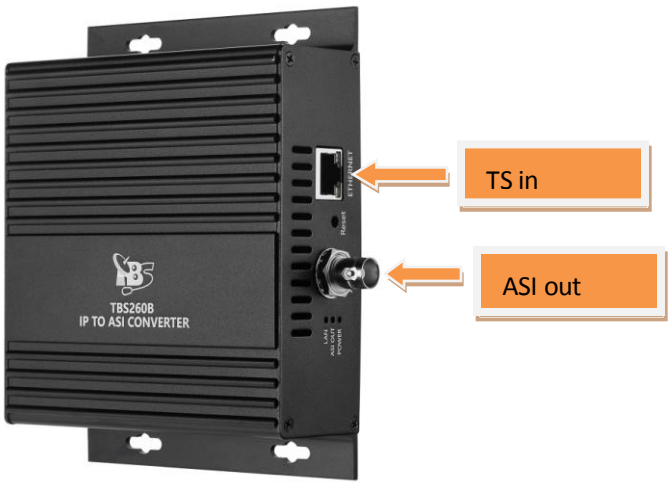
TBS260B User Guide

TBS260B IP to ASI Gigabits converter is a head-end interface device which is used for DVB ASI and Ethernet. As a kind of IP receiver product, this device can recover RTP/UDP database received from the streaming device into TS stream and then output it through the ASI interface. Moreover, it has the function to resist the IP transporting shake, and to restore the PCR of the TS stream.

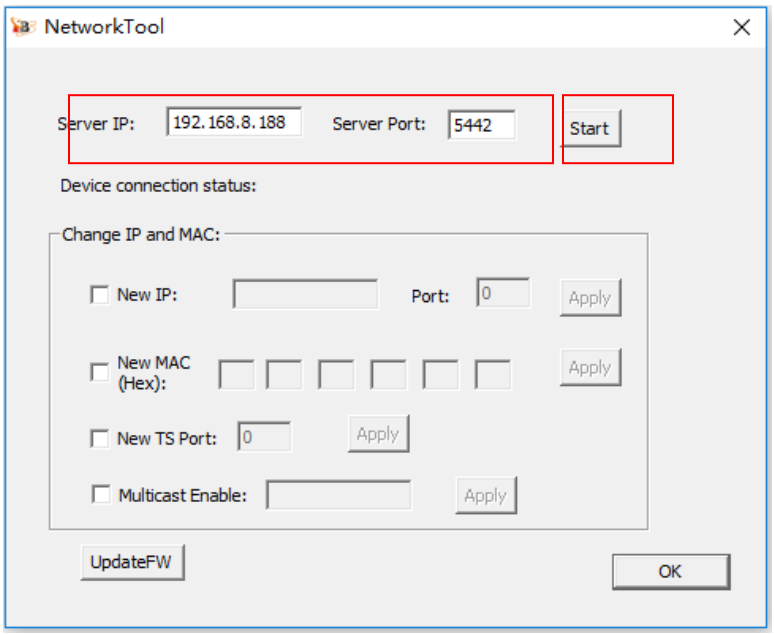


For our TBS260B DVB HD IP to ASI Converter, the default IP and port is 192.168.8.188/5442, these information will be marked on the label.

