



MOI DVB-S2 Streaming Box Quick Start Guide



V1.0



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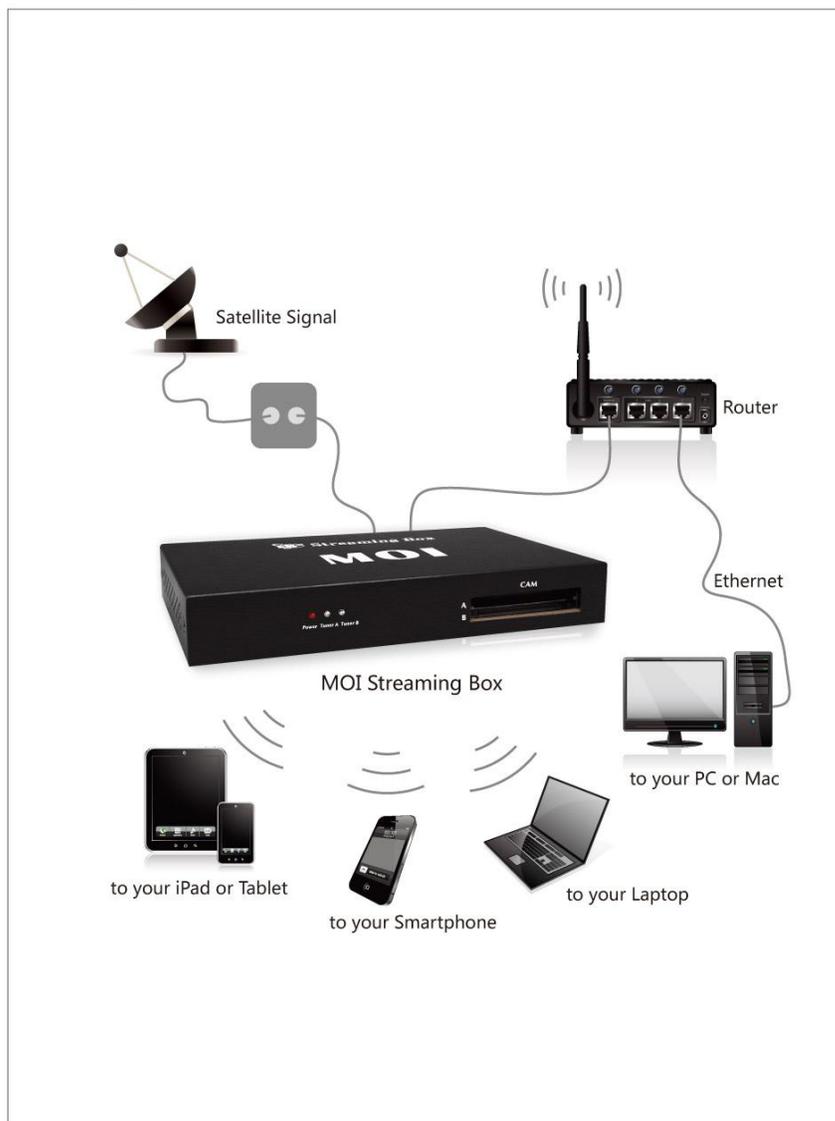


1. Overview

TBS MOI DVB-S2 Streaming TV box is a dual DVB-S2 TV tuner and dual CI slot Linux server for streaming satellite TV channels to the following client end devices within your wired or wireless network:

- HDTV
- PC
- Tablet PC
- Smartphone
- iPhone
- iPad
- iPod
- Sony Playstation 3

How does MOI work?



1.1. At A Glance



Front:

- **Power:** the red LED light is on when MOI is powered on.
- **Tuner A/B:** the blue LED light indicates tuner A/B lock status.
- **CAM:** two CI slots A/B for CAM modules insertion

Back:

- **Power:** power connector, DC 12V/ 2A
- **Tuner A:** Satellite signal input for tuner A
- **Tuner B:** Satellite signal input for tuner B
- **Reset:** reset the system to the factory default settings



- **USB:** USB connector for card reader, can be expanded by USB Hub
- **MicroSD:** for micro SD card insertion
- **LAN:** for local network connection
- **RS232:** for communication and debug print

