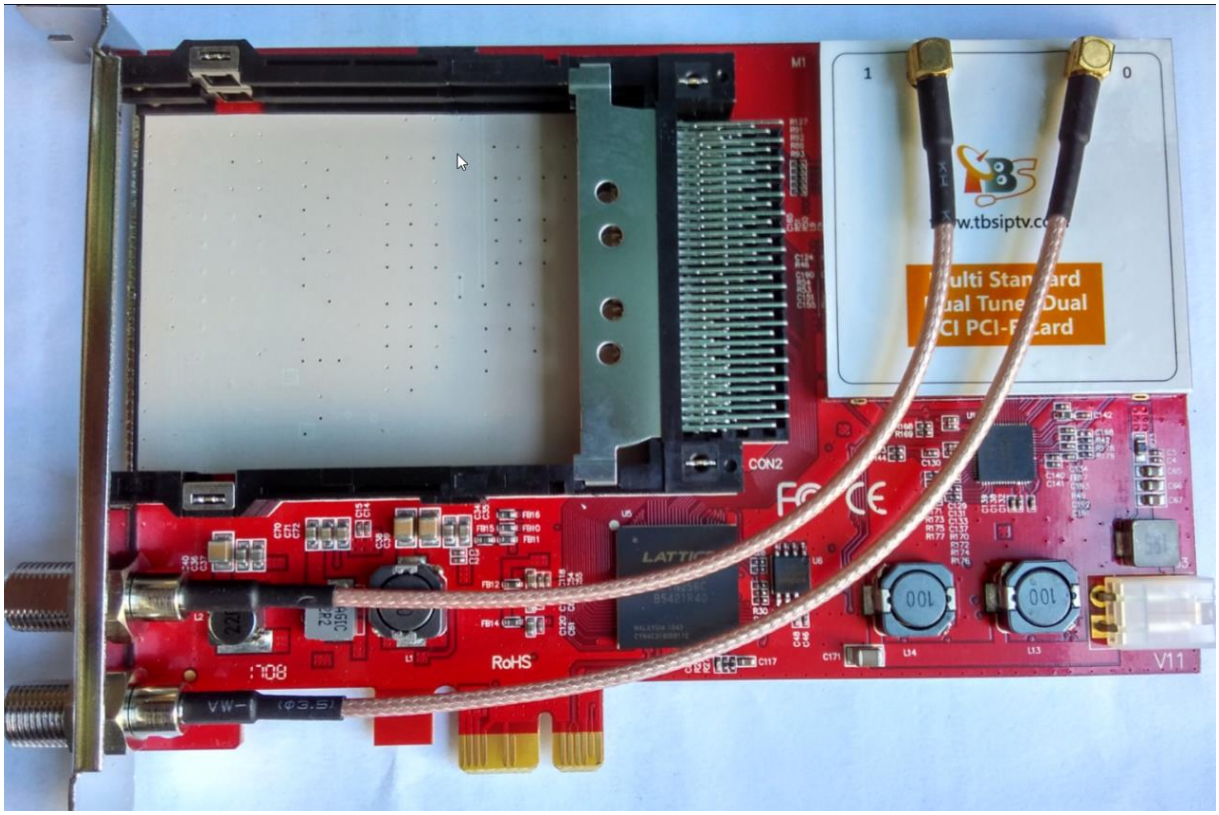
TBS6590 Multi Standard Dual Tuner Dual CI PCI-e Card

In the following,we present the tbs6950 card,as tested on a computer running Windows 10. The tbs6590 card, having the same hardware components as the tbs6522 card (chip Silicon Labs Si218 and Silab 2157 tuners), allow to you watch and/record simultaneously two tv programs on different channels (which can be broadcast in different standards). Compared with the 6522 card, the tbs6590 has two CI slots, which allows for the utilisation of two CAM modules,and by using a valid card (or two cards) it makes possible to watch and record coded tv programs, regardless of the employed digital standard (the recording is done on computer, by using dvbs players).



