

**THE OPPOSITION**

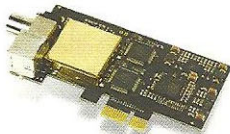
**TBS 6984**

Two DVB-S2 tuners not enough? This one has four, but blind scan isn't supported – Much easier and cheaper than using multiple tuner cards and with unparalleled viewing and recording flexibility



**Black Gold BGT3620**

If you favour terrestrial over satellite, this dearer card boasts two hi-def-capable DVB-T2 tuners plus analogue video capture from external sources. Poor performance on our test PC, though



# TEVII S480 V2.1 DUAL DVB-S2 HDTV PCIE

**This dual HD tuner-equipped digital satellite card has much to recommend it – including hardware-based blind search**

**THE S480, FROM Taiwanese company TeVii Technology, is a dual-tuner card that adds DVB-S/S2 satellite reception to PCs equipped with a spare PCI-Express x1 expansion slot.**

Add a suitable dish and LNB and a range of possibilities open up. First,

you can view one TV channel while recording another to the computer's hard disc. Recent PCs will deliver the necessary horsepower for full-screen HDTV reception. We mustn't, of course, forget the many hundreds of digital satellite radio stations beamed to us via the Clarke Belt. Finally, there's the broadband

potential of satellite data. The S480 is supplied with software to enable all of these and you can simultaneously mix and match from different satellites if need be.

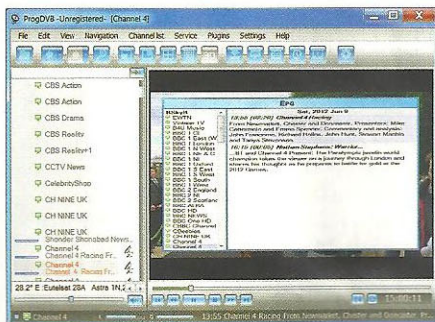
**Build and connectivity**

It's half-height, and is supplied with mounting brackets that allow the

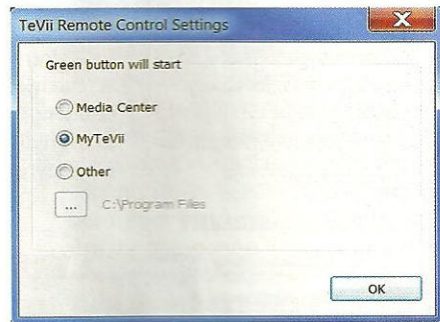
**INTERFACE**



The S480's Microsoft BDA-compliant drivers enable the card to work with Windows Media Center



ProgDVB does everything that can reasonably be expected of desktop TV software. TeVii says it will soon supply the full ProgDVB software



The handset can be configured to work with different software and armchair operation of some options is also possible



## 'Support for blind scan and motorised dishes makes it the choice for the enthusiast'

card to be fitted in either low profile or full-sized PC cases. Accessible from the bracket are two 'F' sockets for attachment to your outdoor kit. A 3.5mm jack socket accepts a trailing infrared sensor, intended for use with the supplied handset. Armchair operation of some software is thus possible. Internally, a PC power supply connector (of the type associated with 3.5in floppy drives) is provided for those occasions when extra 'juice' is needed – DiSEqC motor control, for example. This card supports DiSEqC 1.2 and USALS, in addition to 1.0 and 1.1. If you don't have DiSEqC equipment, though, there's no need to connect it up.

Two blocks of RF circuitry, adjacent to the connectors that feed them, constitute the tuners. They're shielded to minimise problems from stray signals. One of the most interesting aspects of the S480's design is that it features the Montage M88DS3002 DVB-S/S2 demodulator chip – two of them – one for each tuner. The M88DS3002 is compatible with various modulation types (QPSK, 8PSK, 16APSK and 32APSK) with symbol rates of up to 45Ms/s, but just as importantly a blind scan mode has been implemented. Yes, it would appear as if that last bastion of enthusiast-grade set-top box functionality has succumbed to the PC world. Other circuitry includes control microprocessors for each tuner, a PCI-e Express bus chip, 22kHz switching tone generation and electronics that convert the PC supply voltages into the 13V/18V needed by the LNB.