1.2. Specifications

Device	Processor: Cortex TM-A8 1GHz
	RAM : 512MB DDR2
	Storage: 256MB SLC NAND Flash, 1 SD card slot
	Ethernet: 10/100M Ethernet
	USB Ports: High Speed 2.0 USB Host
	Operating System : Linux
DVB S2 Tuner	Supported digital TV standards: DVB-S, DVB-S2
	Demodulator :DVB-S2/DVB-S QPSK 8/16/32 APSK CCM
	Symbol Rate: DVB-S/S2 QPSK 1~45Mps
	Receiving Frequency: 950~2150 MHz Tuning Range
	Input level: -69~-23dBm
	Carrier Capture Range: ±10MHz
	8PSK Puncture codes: 3/5,2/3,3/4,5/6,8/9,9/10
	QPSK Puncture codes: 1/2,3/5,2/3,3/4,4/5,5/6,8/9,9/10
	16PSK Puncture codes: 2/3,3/4,4/5,5/6,8/9,9/10
32PSK Puncture codes: 3/4,4/5,5/6,8/9,9/10	



Soft Support	MOI: TVHeadend, DVBLast, mumuDVB, szap, scan and more
	Client: XBMC, VLC, TVHGuide and more

1.3. System Requirements

- Satellite TV signal.
- Router with at least 100Mbps data transfer speed.
- One of the following client end devices for receiving streaming TV channels.
- DLNA certificated TV, PC with Windows or Linux system, Android tablet PC, Android smartphone, iPhone, iPad, iPod and Sony Playstation 3 etc.

1.4. Package Includes

- TBS MOI DVB-S2 Streaming Box
- RJ45 Network Cable
- RS232 to USB Cable (Optional)
- Power Adapter
- Quick Start Guide

2. Hardware Connection

- Connect the included power adapter and plug it into a wall power outlet
- Connect satellite signal cable to Tuner A or Tuner B. If you want to connect two satellite signal inputs to both Tuner A and Tuner B, the signal inputs should be from different LNBS unless you're using dual/quad LNB. MOI has dual DVB S2 tuner, thus it enables you to receive channels from two separate transponders simultaneously.
- Connect MOI via the included RJ45 Network cable to your router or switch.
- Connect MOI via serial port cable to RS232 to the computer. This connection is not a MUST, it is only recommended for those who want to add or edit the imbedded software on MOI.

3. Software Installation and Configuration (for Windows/ Linux/ Android/ iOS)

MOI box serves as a dual DVB-S2 tuner Linux system backend TV source with TVheadend, DVBLast,mumuDVB,szap,scan pre-installed. You may set up TVheadend by simply typing <http://192.168.1.188:9981> on your browser(or if you have changed MOI IP to another IP address, type the respective IP address with port 9981). For watching/recording satellite TV on your client end devices, you may install VLC, XBMC,TVHGuide on your client end and use these softwares to do the job.



