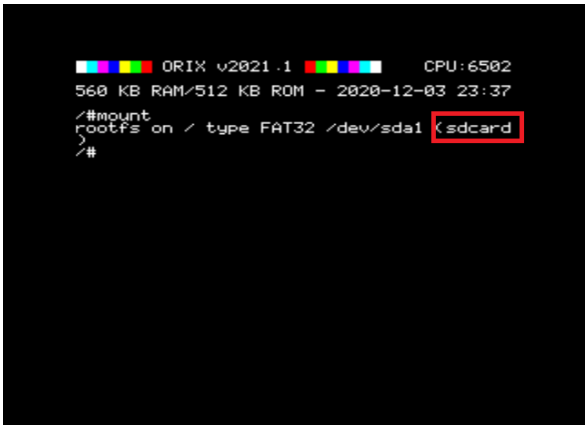
- #mount

## DESCRIPTION

Displays mount (usb key or sdcard)

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/mount.asm



# sh

## Introduction

When kernel has finished to initialize at boot time, sh command is started in interactive mode

## Interactive mode

*Esc-b* : move cursor at the beginning of the previous word

*Esc-f* : move cursor at the end of the next word

*Esc-l* : switch current word into lowercase, and put cursor at the end of the word

*Esc-u* : switch current word into uppercase, and put cursor at the end of the word

*Ctrl-a* : move cursor at the beginning of the line

*Ctrl-e* : move cursor at the end of the line

*Ctrl-c* : cancel current line

*Ctrl-k* : delete the end of the line

*Ctrl-l* : clear screen, and displays the line, the cursors keeps his position

*Ctrl-u* : clear the line and put cursor at the beginning of the line

*Ctrl-t* : swap char under the cursor with the previous one, and shift the cursor to the right

*Ctrl-o* : Switch into replacement or insertion mode

# twil

## Introduction

Manage twilighte board options

## SYNOPSYS

- /#twil -f : displays firmware
- /#twil -u : switch default device : usbdrive
- /#twil -s : swap default device to : sdcard

## DESCRIPTION

## SOURCE

https://github.com/orix-software/shell/blob/master/src/commands/twil.asm

# MONITOR

## Usage

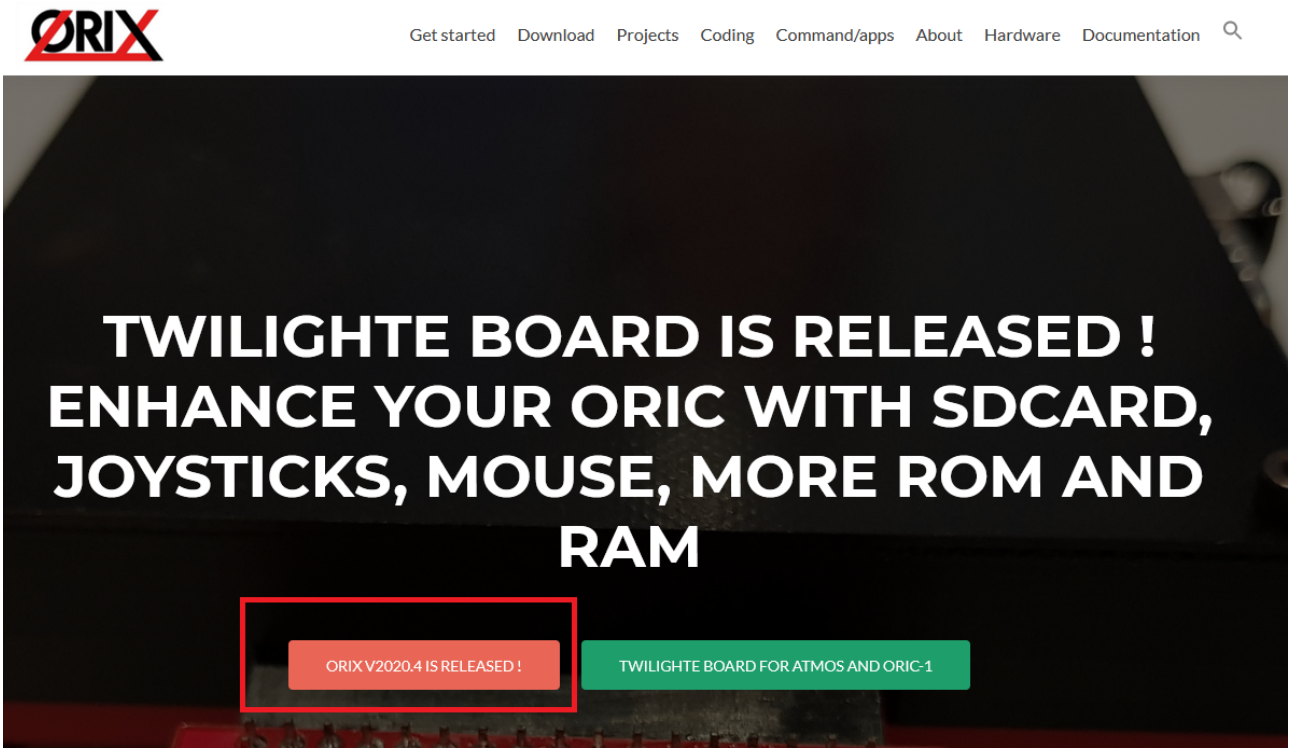
Monitor is a rom which can displays a monitor. It's teleass without assembler part.