### Setup

What of the software? First are the drivers, which are Microsoft BDA (Broadcast Driver Architecture) compliant and will run under

Windows XP, Vista or 7. They also allow the S480 to work under Windows Media Center, the comprehensive multimedia package built into many versions of Windows Vista and 7. If you plan to build a media centre around Linux you'll be pleased to know that third-party drivers for this operating system are available via the TeVii website. The programs supplied are MyTeVii and ProgDVB, digital TV software of different sophistication and presentation, and TeViiData for broadband internet use.

Our version of ProgDVB was a 'time-limited' version, however, TeVii has informed us that it now has an agreement to supply the full software. Interestingly, we had no luck getting the supplied version to work with the S480. Downloading and installing the latest version from the ProgDVB website proved a rather more fruitful experience. Thanks to the BDA-compliant nature of the drivers you have a good deal more freedom in your choice of applications. The S480 is compatible with DVBCViewer, for example.

Also included is a program that deals with the infrared sensor. It's compatible with MyTeVii and Media Center; you can also configure it to start up another program. However, regardless of settings it only seemed to work with ProgDVB – even after a system reboot. With ProgDVB, you can – among other things – change channel, start/stop recording, engage the EPG, adjust volume and switch between window and full-screen modes. The red standby

button doesn't close the program – instead, it shuts down your PC. It can't restart it, either – the PC's own power button is needed here.

### Basic use

After installation, two instances of MyTeVii – one for each tuner – are installed. This allows some flexible operation. You could view or record two different channels (on different satellites, possibly), or combine a single instance of MyTeVii with TeViiData broadband access. Before regular use it's worth manually configuring each instance to work with a specific input (although an automatic 'first-found' mode is also provided). MyTeVii is very basic software. It has nested channel lists (which can be arranged by TV, radio or all services), favourites, timeshifting, recording, full-screen viewing and EPG. There's no delete, media playback or subtitles/soundtrack selection, although you do get plug-in support and an interesting little utility that displays a transponder's bitrates.

In contrast, most other tuner cards facilitate the recording of every channel on all available transponders. We hope that drivers address this issue. ProgDVB can be compared to DVBCViewer in terms of functionality. Among its offerings are multimedia playback, an EPG, subtitles, teletext, transport-stream recording, timeshift, mosaic previews and a channel list – with EPG-derived programme information – that's quite redolent of the one found in Enigma-based

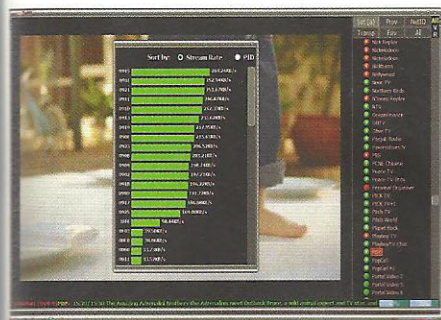
### FEATURES

**No LNB inputs:** 2 (extended IF, 22kHz)  
**LNB loop through:** None  
**No. aerial inputs:** None  
**Aerial loopthrough:** None  
**DiSEqC:** 1.0/1.1/1.2/USALS  
**No. channels:** Software dependent  
**Selectable FEC:** Software dependent  
**Symbol rate:** 2000-45000 (DVB-S), 2000-36000 (DVB-S2)  
**Blind search:** Yes  
**Linux:** Supported with drivers  
**CAM:** N/A  
**Common interface:** N/A