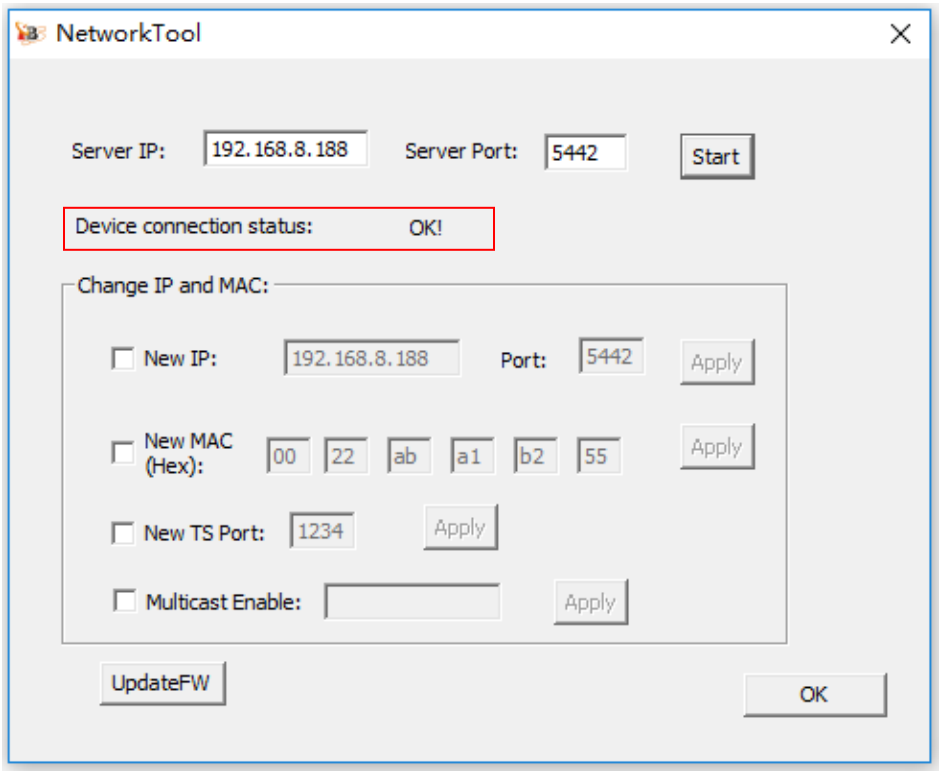
For the user interface, we develop a tool for both Windows and Linux platforms. It's more convenient to configure this device.

Windows platform

1. When you get this device first time, please open this tool name "NetworkTool", enter the default IP and port, then click "start" to check if your PC and converter will communicate correctly. Keep your PC and tbs260B in a same network as below:

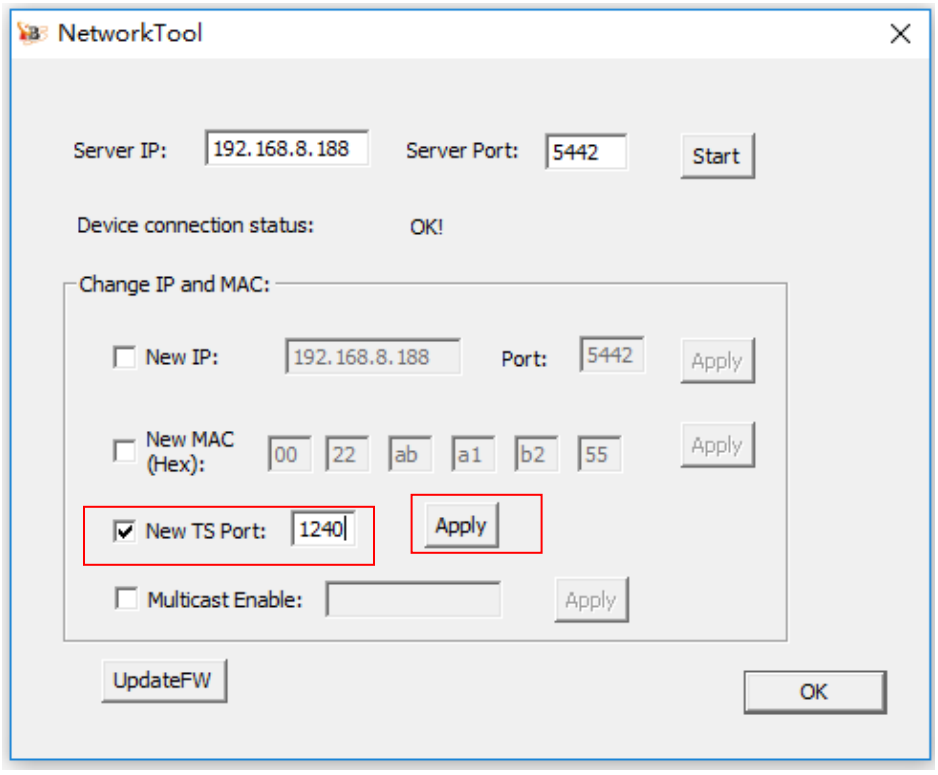


If everything is ok, it will remind you that “Device connection status: ok!”, and we’ll get some device information including MAC address TS port. Like this:



2. Now you can go to set a TS port. Type a port which you want and click “apply”.

This port is for receiving TS from another streaming device. It means you have to stream to this port once you set it.