# ORIXCFG

## Update kernel, shell : orixcfg

When a new released is done, you can update the eeprom with the new kernel and new roms.

If you want to know if you need to update the kernel, you can compare your current version, and the last release version. You can go to http://orix.oric.org You need to have a look to this release below :




If on your Oric screen, it's not the same value, you can update it. The sequence of the Orix release is Year.X. There is 4 releases a year, and each one must be done until you reach the final one, in order to avoid some case. If your version is v2020.3 and the last available version is v2021.4. You need to update to v2020.4, then v2021.1, v2021.2, v2021.3, v2021.4, v2022.1, v2022.4

It's maybe possible to jump to version v2022.3, but it's at your own risk because there is a « chance » that some kernel calls changed, and orixcfg could do wrong step.

## Update kernel, shell

When you need to update kernel, you can update it with orixcfg. You just need to define set 4 on the command line. This step is very **dangerous** if you don't load the right file. There is no verification and any file on the command line will be load in the kernel set. Usually, kernel set file is named kernxxxx.r64.

If you did something wrong on this step, you won't be able to start orix again. It means that you will need to remove eeprom from the card and program it with a eeprom programmer

This next command will load kernel.r64 to kernel set. Please wait until Orix reboots. If you have a kernel 2020.3 and you need to load a kernel 2021,1, you will need to load previous kernel set before the update of 2021.1.

.r64 extension means that it's a 64KB set. It's usually used to define that the file contains 4 roms of 16KB.

Please note that we provide 2 kernels version. One named « kernelsd.r64 » which means that the default device will be sdcard, and the other one « kernelus.r64 » which means that default device will be « usb » (usbkey). If you load the wrong kernel at this step, you can use twil command to switch to the right device, and you can start again kernel update with the right file (kernelsd.r64 or kernelus.r64 depending of your configuration).

/#orixcfg -r -s 4 kernelsd.r64

## Load a ROM into a ram slot

Space between values and switches are not optionnal, orixcfg needs theses spaces

/#orixcfg -b XX -l myrom.rom

This command will load myrom.rom (in the current path), in RAM bank XX

Older usage as : orixcfg -r -s X -b Y myrom.rom is no longer included in orixcfg since orixcfg v2021.3

### Load a set of ROM into ROM slot

/#orixcfg -r -s 0 myrom.r64

This command will load myrom.r64 (in the current path), in set 0. For instance, you can not load one bank, you need to load 64KB set.

### Clear bank ram or initialize it

Ram bank are not initialized when the board is tested. If you have garbage on screen when you uses bank (after you used twil -w). You have to clear all ram bank (ram bank are battery saved).

If you want to clear bank 4 of the set 0, you can do this command. You need to do this command for each bank of each set. For instance, there is no switch to clear all the ram with one command.

/#orixcfg -w -s 0 -b 4 -c

### Flush all ram bank

/#orixcfg -w -f

# OSID MUSIC

## How to play osid music ?

You need to check if you have twilighte board firmware 2 :

/#twil -f

If it returns 2 or greater, you can download some osid files :

https://www.oric.org/software/osid_music-2534.html

Place all .tap files in /home/basic11

And launch :

/#basic11

Load patch to avoid to load sedoric routines (in basic command line)

CLOAD«OSID

And then load the osid file you want :

CLOAD«OSNEVER

# PWD

## Introduction

Displays current PWD

# SHA1

## Usage

Sha1 is a tool to displays a string into sha1 encoding

# STORMLORD

## Introduction

Stormlord is Stormlord game port to Orix. You can use joysticks to plays to this game.

## Only one joystick port is working on this version

# SYSTEMD

Systemd is a rom which can load another ROM in ram slot. When you type systemd, it will reads */etc/systemd/banks and will load rom declared in this file sequencialy. It means that the first rom will be load in bank id 33, the second one in bank id 34.*

This roms can be used in a eeprom bank, you can load it with orixcfg

You can set roms in *« /etc/systemd/banks » as :*

*[MYROMNAME1]*

*path=/usr/share/rom/my.rom*

*[MYROMNAME2]*

path=/usr/share/rom/my2.rom

# Command: submit

**submit utility**

## SYNOPSYS

- submit file [arg...]