The TBS6590 will take SCV-S2,DVB-T2/T,DVB-C2/C standards, that is, practically everything that a true dxer needs today. Changing from one digital standard to another is easily done, as long as both tuners are fed with signal. Thus, the tuners of the hard drive will process simultaneously two different frequencies and standards, such as satellite/cable, cable/terrestrial, satellite/terrestrial. Also, my tests have shown that they are capable of receiving two different frequencies from the same digital standard or two tv programs from the same frequency.

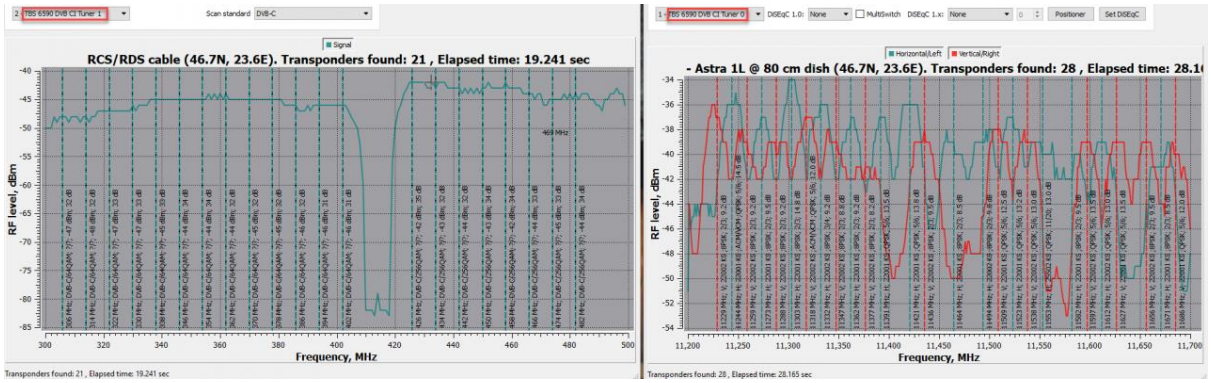
As with the 6522 card, we must recognize that it is a great advantage to have access to different signal sources and different transmission standards, without having to change the cable. But above all, in order to choose the signal source and the standard that we want,it is mandatory to use the ChangeModeTool utility, specially made for 6590. With its help, we initialize the tuners for the digital standard we want.

Then I checked and viewed a tv channel from Astra and one cable channel by using DVBDream players. Switching from one tv program to another, regardless of standard and frequency, is the

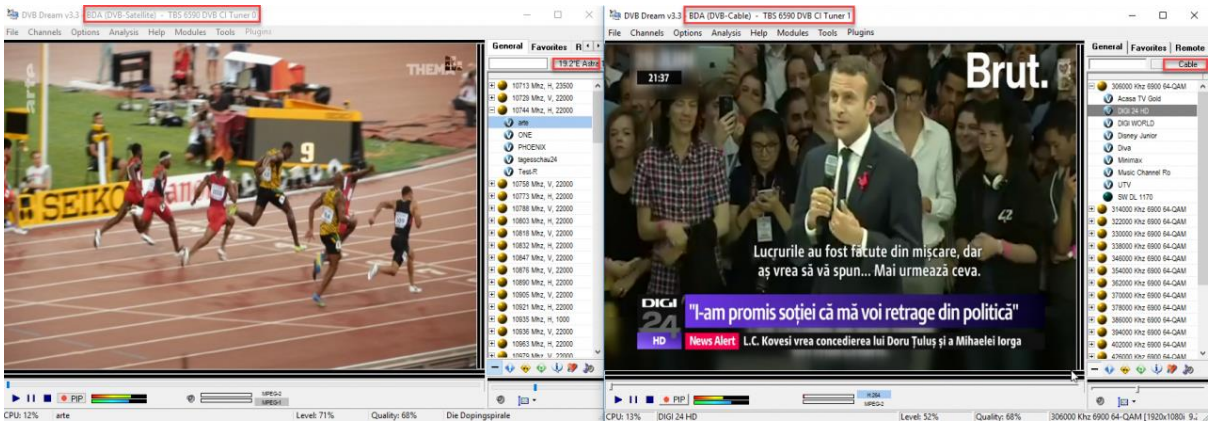
same as on any tbs card. Also using the ChangeModeTool, I picked tuner 0 for cable and tuner 1 for terrestrial. To watch programes on cable and terrestrial, I used the DVBDream players, which in my opinion are the best at handling bda drivers.