**Teletext:** Software dependent  
**EPG support:** Software dependent  
**Timer:** Software dependent

**UHF modulator tuning:** N/A  
**Software upgrade:** Software dependent  
**Data ports:** PCI-e, infrared receiver

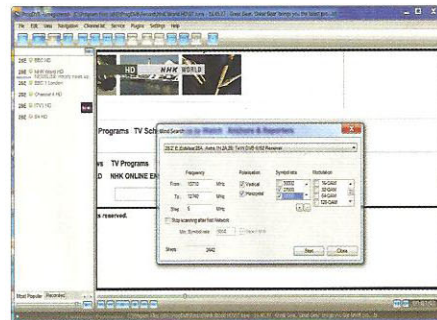
**SD out:** PC-dependent  
**HD out:** PC-dependent  
**Audio out:** PC-dependent  
**Drivers:** Windows 2000/XP/Vista/7, Windows Media Center, Linux  
**Minimum system requirements:** 2GHz CPU (2.4GHz for HDTV), 256MB RAM (1GB for HDTV), 128MB graphics card; Microsoft DirectX 9.0c or higher



MyTeVii is basic, with nested channel lists that can be arranged by TV, radio or all services, but there are one or two unusual features



Keep the two tuners separate – and you can have data and television programmes simultaneously

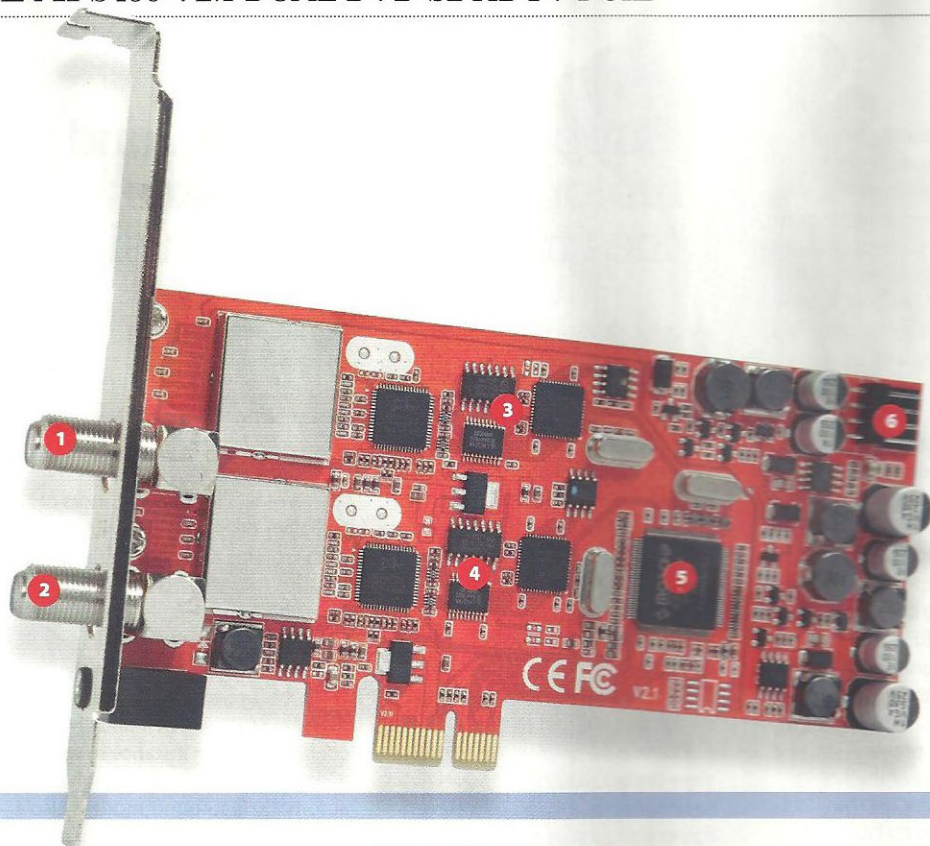


Happily, all four of the TBS6984's tuners were recognised by Windows Media Center with no need for fiddling with configuration options



IN THE BOX

- 1 Screening can for tuner 1
- 2 Screening can for tuner 2
- 3 Demodulator and control chips for tuner 1
- 4 Demodulator and control chips for tuner 2
- 5 PCI-e bus interface chip
- 6 PC power-supply connector