## EXAMPLES

- submit help.sub

## DESCRIPTION

**submit** is a command language interpreter that executes commands read from a file.

## OPTIONS

- no options

## SOURCE

https://github.com/orix-software/submit

==========

# Description

Un fichier submit peut faire appel a toutes les commandes du shell a l'exception des commandes internes suivantes:

- help
- pwd

qui ne sont pas encore supportees.

Les commandes **call**,**choice**,**cls**, **getkey**,**goto**,**if**,**pause**, **return** et **type** ont ete ajoutees.

La commande **echo** est etendue par rapport a celle du shell.

Une ligne ne peut exceder *128* caracteres ou *200* apres expansion des variables.

Il n'y a ^Bpas de taille maximale^G pour un fichier submit.

# Description

Les parametres de la ligne de commande sont accessibles par les variables$^{C\$0}$G a$^{C\$9}$G.

$^{C\$0}$G est le nom du fichier submit.

Les lignes commencant par **REM** , $^{T\#}$P , $^{T;}$P sont des commentaires.

Les lignes commencant par $^{T:}$P definissent un label.

# call

La commande **call** permet de faire appell a une sous-routine terminee par **return**.

## Syntaxe:[P call]Flabel

# choice

La commande **choice** permet d'afficher un message et de proposer une liste d'options.

## Syntaxe:^P choice ^B[-n] [-c] [msg]

## Options:^P

- [B-n]G n'affiche pas les choix
- [B]G est une suite de caracteres composant les options possibles. Valeur par defaut: YN
- [Bmsg]G est le message affiche. Valeur par defaut: aucun

## Exemples:^P

- choice -con Continuer

# echo

La commande **echo** accepte les caracteres de controle.

Par exemple pour la couleur:

[@]WNoir [P] ARouge [BVert] CJaune [DBleu] EMagenta ^FCyan Blanc

noir ^Qrouge [P] @^Rvert [P] @^Sjaune [P] Tbleu [P] Umagenta [P] D^Vcyan [P] @^Wblanc ^P

Les caracteres de controles sont ^ A a ^[

## Syntaxe:^P

- echo ^B[-n] [message]

## Options:^P

- [B-n]G ne fait pas de saut de ligne a la suite du message

# Getkey

La commande **getkey** permet d'attendre la frappe d'une touche du clavier.

Le code ASCII de la touche est place dans la variable[D]Rkey [P]@.

## Syntaxe:^P getkey

# Goto

La commande **goto** permet de poursuivre l'execution a un label specifique.

Un label est cree en debutant une ligne par$^{F:}$Gsuivi d'une chaine de caracteres.

## Syntaxe:$^{P\ goto}$Flabel

# If (1/2)

La commande **if** permet de faire un test par rapport au code erreur de la derniere commande executee ou de tester l'existence d'un fichier.

## Syntaxe:^P - if $^{D}$Rvar$^{C}$Pn^Finstruction - if exist$^{Efichier}$Finstruction - if $^{D}$Rvar$^{B}$Pop$^{Cn}$Finstruction
Si la valeur de $^{D}$Rvar$^{G}$Pest superieure ou egale a$^{Cn}$Gou si le fichier existe alors$^{Finstruction}$Gsera executee.

$^{D}$Rvar$^{G}$P peut etre errorlevel ou key

$^{Bop}$Gpeut etre <, =, > ou #
# If (2/2)

### Exemples:^P - [1] if errorlevel 2 goto choix2 - [2] if exist fichier echo Ok - [3] if errorlevel < 2 echo inferieur - [4] if keu # 65 echo different

[1] Ira au label$^{Fchoix2}$Gsi$^{D}$Rerrorlevel$^{P}$G est superieur ou egale a$^{C2}$G.

[2] Affiche$^{BOk}$Gsi$^{Efichier}$Gexiste.

[3] Affiche$^{Binferieur}$Gsi$^{D}$Rerrorlevel $^{P}$G est inferieur a$^{C2}$G.

[4] Affiche$^{Bdifferent}$Gsi$^{D}$Rkey $^{P}$G est different de$^{C65}$G.

# Pause

La commande **pause** affiche un message et attend l'appui sur une touche.

Elle accepte un message optionnel en parametre.

## Syntaxe:$^{P\ pause}$B[message]

Le message par defaut est:

```
^LPress any key to continue
```

# Return

La commande **return** termine une sous-routine et permet de revenir a la ligne suivant le **call**.

## Syntaxe:^P

return

# Text (1/2)

Affiche directement tout ce qui est entre **text** et **endtext**
Cela permet d'afficher un texte ou un formulaire plus simplement qu'avec la commande **echo**
Les codes de controles sont interpretes ainsi que les parametres du script.
**text** et **endtext** doivent etre seuls sur la ligne.