I did the same for receiving the satellite and terrestrial signal, and then viewing both channels on both standards simultaneously.

The first combination I chose with ChangeModeTool was for satellite and cable signal reception, i.e.tuner 0 for Astra at 19.2E,and tuner 1 for cable from RCS-RDS provider. To be sure that the tool initiated correctly the signal sources, I used the utilities Crazyscan for satellite and Crazyscan2 for cable.Scanning with the two utilities can be done separately or simultaneously. As I had a signal at both tuners, I scanned both standards directly at the same time and encountered no problem.

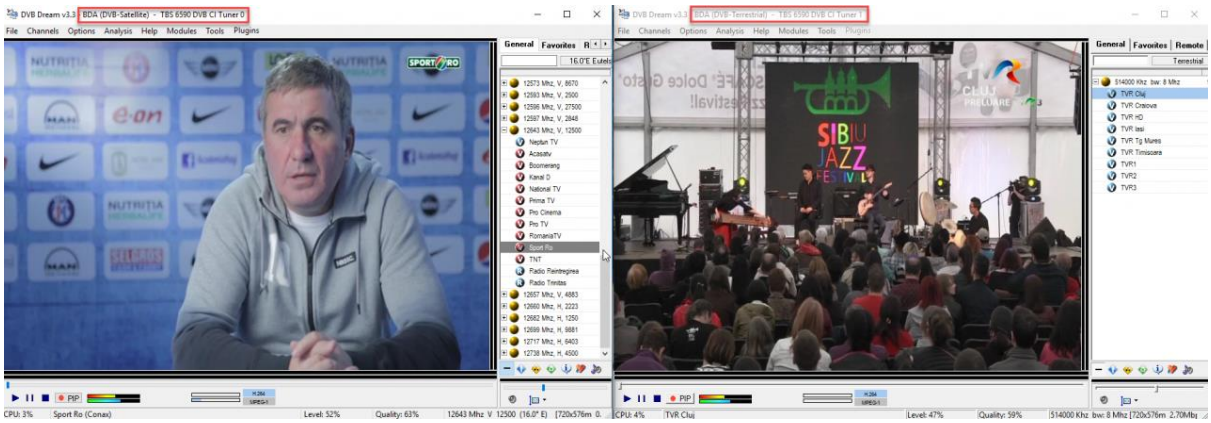


Then I checked and viewed a tv channel from Astra and one cable channel by using DVBDream players. Switching from one tv program to another, regardless of standard and frequency, is the same as on any tbs card.



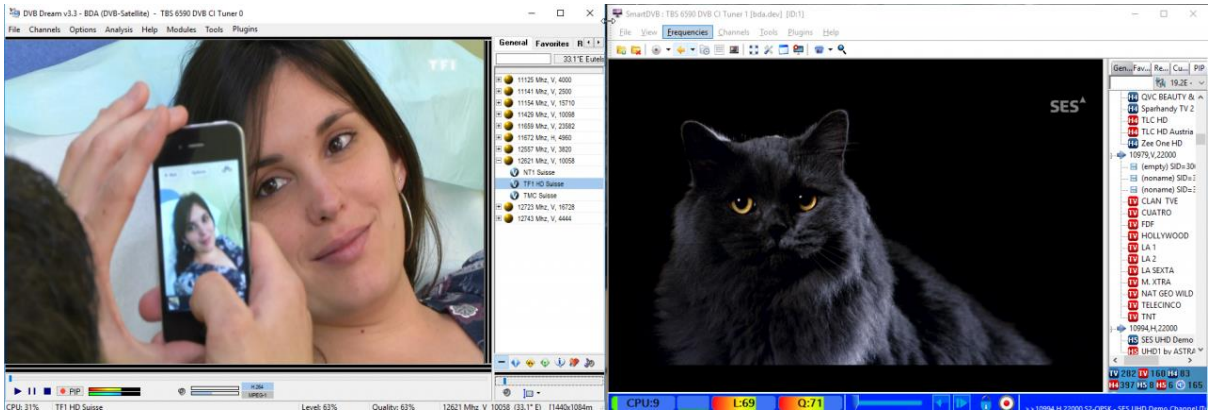
Also using the ChangeModeTool,I picked tuner 0 for cable and tuner 1 for terrestrial. To watch tv programes on cable and terrestrial I used the DVBDream players, which in my opinion are the best at handling bda drivers.

