

STEP2STEP PROCEDURE FOR INSTALLING THE SYSTEM OF TRANSCODIFICATION XLX DMR <> DSTAR

Install the FTDI drivers in / root

Depending on your system, download 64-bit or 32-bit drivers

```
# wget http://www.ftdichip.com/Drivers/D2XX/Linux/libftd2xx-x86\_64-1.4.6.tgz
# wget http://www.ftdichip.com/Drivers/D2XX/Linux/libftd2xx-i386-1.4.6.tgz
# tar xfvz libftd2xx-XXX-1.4.6.tgz
# cd /release/build
# cp libftd2xx.* /usr/local/lib
# chmod 0755 /usr/local/lib/libftd2xx.so.1.4.6
# ln -sf /usr/local/lib/libftd2xx.so.1.4.6 /usr/local/lib/libftd2xx.so
```

Install the sudo git g ++ and build-essential package

```
# sudo apt-get update
# sudo apt-get upgrade
# sudo apt-get install build-essential
# sudo apt-get install g++-4.7 (not needed from Debian 8 and up)
# sudo apt-get sudo
# sudo apt-get install git
```

Download and install AMBED


```
# cd ~
# git clone https://github.com/LX3JL/xlxd.git
# cd xlxd/ambed/
# make
# make clean
# make install
```

Configure the AMBED startup script

```
# nano /ambed/run
```

Change the following line:

```
sudo /ambed/ambed 127.0.0.1 &
```

A terminal window with a dark background and light-colored text. The text is as follows:

```
#!/bin/bash
# start ambed server

sudo rmmod ftdi_sio
sudo rmmod usbserial
sudo /ambed/ambed 192.168.2.114 &
```

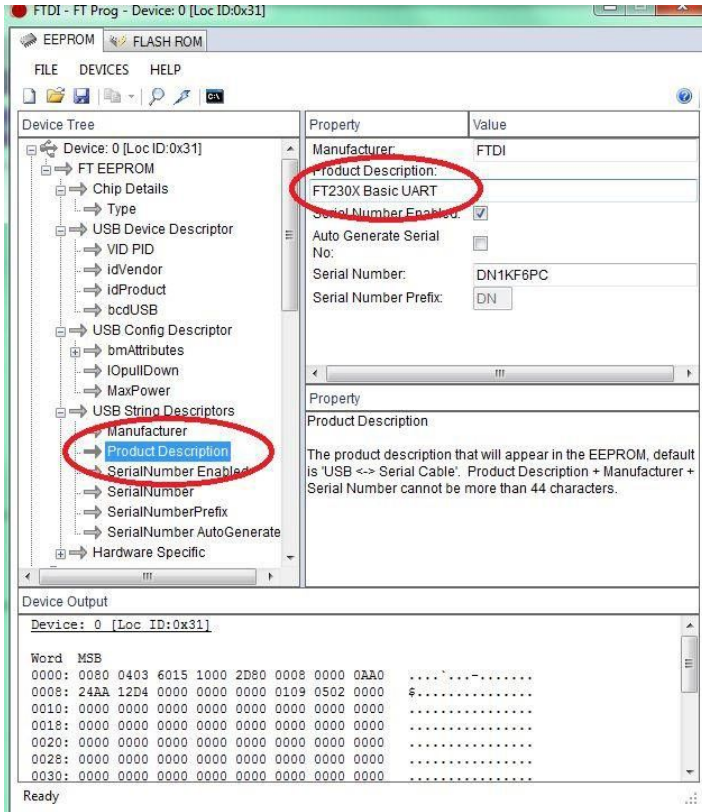
An orange cursor is visible at the end of the last line.

if the AMBED runs on the same machine on which it runs xlxd leave 127.0.0.1 otherwise indicate IP of the network housekeeper.

Prepare the keys, so download the windows software FT prog with which you can edit the name of the keys to be "read" correctly by the AMBED

```
# http://www.ftdichip.com/Support/Utilities/FT\_Prog\_v3.6.88.402%20Installer.exe
```

Changing the name of the thumbDV stick to USB-3000 is strongly recommended that you make a backup of the original firmware



Open the UDP ports from 10100 to 10199 on the router connected to the AMBED server making them point to the IP of the same.

Insert the keys into the AMBED server

Start the AMBED engine:

```
# cd /ambed/run
```

```
# sh ./run
```

```
Initializing vocodecs:
Detected 2 USB-FTDI devices

Description : USB-3000   Serial : DN228XIF
Description : USB-3000   Serial : DN218TA2
Opening USB-3000:DN228XIF device
ReadDeviceVersion : 0AMBE3000R1V120.E100.XXXX.C106.G514.R009.B0010411.C0020208

Opening USB-3000:DN218TA2 device
ReadDeviceVersion : 0AMBE3000R1V120.E100.XXXX.C106.G514.R009.B0010411.C0020208

Codec interfaces initialized successfully : 2 channels available
```

pressing **ctrl + C** will return you to the prompt but the engine will remain active until the next restart (you can create a service and start it automatically on startup)

Move to the XLX server and stop the service:

```
# service xlx stop
```

Edit the `/etc/init.d/xlx` file

```
ARGUMENTS="XLX099 212.237.59.103 127.0.0.1"
```

replace **127.0.0.1** with the public IP address of the server where AMBED is running.

```
PATH=/sbin:/bin:/usr/sbin:/usr/bin

. /lib/lsb/init-functions

# change below settings according to your system
NAME="xlxd"
DAEMON="/xlxd/xlxd"
ARGUMENTS="XLX099 212.237.59.103 XXX.XXX.XXX.XXX"
PIDFILE="/var/log/xlxd.pid"
USER=root
GROUP=root
```



Save and restart XLXD.

If everything has been successful, starting the AMBED manually you will display the exchange on the terminal data between the two systems.


```
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ReadDeviceVersion : 0AMBE3000R1V120.E100.XXXX.C106.G514.R009.B0010411.C0020208

Codec interfaces initialized successfully : 2 channels availables

Initializing controller

AMBEd started and listening on 192.168.2.114
Stream Open from XLX077
Vocodec channel USB-3000:0 -> USB-3000:0 open
Opened stream 1
Vocodec channel USB-3000:0 -> USB-3000:0 closed
0 of 73 packets lost
Stream 1 closed
Stream Open from XLX077
Vocodec channel USB-3000:0 -> USB-3000:0 open
Opened stream 2
Vocodec channel USB-3000:0 -> USB-3000:0 closed
0 of 63 packets lost
Stream 2 closed
```