# Text (2/2)

TExemple:P

text

Ligne de texte

avec des[Bcouleurs[G

endtext

Taffiche:P

Ligne de texte

avec desBcouleursG

# Type

La commande **type** est un alias de **cat** mais renvoie une erreur si son parametre est absent.

## Syntaxe:^P

type ^Efichier

# Command: untar

**untar utility**

## SYNOPSYS

- untar -t[v]f tarfile
- untar -x[v]f tarfile

## EXAMPLES

- untar -tf /home/test.tar

## DESCRIPTION

**untar** list and extract files in a TAR archive

## OPTIONS

- -h ^Bshow this help message and exit
- -t ^Blist files
- -x ^Bextract files
- -v ^Bverbose mode

## SOURCE

https://github.com/orix-software/untar

# CUMULUS COMPATIBILITY

## How to connect a cumulus

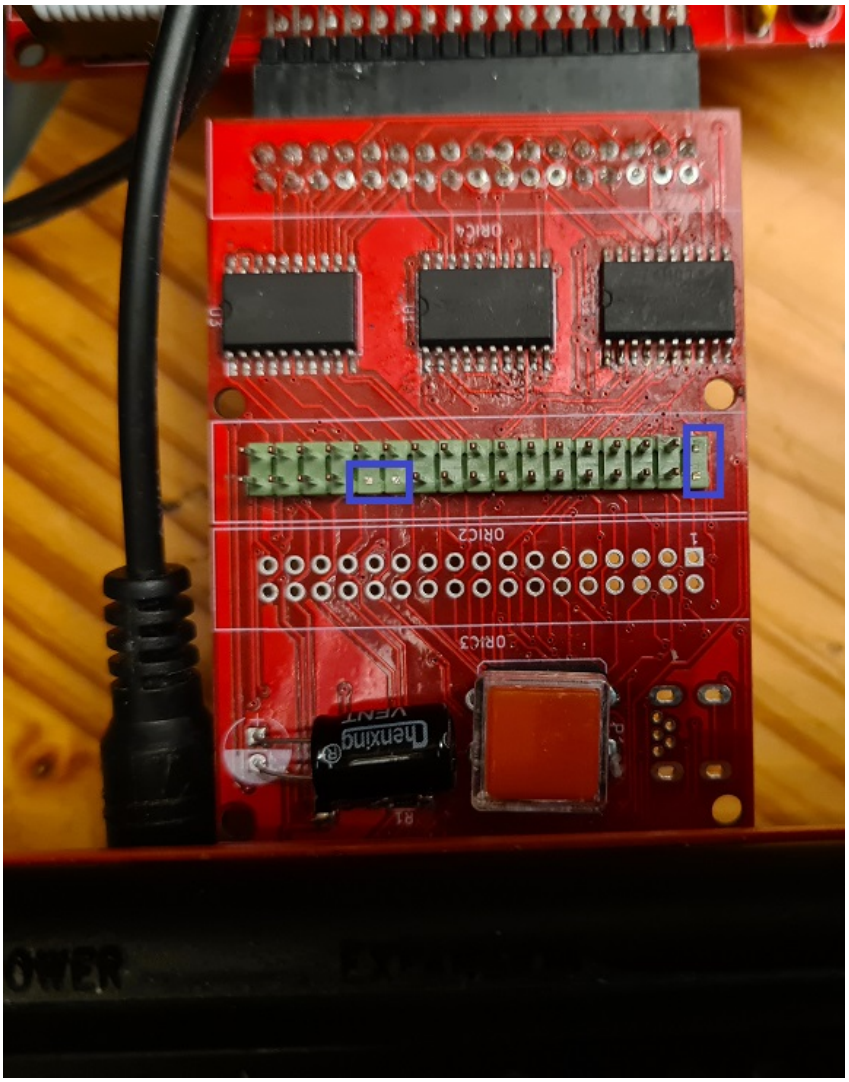
On the current firmware (Firmware 1) : and current hardware (board version v0.65), we have to do some hacks to have cumulus working. But, you will only launch two diskfile. Anyway, you can access to drive with no restriction, except bank switching. See « Hardware and firmware upgrade », if you want to avoid theses modifications

In firmware 1, and with board modification, there is only two working disk : Blake's 7 and VIP2015.