I did the same for receiving the satellite and terrestrial signal, and then viewing both channels on both standards simultaneously.

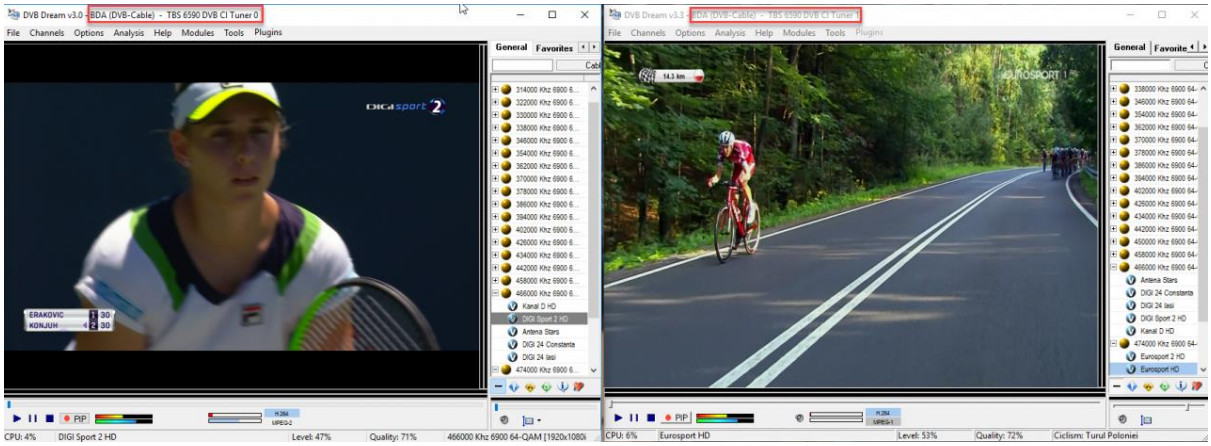


As I mentioned before, the tuners of the 6590 card manage the simultaneous reception of two frequencies from the same standard. In ChangeModeTool I initialized both tuners, i.e. 0 and 1 for simultaneous reception of satellite/satellite standard, following which I was able to receive two tv programs from two satellites by using DVB players. On this occasion, I checked the standard DVB-S2X on tuner 0, choosing the Swiss package from