4. How To:

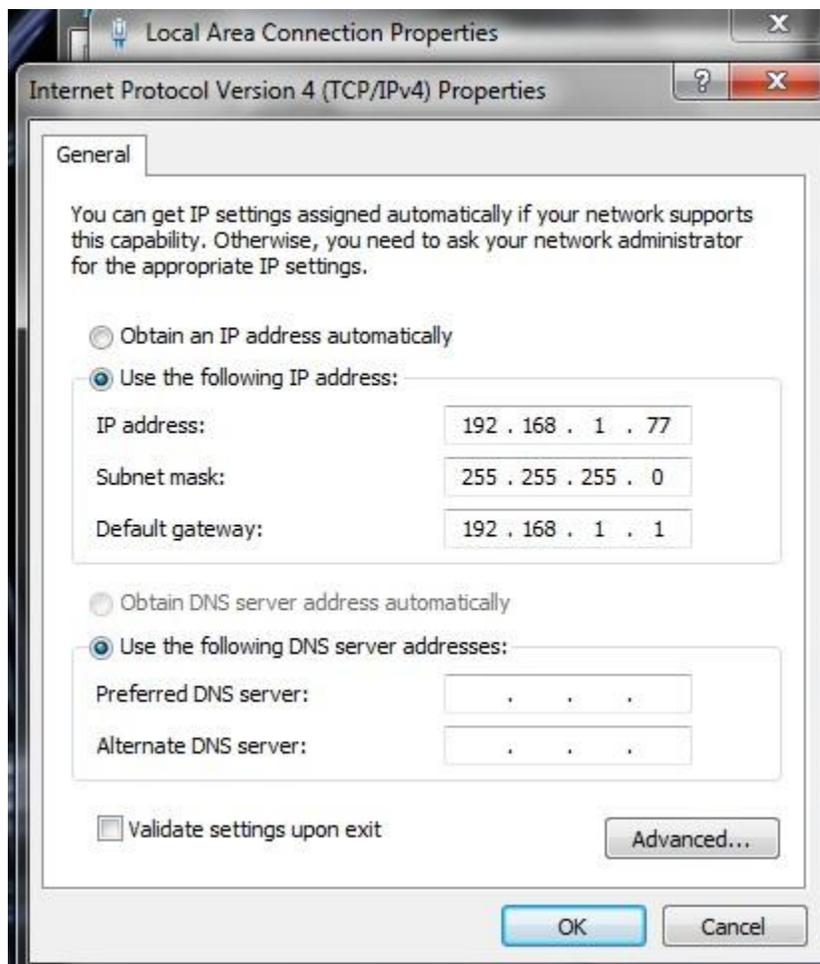
4.1. change IP address of MOI

The default IP address of MOI is **192.168.1.188**, if this IP is not in your network IP range, you need to either change MOI IP to your network IP range or change your network IP range to 192.168.1.XXX to make MOI accessible.

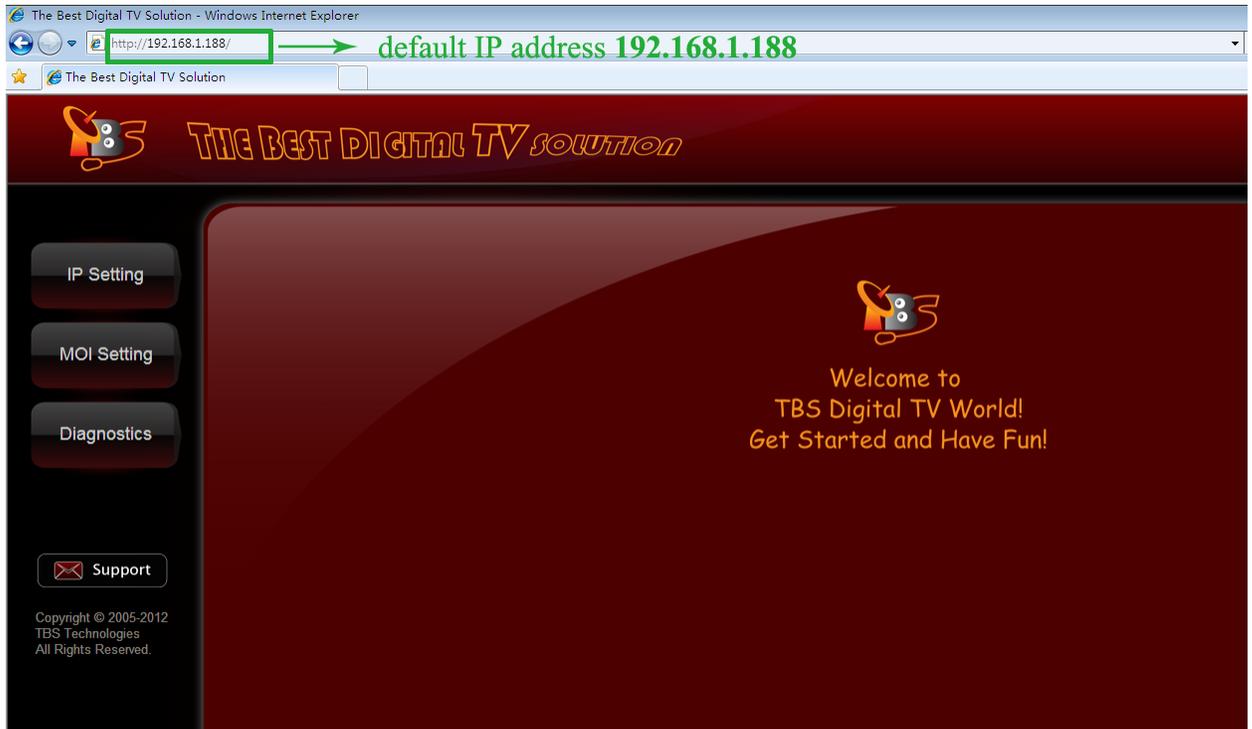
Preparation

Step 1: Connect Ethernet port "LAN1" of MOI to your network router or switch.

Step 2: If your router is not in IP range 192.168.1.XXX, change your router IP to 192.168.1.1. Then change your computer IP address to any IP address in the range 192.168.1.2 - 192.168.1.254 with network mask 255.255.255.0 and gateway 192.168.1.1 as on the picture below:



Step 3: Now your computer, your router and MOI box are in the same IP range, you can connect to MOI via SSH protocol or Web User Interface. To access MOI from Web User Interface. Open the browser and enter the default IP address of MOI, which should be 192.168.1.188, then you will see the window below:



Click “IP Setting”, Here you can **enable** or **disable** “DHCP”:

Enable DHCP (It’s not recommended unless you know exactly how to find your MOI IP later). After you select “Enable”, you can click “save” directly, then MOI will receive a random IP address from the Ethernet server, since it is dynamic, the realtime IP can’t be displayed, if you want to check the new IP address, you will need to access the DHCP of your router settings, there you can find MOI by looking for it’s Mac address.