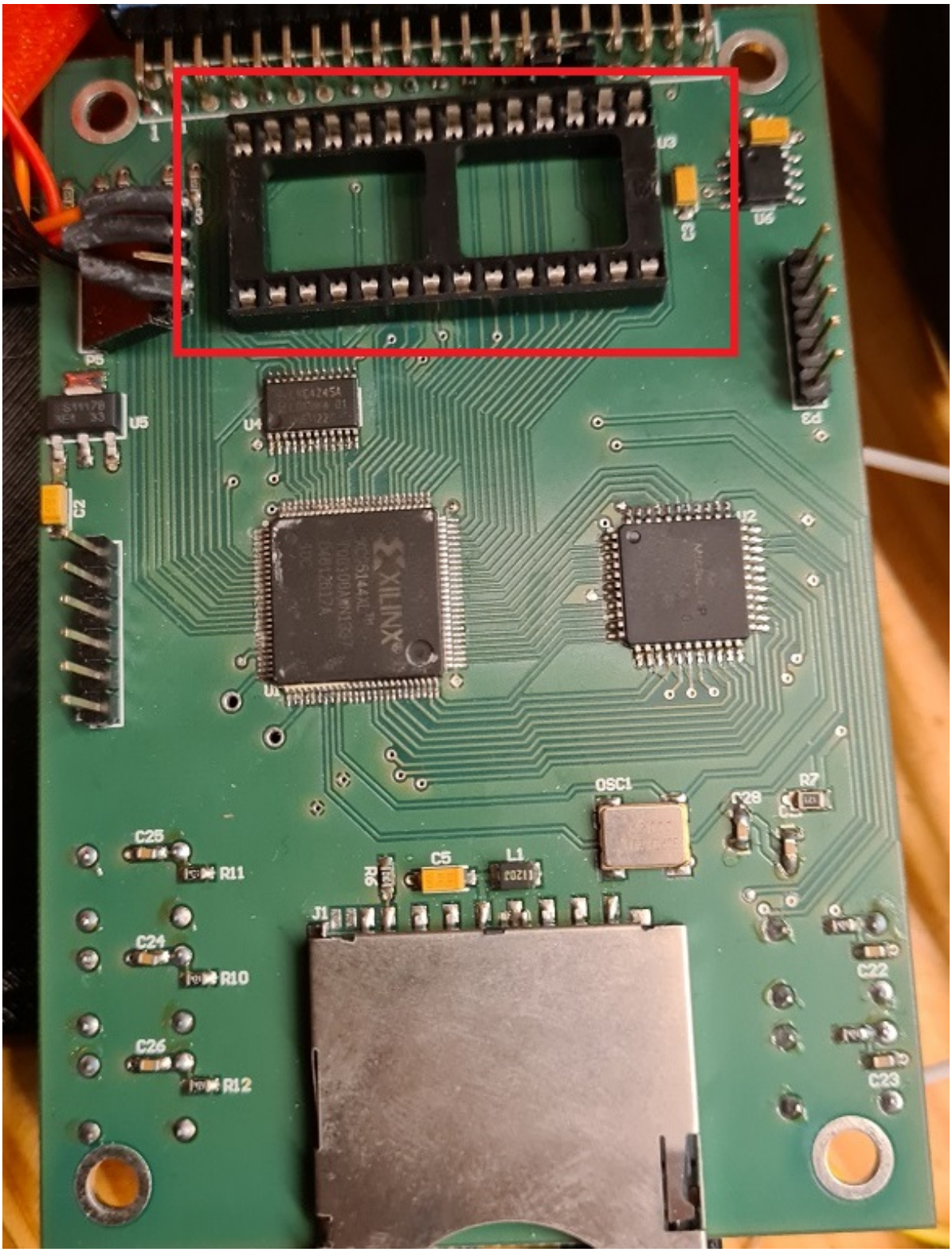
Please, test your cumulus on the oric connected to the board. If it does not work on your Oric, it won't work too with card plugged !

If you want to use cumulus, you have to :