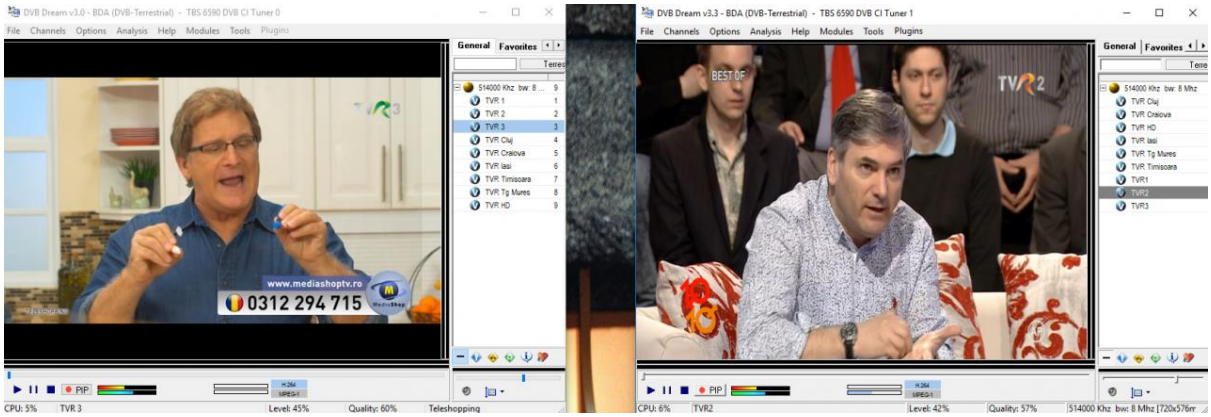
33.1E and tuner 1, where I received an UHD package from 19.2E. Changing and switching from one channel to another or different transponders from two satellites went smoothly. Receiving flawless feed and watching simultaneously are entirely dependent on the capabilities of one's computer.



Once the simultaneous reception of signal from two satellites was accomplished, I proceeded to the testing of the two tuners of card for reception of two programs of cable. I attached a cable from my cable company, RCS-RDI, to each tuner of the card and by again using the ChangeModeTool I picked the same DVB-C standard for both tuners. I checked for signal(with Crazyscan2) and then I started two DVBDream players, each from its own folder to receive two programs from cable. As I expected, each player had signal, so I could watch two programs from cable at the same time.

