

```
#!/bin/bash
```

```
echo ""  
echo ""  
echo "=====  
echo "Radioberry software installation."  
echo ""  
echo "You will install the following versions: "  
echo ""  
echo " Gateware version 73.3"  
echo " Driver version 0.94"  
echo " Firmware version 2022.01.24"  
echo "=====  
echo ""  
echo ""
```

```
fpgatype=2; #default
```

```
while true; do
```

```
read -p "Install CL016 or CL025 radioberry version: 1 = CL016 or 2 = CL025? " type
```

```
case $type in
```

```
  [1]*) fpgatype=1; break;;
```

```
  [2]*) fpgatype=2; break;;
```

```
  * ) echo "Please answer 1 or 2 for the FPGA used in your radioberry.";
```

```
esac
```

```
done
```

```
function install_dependency {
```

```
  echo "--- Installing dependency: $1"
```

```
  sudo apt-get -y install $1
```

```
}
```

```
install_dependency raspberrypi-kernel-headers
```

```
install_dependency linux-headers-rpi
```

```
install_dependency git
```

```
install_dependency device-tree-compiler
```

```
install_dependency pigpio
```

```
if [ -d "Radioberry-2.x" ]; then
```

```
  DO_CLEANUP=false
```

```
else
```

```
  DO_CLEANUP=true
```

```
  git clone --depth=1 https://github.com/pa3gsb/Radioberry-2.x
```

```
fi
```

```
sudo systemctl stop radioberry
```

```
sudo systemctl disable radioberry
```

```
#-----
```

```
if [[ $fpgatype == 1 ]]; then
```

```
  echo "Installing Radioberry gateware Cyclone 10 CL016..."
```

```
cd Radioberry-2.x/SBC/rpi-4/releases/dev/CL016
```

```
sudo cp ./radioberry.rbf /lib/firmware
```

```
cd ../../../../..
```

```
echo ""
```

```
echo "Radioberry gateware Cyclone 10 CL016 installed."
```

```
fi
```

```

if [[ $fpgatype == 2 ]]; then
    echo "Installing Radioberry gateway Cyclone 10 CL025..."

cd Radioberry-2.x/SBC/rpi-4/releases/dev/CL025
sudo cp ./radioberry.rbf /lib/firmware
cd ../../../../..

echo ""
echo "Radioberry gateway Cyclone 10 CL025 installed."

fi

#-----
echo "Installing Radioberry driver..."

#unregister radioberry driver
sudo modprobe -r radioberry

# new raspios uses /boot/firmware instead of /boot
if [ -d "/boot/firmware" ]; then
    BOOT_PATH="/boot/firmware"
else
    BOOT_PATH="/boot"
fi

if [ ! -d "/lib/modules/$(uname -r)/kernel/drivers/sdr" ]; then
    sudo mkdir /lib/modules/$(uname -r)/kernel/drivers/sdr
fi

cd Radioberry-2.x/SBC/rpi-4/device_driver/driver
make
if [ $? -eq 0 ]; then
    sudo cp radioberry.ko /lib/modules/$(uname -r)/kernel/drivers/sdr

    sudo dtc -@ -I dts -O dtb -o radioberry.dtbo radioberry.dts
    sudo cp radioberry.dtbo "$BOOT_PATH/overlays"
    #add driver to config.txt
    sudo grep -Fqx "dtoverlay=radioberry" "$BOOT_PATH/config.txt" || sudo sed -i '$ a dtoverlay=radioberry'
    "$BOOT_PATH/config.txt"

    cd ../../../../..

    sudo depmod
    #register radioberry driver
    sudo modprobe radioberry
    sudo chmod 666 /dev/radioberry
    #show radioberry driver info.
    sudo modinfo radioberry

    echo ""
    echo "Radioberry driver installed."
else
    echo "Radioberry driver installation failed."
    echo ""
    echo "You are using a linux version without linux header files; choose an other distro."

if [ "$DO_CLEANUP" = true ]; then
    echo "Cleaning up..."
    sudo rm -rf Radioberry-2.x
fi

```

```

exit 1
fi

#-----
echo "Installing Radioberry firmware..."

cd Radioberry-2.x/SBC/rpi-4/device_driver/firmware
sudo make
  if [ $? -eq 0 ]; then

    sudo cp radioberry /usr/local/bin
    sudo chmod +x /usr/local/bin/radioberry

    cd ../../../../..

    echo ""
    echo "Radioberry firmware installed."
else
  echo "Radioberry firmware installation failed."
  echo ""
  echo "Looking into the log and try to find out what is wrong."

  if [ "$DO_CLEANUP" = true ]; then
    echo "Cleaning up..."
    sudo rm -rf Radioberry-2.x
  fi

  exit 1
fi

#-----
echo "Installing radioberry service ..."

cd Radioberry-2.x/SBC/rpi-4/device_driver/systemd

sudo cp radioberry.service /etc/systemd/system/radioberry.service
sudo cp radioberryd /etc/init.d/radioberryd
sudo chmod +x /etc/init.d/radioberryd

cd ../../../../..

echo "Radioberry service installed."

#-----
if [ "$DO_CLEANUP" = true ]; then
  echo "Cleaning up..."
  sudo rm -rf Radioberry-2.x
fi

sudo systemctl enable radioberry
sudo systemctl start radioberry

echo ""
echo ""
echo "=====
echo "Radioberry software is installed!"
echo "Have fun using the SDR Radioberry"
echo ""
echo "73 Johan PA3GSB"

```

```
echo "===== "  
echo ""  
echo ""
```

```
exit 0
```