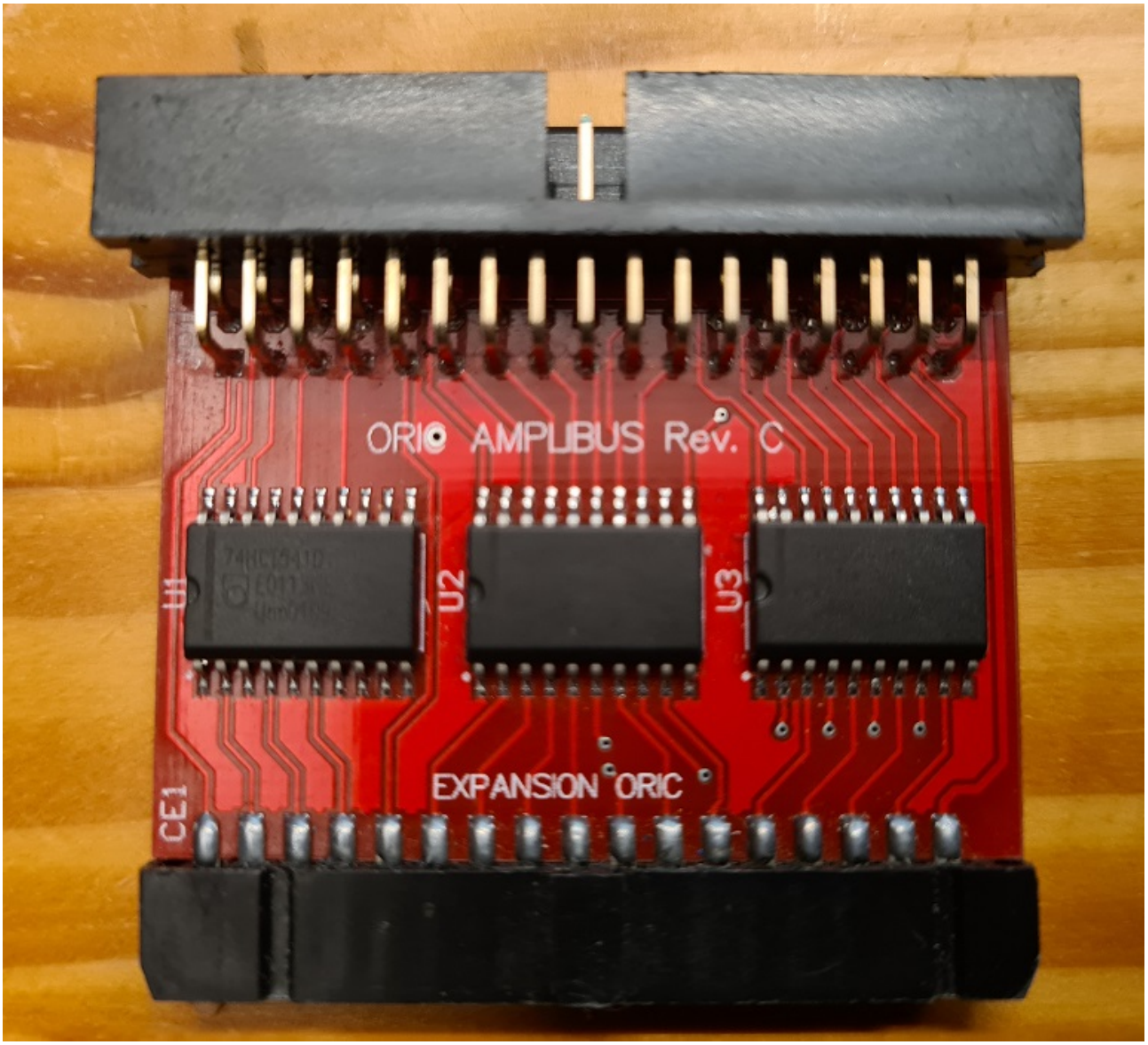
1) cut 4 pins on daughter card (ROMDIS, MAP, A14, A15)