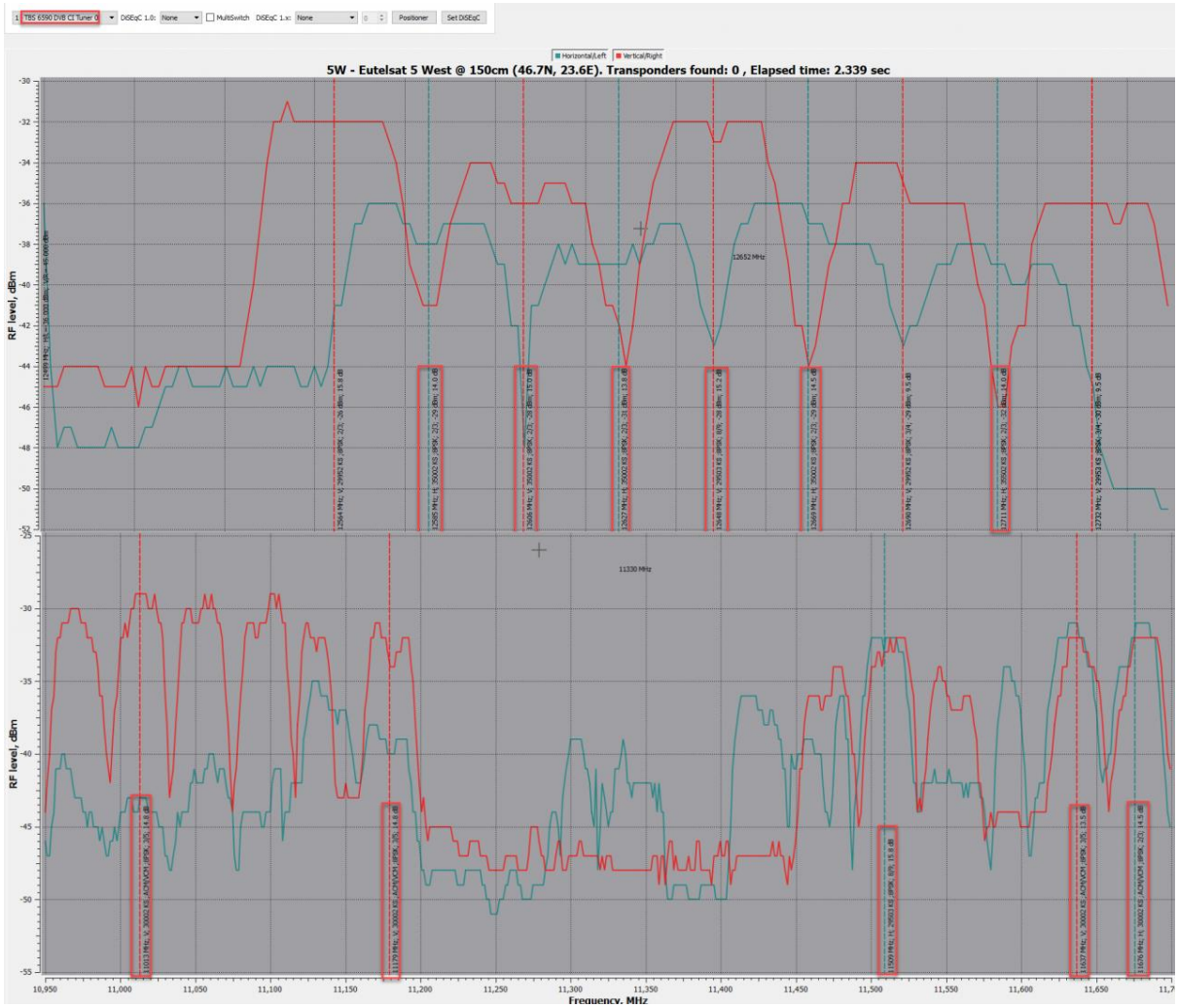


Even better, I recorded a program while watching another one in real time. For terrestrial reception, an important test for the tuners of 6590 card is the simultaneous reception from the same standard and from the same frequency. As in my earlier test, I checked the signal on each tuner with Crazyscan2 and then I started two DreamDVB players. I was pleased to immediately be able to watch two programs from the TVR package on both players.



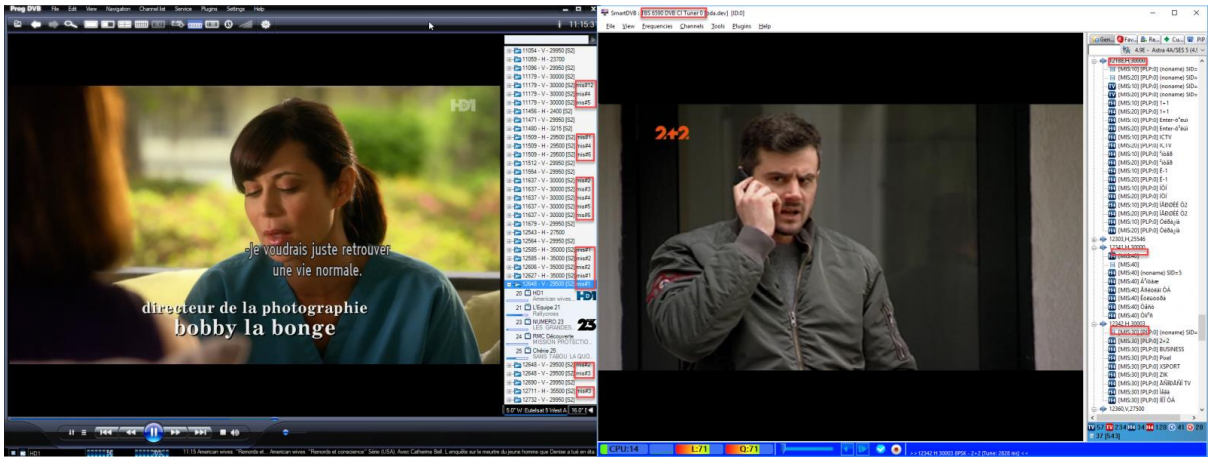
Switching from one channel to another on one of the players was done quickly, and on the other player somewhat more slowly but, once it was accessed the program ran smoothly and quite well, without interruption or microcubs. The slow switching from one program to another on one the players I considered to have been caused by the players both using the same computer capacity.