3. Now you can stream to this device and test. The source is also easy to get, you can get them from MOI-V, MOI Pro AMD, MOI Pro or other streaming servers.

TBS260B supports rtp and udp streams, so DVBlast is a good choice in Linux system. Moreover, dvblast software supports streaming the entire transponder to an IPv4 or IPv6 address.

For example, your current tbs260B IP/TS port is 192.168.8.188/1240, you can stream a unicast or multicast to it. Like this:

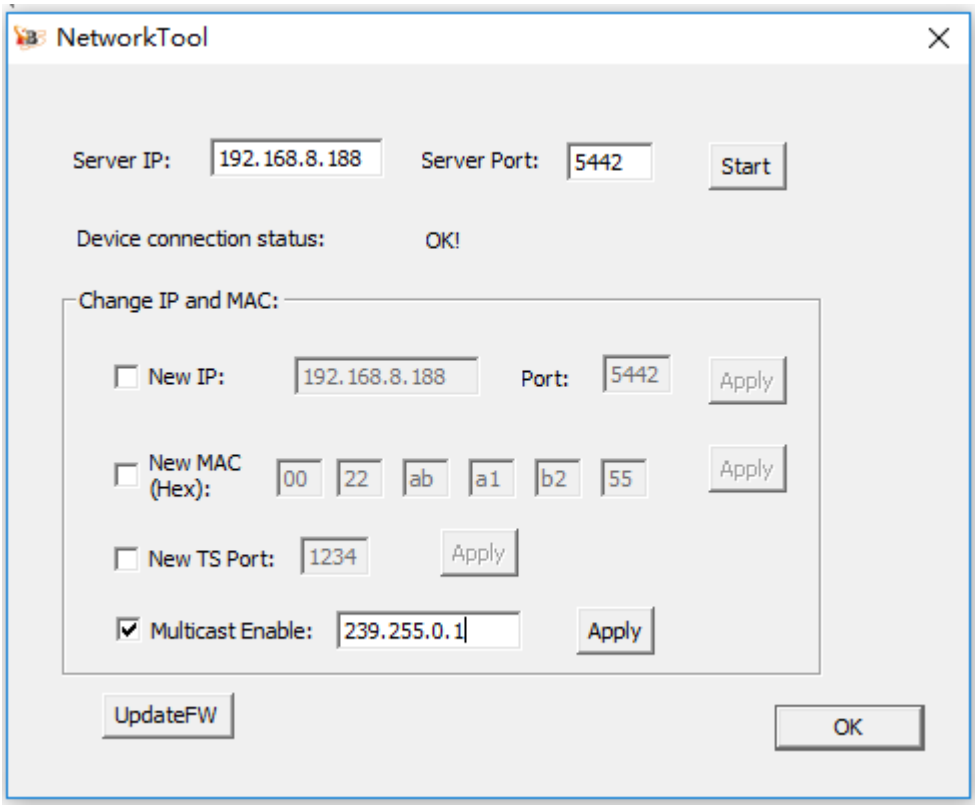
Unicast:

rtp: # dvblast -f 12538000 -s 41250000 -u -d 192.168.8.188:1240

udp: # dvbalst -f 10988000 -s 41250000 -u -d 192.168.8.188:1240 -U

Multicast:

Our TBS260B also supports multicast stream. If you want this device to receive multicast stream, you must specify it first, and you have to stream to this address: 239.255.0.1:1234