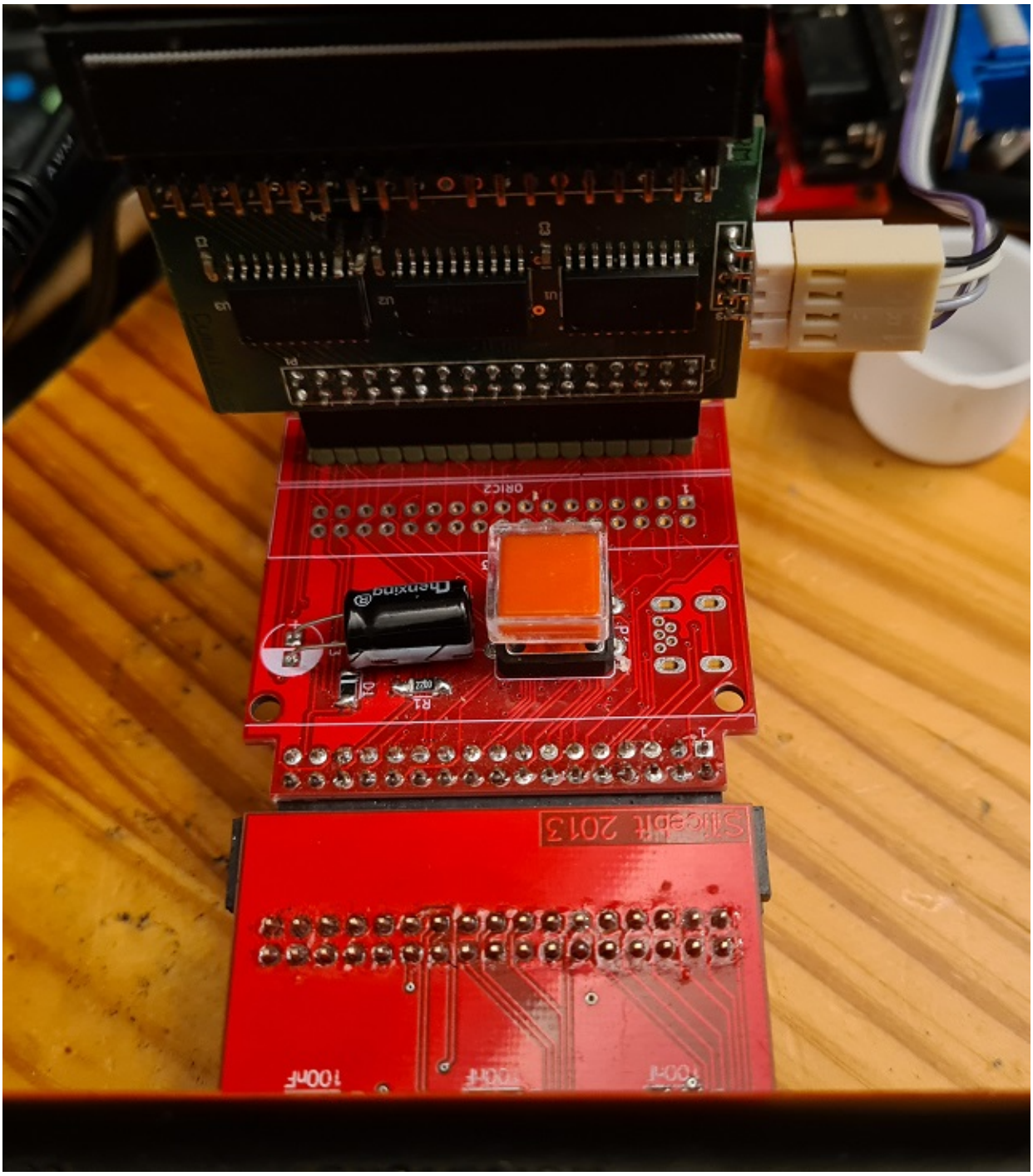
2) remove eprom from cumulus




3) add another amplibus before twilighte daughter board




4) Connect all cards to the oric



### Twilighte board firmware compatibility

Only firmware 2 is available to use boot sector to start Microdisc disk.

## Hardware and firmware upgrade

### Firmware upgrade

There is only one firmware available. The version 2 is in development.

### First method : For those who have programmers and some hardware tool

But, when it will be released, you could update the firmware with :

1) a plcc extractor

2) altera software (Quartys v13)

3) a Jtag programmer

4) solder the jtag connector

5) get .pof file

### Second method : send the card to the author of the card (me)

In that case, fimware upgrade will be done, and you could ask to upgrade to new board version to add (sometimes new functionnality)

# TROUBLE SHOOTING

## 'ls' displays garbage on screen

Insert your sdcard or your usb drive into your PC. You should have strange « file » on the sdcard : remove theses files.

## Impossible to mount a usb key or a sdcard

The sdcard must be in FAT32 format

## Screen garbage when i use bank

If you have screen garbage when you switched to ram bank before with « twil -w »

It means that ram bank are not initialized. See orixcfg section to fix it

## Pi zero always reboots

Check your PSU. If you have a 2A PSU and you have a pi zero, cumulus and TOM2 connected, you should reach the PSU limits. If you can't get another PSU, you can disable bluetooth of you pi zero, or you can also downclock from 1Ghz to 700mhz for example.

You can also use a 3A PSU. In the future, it will be possible to add another PSU on the board.

## When i start Orix, filesytem is unstable or displays usb controler not found

If you have pi zero connected, it could answer to the controler partial information or could hang the usb controler because controler does not understand usb data when it sends information to usb port.

You have to wait a bit. If you want to verify this, you can switch off the oric (and then the pi zero), switch on the oric with Orix, and type 'debug', if you have another value than #AA for ch376 check exists, it's the problem, if you do 'debug' another value will be displayed but not #AA. In fact, when pi zero boot, usb controler is unstable.

## « I/O Error » is displayed

You can reach this message in some case :

1. device (sdcard or usbdrive is missing)
2. after a launch of « df » command : There is an issue, the controler is in incorrect state after this command. It's a bug

You can usually fix it by launching « ls » twice. Because « ls » handles a reset order to the usb controler when it does not produce the correct answer. It means that if USB controler is not working well, ls displays the error message and will produce a reset command to the controler. If you launch ls again, it will work.

## The oric does not work : black screen

If you have a pi zero connected on usb port, unplug it. Boot the oric, and now insert pi zero into usb port

## Kernel panic

When kernel can't solve a « free memory kernel call» in a binary, it could produce a kernel panic. In that case, you need to do a reset. There is a bug in kernel 2021.1 which could produce this error. It will be corrected as soon as possible.