The salient point for those interested in this card is its capacity to receive multistream signal, especially Italian and French packages from 5.0W, but also tv packages from other satellites, such as 12.5W, 4.9E or 39.0E.



It should be noted that locking signal on the Crazyscan signal on multistream transponders is done only manually. Of course,it is mandatory to enter the correct PLS code into each transponder while scanning. When you are not sure that you have signal on a multistream transponder, Crazyscan is indispensable. It will show immediately whether the tuner was initialized for satellite or whether the chosen transponder has a useful signal. Once each transponder with its respective code is memorized, dvbs players can play tv programs directly, as soon as they are switched on. Nothing further needed to be done, and thus, switching from one channel to the other was done as quickly as with a common transponder. TBS6590 has an option for watching multistream programs.

Untill recently, for viewing multistream packages broadcast on T2-MI standard using PLP protocol such as the two transponders from 4.9E (12180 and 12341 GH) but also other transponders from Ku-band, (for instance from those 53E) you needed to have special application-4T2 Content Analyser. Luckily, given the increased interest of users for such a standard T2-MI, some developers of DVBs applications have broadened the area of utilisation of this application so that now they can lock scan and memorize multistream packages directly with DVBs player. Such a player is SmartDVB which I used to memorize the MIS Zeon Package from Astra 4A (4.9E) on 12.188 MHz, H, 30000, 5/6, DVB-S2 8SK, T2-MI and 12341 H, 30000, 5/6, DVB-s2/8PSk, T2-MI. All tv channels could be memorized and then viewed without problems.



Another important feature that I checked on the 6590 card is the symbol rate. The Manufacturer gave its value to be between 1-45 Msps. In other words, the manufacturer gives no guarantee for small SRs and in practice, the 6590 responds differently when symbol rates are under the value of 1000 Ks. At times, I managed to lock signal at around 500 Kps symbol rate, at other times, I failed to do so. I hoped to be able to lock an SR of 256 Ks when the signal appeared on the bar, but it was not to be. It would have been too much to ask for lock at such low value of the symbol rate and the explanation is very simple: The card was designed and manufactured to be used for multi standard reception of tv programs, that is, for viewing tv programs and not for very low SR signals.

Mention should be made that I had not difficulty with tbs6590 when I tried to switch satellite by using the diseqc EMP Centauri switch on 16 lnbs toroidal antena. Switching from one satellite to another was normal, as was the case with cards that I tested.I noticed a short delay on switching only when the signal was weak. I have to say that I did not test disecq 1.2 for moving the antenna. In any case the card comes with connecting cable for just such an operation (for added security in its long term use).

So far we have reviewed and tested a number of basic features of the tbs6590 card which we also find on the 6522 model (S2X extension, etc.); now we have to see the novelty that the card brings, i.e. the two CI slots for CAM (ConditionalAccesModul). This is not a novelty when it comes to cards but providing the 6590 with this Interface is welcome.

I tested the reception of two roumanian packages, Freesat (16.0E) and FocusSat (1.0W). First, using the Conax access module and a valid Freesat card I tried to view coded programs on DVBDream player.