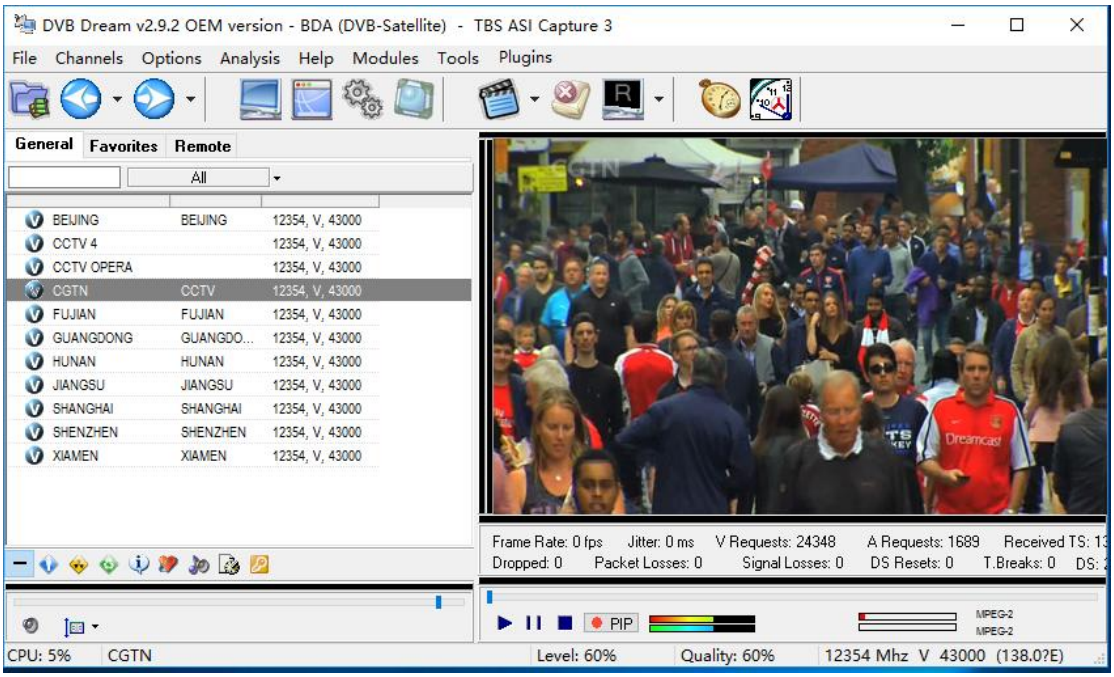
Go to stream now,

rtp: # dvblast –f 12660000 –s 45000000 –m psk_8 –v 13 –a 2 –u –d 239.255.0.1:1240

rdp: # dvblast –f 12630000 –s 43200000 –m psk_8 –a 3 –v 18 –u –d 239.255.0.1:1240 –U

4. When TBS260B got TS stream, it will convert to ASI output, and now you can take it as the source of your ASI IN product. Here we take TBS690A ASI IN as an example.

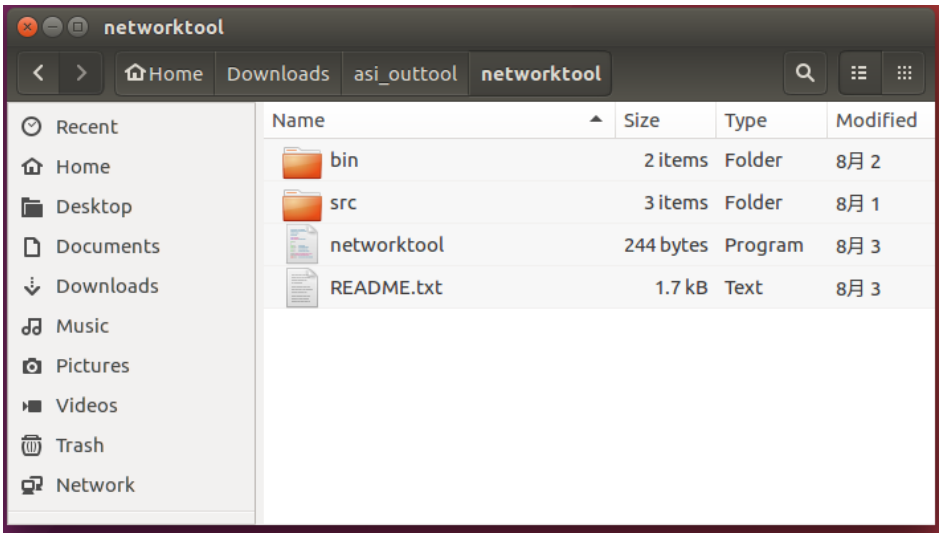
TBS260B ASI out then to TBS690A IN



Linux platform:

For the Linux, we also have a tool. You can download this tool from our website, when you got it, please extract it firstly, then you will see as below. “networktool” is an executable file, assign the permission to it first like this:

chmod 777 networktool, then you can use it:



Please read “README” carefully before you use this tool. In this README txt file, you will see the meanings of these parameters:

-i: input Server IP

-p: input server port (0~65535)

-I: change new Server IP

-P: change new server port

-M: change new MAC, and showed by hex

-T: change new TSPort(0~65535)

-E: enable and change Multicast

-D: disenable Multicast

-w: write firmware to flash

-r: read firmware form flash

-v: check firmware's version

Or you can check it like this:

```
daowei@daowei-All-Series:~/Downloads/asi_outtool/networktool$ ./networktool

Usage: networktool:
-i <server ip> -p <server port>
-I <new server ip> -P <new server port>
-M  : change new MAC ,and showed by hex,eg: xx:xx:xx:xx:xx:xx
-T  : change new TsPort(0~65535)
-E  : enable and change Multicast,eg:*.*.*.*
-D  : disenable Multicast
-w  : write firmware to flash,eg: ./networktool -w xxx.bin
-r  : read firmware form flash,eg: ./networktool -r xxx.bin
-v  : check firmware's version
```

1>Communicate with TBS260B, you can run this command:

```
daowei@daowei-All-Series:~/Downloads/asi_outtool/networktool$ ./networktool -i 192.168.8.188 -p 5442
connect success!
IP:192.168.8.188
Port:5442
MAC addr:00:22:ab:a1:b2:55
Tsport: 1234
check Multicast status is disable!
daowei@daowei-All-Series:~/Downloads/asi_outtool/networktool$
```

2>If you want to set a new TS port, please do it like this:

```
daowei@daowei-All-Series:~/Downloads/asi_outtool/networktool$ ./networktool -i 192.168.8.188 -p 5442 -T 1240
connect success!
IP:192.168.8.188
Port:5442
MAC addr:00:22:ab:a1:b2:55
Tsport: 1234
check Multicast status is disable!
New Ts port 1240
write new TsPort is success!
daowei@daowei-All-Series:~/Downloads/asi_outtool/networktool$
```

Now TBS260B is ready, you can stream to 192.168.8.188:1240, and we take a TBS690A as ASI Receiver, we can test now:

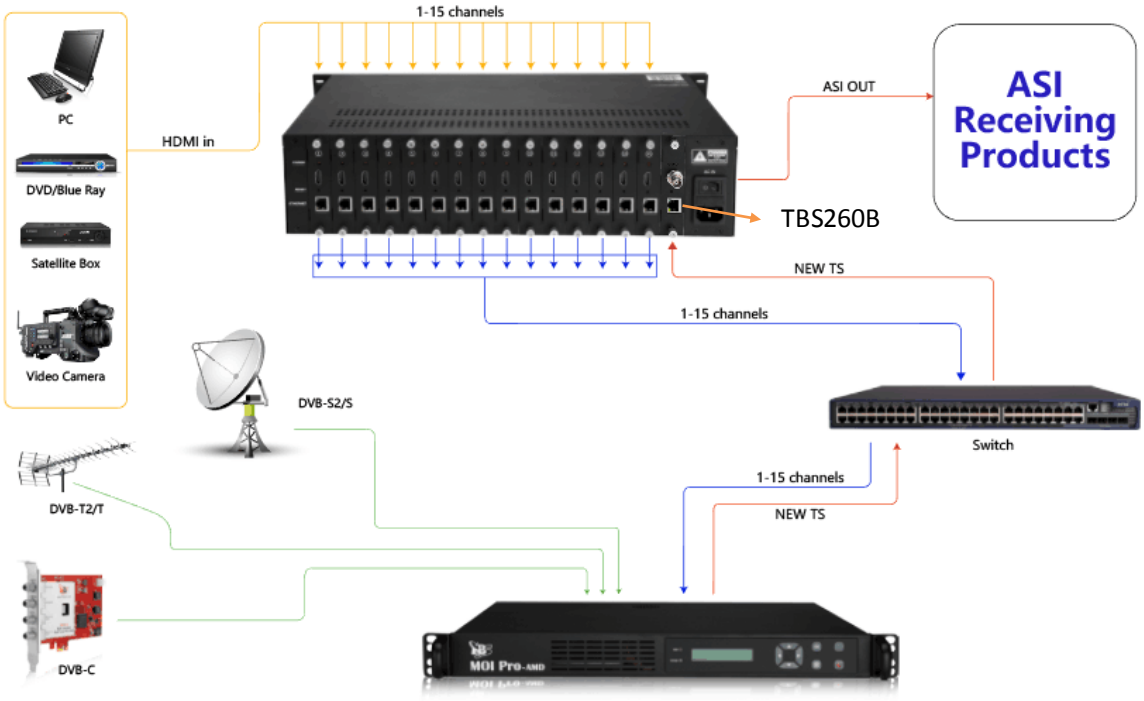
```
daowei@daowei-All-Series: ~
daowei@daowei-All-Series:~$ dvblast -f 12538000 -s 41250000 -v 13 -a 3 -c dvb.conf

DVBlast 3.1 (release)
warning: restarting
debug: compiled with DVB API version 5.10
debug: using DVB API version 5.10
debug: Frontend "TurboSight TBS 690a ASI Capture " supports:
debug:  frequency min: 950000, max: 2150000, stepsize: 1011, tolerance: 5000
debug:  symbolrate min: 1000000, max: 45000000, tolerance: 0
debug:  capabilities:
debug:   INVERSION_AUTO
debug:   FEC_1_2
debug:   FEC_2_3
debug:   FEC_3_4
debug:   FEC_4_5
debug:   FEC_5_6
debug:   FEC_6_7
debug:   FEC_7_8
debug:   FEC_AUTO
debug:   QPSK
debug:   2G_MODULATION
debug:   FE_CAN_RECOVER
debug:  delivery systems:
debug:   DVBS
debug:   DVBS2
debug: frequency 12538000 is in Ku-band (higher)
debug: configuring LNB to v=13 p=0 satnum=0 uncommitted=0
debug: tuning DVB-S frontend to f=12538000 srate=41250000 inversion=-1 fec=999 rol
loff=35 modulation=legacy pilot=-1 mis=0
warning: failed opening CAM device /dev/dvb/adapter3/ca0 (No such file or director
y)
debug: setting filter on PID 0
debug: setting filter on PID 16
debug: setting filter on PID 17
debug: setting filter on PID 18
debug: setting filter on PID 19
debug: setting filter on PID 20
debug: conf: 239.255.0.1:1250 config=0x1 sid=2 pids[0]
debug: change sid tsid network
debug: frontend has acquired signal
debug: frontend has acquired carrier
debug: frontend has acquired stable FEC
debug: frontend has acquired sync
info: frontend has acquired lock
lock status: 1
debug: - Bit error rate: 67108863
debug: - Signal strength: 67089532
```

Now you can play a channel which picked out from this stream, the URL is rtp://239.255.0.1:1250, this configuration is created in dvb.conf:

Success case

1. With built-in TBS TV Tuner cards, MOI Pro AMD server can receive different kinds of live TV signals including DVB-S/S2, DVB-T/T2, DVB-C and ISDB-T. After “DeMux” technology, you can easily select some popular channels from these TS streams, then “ReMux” to a new TS stream to ASI IN products.

2. With 15x HDMI encoder + “Demux & ReMux” technology, the 15 channels would form to a new TS, and then transfer to TBS260B through the Ethernet, at last it will be converted to ASI output.



Demux&Remux Technology