## A folder is displayed on my PC but not under my Oric

Sometimes sdcard or usbkey has bad format for the usb controler and it can reads some content. Format the usb key or sdcard and install again all files. Or try another usb key/sdcard

## I have strange behavior when un do csave or cload on basic ROM : It's always the same file event i cload another content

Sometimes sdcard or usbkey has bad format for the usb controler and it can reads some content. Format the usb key or sdcard and install again all files. Or try another usb key/sdcard

# Q&A

## I want to change the current directory

See « cd » command

## I want to see which bank are loaded into ROM and RAM

See «bank» section

## I want to read a .dsk file

You can only extract files from a .dsk file (see « dsk-util »)

If you have a cumulus board, you can use « bootfd » and connect your cumulus on expansion board « see how to connect a cumulus section »

## I can't type anything in basic rom (« basic11 » command)

There is a firmware bug on some board which generate a false state for the third button of a joystick. The easier step to avoid this, is to connect a joystick to the left port on the board.

The issue can be fixed by upgrading firmware board (it needs to open the box and program the firmware with Jtag port)

# ANNEXES

## Firmware version

| Version | Features | Known bugs |
|---|---|---|
| 1 | RAM/ROM switch, ROM programmation, joysticks, usb controler | N/A |
| 2 | Start all sedoric disks from cumulus | N/A |

## Upgrade from older version

## Upgrade from v2021.4 to v2022.1

If your card is below v2021.4 version, please go to annexes part at the end of this document, before you try to upgrade to v2022.1

- Download http://repo.orix.oric.org/dists/official/tgz/6502/sdcard.tgz
- untar/gunzip sdcard.tgz (use 7zip under windows) on your device usb or sdcard : It could require some time to copy because there is a lot of small files (tap, hlp etc)
- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2022.1*

  If you want to usr usb drive for default device :

  */usr/share/carts/2022.1#orixcfg -r -s 4 kernelus.r64*

  If you want to use sdcard for default device :

  /usr/share/carts/2022.1#orixcfg -r -s 4 kernelsd.r64

- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

## Upgrade from v2021.3 to v2021.4

If your card is below v2021.3 version, please go to annexes part at the end of this document, before you try to upgrade to v2021.4

- Download http://repo.orix.oric.org/dists/official/tgz/6502/sdcard.tgz
- untar/gunzip sdcard.tgz (use 7zip under windows) on your device usb or sdcard : It could require some time to copy because there is a lot of small files (tap, hlp etc)
- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2021.4*

  If you want to usr usb drive for default device :

  */usr/share/carts/2021.4#orixcfg -r -s 4 kernelus.r64*

  If you want to use sdcard for default device :

  /usr/share/carts/2021.4#orixcfg -r -s 4 kernelsd.r64

- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

## Upgrade from v2021.2 to v2021.3

You need to unzip/untar orixcfg new version here : http://repo.orix.oric.org/dists/2021.3/tgz/6502/orixcfg.tgz

- Download http://repo.orix.oric.org/dists/official/tgz/6502/sdcard.tgz or http://repo.orix.oric.org/dists/2021.3/tgz/6502/cardridge.tgz
- untar/gunzip sdcard.tgz (use 7zip under windows) on your device usb or sdcard : It could require some time to copy because there is a lot of small files (tap, hlp etc)
- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2021.3*

  If you want to usr usb drive for default device :

  */usr/share/carts/2021.3#orixcfg -r -s 4 kernelus.r64*

  If you want to use sdcard for default device :

  /usr/share/carts/2021.3#orixcfg -r -s 4 kernelsd.r64
- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

### Upgrade from v2021.1 to v2021.2

If your card is below v2021.1 version, please go to annexes part at the end of this document, before you try to upgrade to v2021.2

- Download http://repo.orix.oric.org/dists/official/tgz/6502/sdcard.tgz
- untar/gunzip sdcard.tgz (use 7zip under windows) on your device usb or sdcard : It could require some time to copy because there is a lot of small files (tap, hlp etc)
- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2021.2*

  If you want to usr usb drive for default device :

  */usr/share/carts/2021.2#orixcfg -r -s 4 kernelus.r64*

  If you want to use sdcard for default device :

  /usr/share/carts/2021.2#orixcfg -r -s 4 kernelsd.r64
- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

### From 2020.4 to 2021.1

Download : http://repo.orix.oric.org/dists/2021.1/tgz/6502/carts.zip

Unzip it on your device (sdcard/usbkey)

- you can start orix on real machine, and type :

  /#cd usr
  /usr#cd share
  */usr/share#cd carts*
  */usr/share/carts#cd 2021.1*

  If you want to usr usb drive for default device :

*/usr/share/carts/2021.1#orixcfg -r -s 4 kernelus.r64*

If you want to use sdcard for default device :

/usr/share/carts/2021.1#orixcfg -r -s 4 kernelsd.r64

- press 'y', and **wait until Orix reboots**

  (Don't switch off the Oric at this step)

## Optionnal step for upgrade

Now bank displays all banks from l to 64. It means that you should have some strange bank signature for eeprom. Now an empty set is provided in */usr/share/carts/2021.3* folder. With Orixcfg you can initialize your set with this cart. Don't use « -s 4 » flag for orixcfg when you want to load emptyset.