The screenshot shows a web browser window titled "The Best Digital TV Solution - Windows Internet Explorer" with the address bar displaying "http://192.168.1.188/". The page features a dark red header with the TBS logo and the text "THE BEST DIGITAL TV solution". On the left side, there is a navigation menu with buttons for "IP Setting", "MOI Setting", "Diagnostics", and "Support". The main content area displays the "IP Setting" configuration form, which includes a "DHCP" section with radio buttons for "Enable" (selected) and "Disable". Below this are input fields for "IP Address" (192.168.1.188), "Subnet Mask" (255.255.255.0), "Gate Way" (192.168.1.1), and "DNS Server" (192.168.1.1). A "Save" button is located at the bottom right of the form. At the bottom left of the page, there is a copyright notice: "Copyright © 2005-2012 TBS Technologies All Rights Reserved."

Disable DHCP(it's strongly recommended you check disable DHCP)

You can change the IP manually, simply change the "192.168.1.188" to any IP address which is included in your Ethernet IP range. For example, if your previous network router IP range is 192.168.15.xxx and you want to keep using that IP range for your router and computers in the network, you can simply change MOI IP to the IP range of 192.168.15.xxx ,set subnet Mask to what you're currently using(normally 255.255.255.0) and set Gat Way to your router IP address. click "save", then your MOI box will be assigned with the new IP. Remember this IP, you need need to input this IP to connect to MOI each time. Now you may change back your computer IP address and router IP address.



MOI Settings

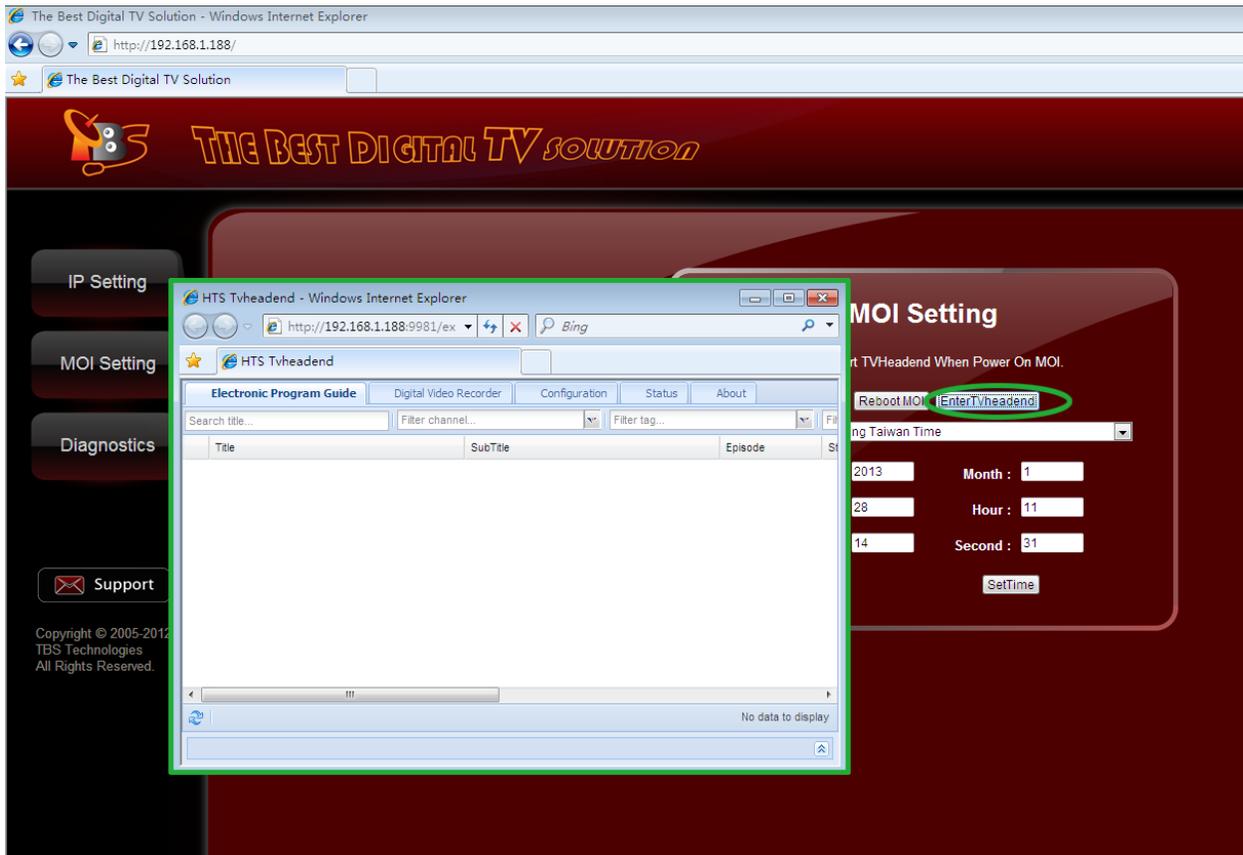
To set up TVHeadend¹, you may click “EnterTVheadend” and you can make TVHeadend automatically start when MOI is powered on by checking the “Auto Start TVheadend When Power On MOI” checkbox.