Linux receivers. ProgDVB also boasts blind search. With the default 5MHz-step settings, though, Astra 2x/Eurobird took more than five hours to complete – disappointing, considering the hardware support for blind scan. There is a solution. The TeVii website provides a link to a utility called BLScan, which talks directly to the card, thereby harnessing its blind scan mode. It's a command-line program, but a friendlier Windows GUI is also available. This program sniffs out transponders and exports a list that can be imported into several types of conventional digital TV software – ironically, ProgDVB isn't currently in the list. With the new transponder list loaded, a regular scan can then be initiated. BLScan is fast, both bands and polarities are covered within five minutes. We hope that digital TV software starts supporting this capability directly before long.

**PVR and multimedia**

You can record two channels on different satellites with MyTeVii but you can't simultaneously record and view different channels on the same transponder. Even with software that supports multiple tuners (DVBViewer, ProgDVB), access to a third channel carried by one of the already tuned transponders is forbidden.

**Performance**

Sound and picture quality are influenced by the speed of the PC, what codecs are installed and the AV equipment you're using. Using a quad-core Yoyotech PC with ATI 5570 graphics card, feeding a Full HD Samsung LCD TV via HDMI, ProgDVB gave excellent 'full-screen' results from HD channels – they're broadly comparable with what you can expect from a set-top box. Sensitivity also seems to be of an acceptable standard. Interestingly, some

channels couldn't be received with MyTeVii. Even after changing the transponder's parameters (the symbol rate of Astra 2D 10847/H – which carries the BBC HD channels – was set to 22Ms/s, rather than the correct 23Ms/s) reception was denied to us. There were no such problems with ProgDVB or DVBViewer ■ **Martin Pipe**

**VERDICT**

The TeVii S480's support for blind scan and DiSEqC motorised dishes (ensure that your PC's power supply is up to the job) makes it the choice for the enthusiast who wants to move from receivers to a totally PC-based approach (and all of the advantages that brings). But it's not without its limitations. Only being able to open one channel per tuner is disappointing, considering the capabilities of competing cards.

RATINGS

**PLUS**

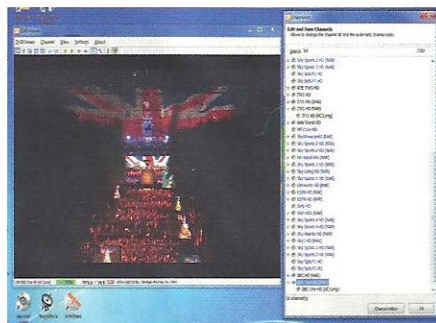
- Blind scan will appeal to PC-bound satellite enthusiasts
- Motorised DiSEqC dishes catered for
- BDA drivers ensure third-party software compatibility

**MINUS**

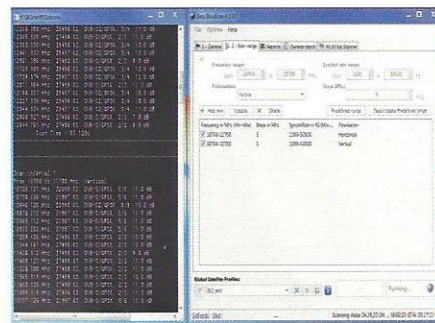
- Needs greater integration between hardware and software
- Tuners can only access one channel at a time
- Tuning issues with some software

<b>Build</b>	★★★★★★★
<b>Setup</b>	★★★★★★★
<b>Searching</b>	★★★★★★★
<b>Navigation</b>	★★★★★★★
<b>Performance</b>	★★★★★★★
<b>Features</b>	★★★★★★★
<b>Value</b>	★★★★★★★
<b>Overall</b>	★★★★★★★

**83%**



Thanks to the inclusion of BDA drivers, most digital television applications are compatible with the TeVii S480 tuner card



The free third-party BLscan utility is used to conduct blind scans – both bands and polarities are covered within five minutes