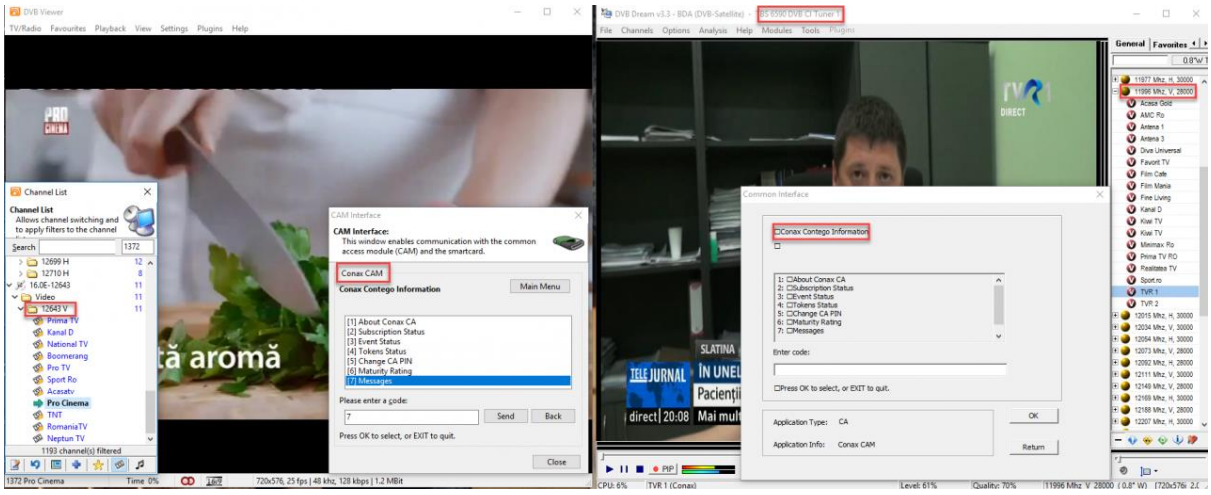
Inserting the CAM in the slot was very easy, and when physical contact was established between this and the device, a led was switched on, telling us that the two components are connected (through a slit of the fan, I could check whether the led was on, signalling that the module was in the right slot). Very important notice: never insert or remove the CAM from the CI slot while the computer is on, because there is a risk for the card to be destroyed.

At first try, I detected no "light" from the coded program. I had to access the DreamDVB player manually to activate (by checking) the TBS CI module on the player list of modules. Once it was done, the first coded channel opened, followed by the rest of the package. I detected no delays on

switching from one coded channel to another. In this respect there is no difference in decoding, compared to the other devices carrying CAM.

For the second CI slot of TBS6590 card I used a Conax module and the FocusSat smartcard, choosing at random a program from tv packages broadcast on Thor at 1.0W, using the same DVBDream. The program chosen at random (TVR1) was decoded instantly.

For the simultaneous reception of coded packages on the two satellites, I chose a DVBViewer player for Freesat package and DVBDream player for Focus package. From the menu of both players I chose the CAM decoding interface in order to obtain all the information that they and the smart cards contained. Having the proper modules and smartcards in both slots of the card, I could choose and view simultaneously coded channels from both packages. I also made a direct recording with the player, while watching a program in real time on the other one. Switching from one coded channel to another was fast, with no delay, as was the case with CI receivers.



As I had a CAM Diablo light at my disposal, I also tested it on the TBS6590 card. I encountered no problems, as the card detected and I could watch coded programs, either from Freesat or from Focusat by using one of the Conax smartcards. In the absence of the necessary CAM and Smartcards, I was unable to test other coding systems from other program providers; I am certain nevertheless that they can be used without any problems.

Of course I tried to make some tests with smartcard CI+ from Digi TV in order to decode coded programs broadcast by cable by using tbs6590 card but all my attempts were unsuccessful. I later learned from the manufacturer that the 6590 card has no support for CI+ (at least not for Windows).

After running many tests on the tbs6590 card, I can say that it is meant primarily for buyers who wish to receive and view simultaneously tv programs broadcast in several standards, satellite, cable and terrestrial. It is not meant to be used by those in search of weak signal or special reception. It however has capabilities similar to the professional cards, such as the reception of 16PSK feeds or multistream broadcast. The manufacturer optimized the driver, so that access to different broadcasting standards is done more easely and safely, without the glitches that we encountered initially with the 6522 card, which were later remedied. Flexibility and ease of use, regardless of the standard employed, are the strong suits of this card, to which we can add the two CI slots.

Concerning the latter, I was pleasantly surprised that the two CAMs, used simultaneously on these two slots, did not warm up, even after hours of use.

If I were to mention a weakness,this would be the fact that the manufacturer did not provide a CI+ support on Windows, perhaps for licensing reasons(?).

Satelescu