You can also set up MOI box date & time here.

Please note: your browser need to allow pop-ups to enter TVHeadend setting page.

The screenshot shows a web browser window titled "The Best Digital TV Solution - Windows Internet Explorer" with the address bar showing "http://192.168.1.188/". The page features a dark red header with the TBS logo and the text "THE BEST DIGITAL TV SOLUTION". On the left side, there is a navigation menu with buttons for "IP Setting", "MOI Setting", "Diagnostics", and "Support". The main content area displays the "MOI Setting" configuration page. At the top of this page, there is a checkbox labeled "Auto Start TVHeadend When Power On MOI." which is checked. Below this are two buttons: "Reboot MOI" and "EnterTVheadend". A time zone dropdown menu is set to "(GMT+01:00)European Central Time". The date and time are set as follows: Year: 2013, Month: 1, Day: 28, Hour: 4, Minute: 14, and Second: 02. A "SetTime" button is located at the bottom of the time settings.

¹ more information about TVHeadend settings, please refer to “How to configure TVHeadend”



4.2. Upgrade The System

To upgrade the system, you need a formatted FAT32 file system micro SD card.

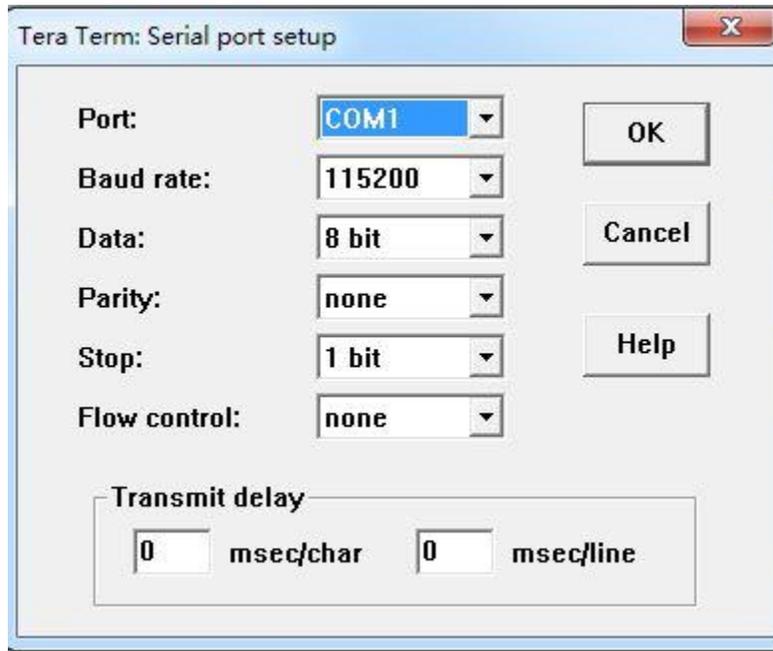
Download the latest upgrade package from the download section of tbsdtv.com and copy to the micro SD card, insert the micro SD card into MOI, power on and then wait about 5 minutes until the upgrade is completed.



4.3. Set up RS232 connection

Connect MOI with a serial port cable to your PC.

Run Tera Term software to configure, as it is shown in the picture below:





5. Declaration

- The user manual includes all the information of safe and correct operation instruction. To avoid accident and product damaged, please make sure read it carefully before using the product.
- Please keep the product away from high temperature, humid and dusty environment.
- Do not drop or crash the product
- Do not cut off the device when it is formation or upgrading. Otherwise it will cause operation system error.
- Do not dismantle the deice, Do not clean it by alcohol, thinner and Benzene
- We keep the right to upgrade and modify the product
- The product is not water-proof
- All the pictures in the instruction are just for reference. It might be different from actually showing on the computer due to software upgrading.