

# Pace DS420 Digital Satellite Set-top Box

## TECHNICAL SPECIFICATION



### Support for Tomorrow's Broadband Content

The Pace 400 series offers several A/V options plus USB and Ethernet\* connectivity to integrate content from a variety of sources. In addition, RS-232 and a choice of PSTN modem variants may be specified.

### Intelligent Design

Styled in an elegant, low-profile cabinet the 400 series uses an innovative concealed cable bay design, ensuring all ports and connectors can be accommodated in a small form factor by making full use of the rear panel and a hidden side panel.

There are three base designs available for the front panel incorporating 4, 8 or 11 buttons, all optionally available with a 4-digit 7-segment LED clock display. A second smart card slot for interactive or banking applications is also an option, as is a PC Card Slot for Common Interface. Four software controllable LEDs (1 bi-colour) completes the front panel equipment.

### Performance

- Enhanced MPEG-2 decoder, offering a 166MHz CPU that delivers in excess of 110MIPS
- Multichannel burst DMA engine for enhanced real-time stream transfers and true colour RGB16 graphics capability
- DVB transport streams can be handled with data rates up to 120Mbits

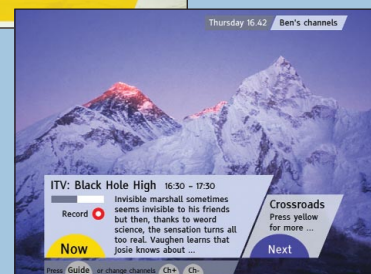
### Features

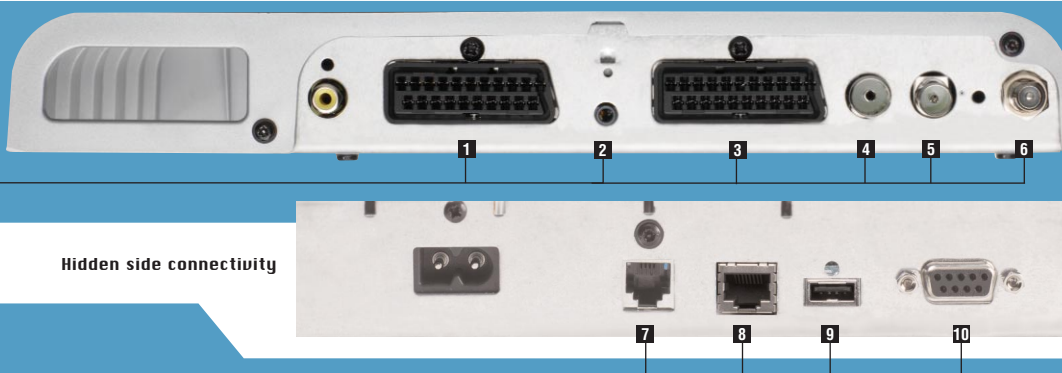
- VBI Teletext and Wide Screen Signalling support for 4:3, 14:9 and 16:9 formats to EN 301 775 and pan & scan 4:3 presentation of 16:9 sources. Compliant with Active Format Descriptors as described in DVB TR 101 154
- To prevent unauthorised copying, the output video signal can be encoded using Macrovision 7.01
- The device will display DVB subtitles as described in ETS 300 743

### Software

A variety of middleware options are available including OpenTV & NDS Core. By default however the impressive on-screen navigator and embedded Electronic Programme Guide (EPG) offers many advanced features and there is also the possibility of upgrading to a third party middleware or Conditional Access (CA) with an over the air upgrade.

- TDT clock updates over the network
- Automatic or manual channel scan
- Automatic Bouquet updates
- Fast (NIT) scan and exhaustive scan
- Comprehensive banner info including present/following programme data
- Parental locks
- 8 day channel guide
- Multilingual GUI





Hidden side connectivity

- 1 TV A/V SCART** - Provides either composite or RGB and composite video output. Audio volume can also be controlled in software
- 2 Analogue Audio Outputs\*** - And Optical SP-DIF\* are important additions for users wishing to integrate the set-top box into their home theatre system. Volume can be adjusted or muted under software control on the analogue audio outputs and PCM or AC-3 digital reproduction is available on the digital output
- 3 VCR A/V SCART** - Can provide on-screen graphics to the VCR if required and inputs to the connector can be routed to the TV SCART when the unit is in standby
- 4 RF Output** - To connect the set-top box to TVs & VCRs without a SCART connector
- 5 Terrestrial Antenna Input** - Enables the set-top box to pass through analogue terrestrial RF signals to the TV and VCR
- 6 RF Input** - F-Type connector for satellite LNB
- 7 Telco Modem\*** - A PSTN return path enables interactive services such as PPV, IPPV, home shopping and games
- 8 802.3 Ethernet Port\*** - The de facto high-speed interface for Local Area Networks
- 9 USB 1.1 Host Port\*** - A ubiquitous interface for multimedia devices including digital cameras, printers & MP3 players
- 10 RS232\*** - Serial port for legacy devices, game pads, upgrades and diagnostics

\*Optional feature

For more information on the DS420 or any other Pace products you can visit our website [www.pace.co.uk/paceproducts/index.asp](http://www.pace.co.uk/paceproducts/index.asp)



#### Pace Micro Technology plc

Victoria Road Saltaire Shipley West Yorkshire BD18 3LF England  
Tel: +44 (0) 1274 532000 Fax: +44 (0) 1274 532010

[www.pace.tv](http://www.pace.tv)

## GENERAL SPECIFICATION

### HARDWARE

DVB compliant video and audio decoder  
Supports MPEG-2 video at MP@ML with support for incoming MPEG-2 transport streams at bit rates up to 120Mbps  
DVB compliant QPSK  
Tuner with single LNB Input QPSK demodulation and error correction  
350mA power source available for LNB  
22KHz LNB Tone Generation compliant with DiSEqC1.2  
RF Remodulator offers VHF/UHF PAL output  
Display Resolution PAL: 576 lines by 720x25Hz  
Full screen OSD, alpha blending and arbitrary video scaling  
5 video planes for background colour, video plane (MPEG-2), still image, OSD and sub-picture/cursor plane  
Support for I-MPEG and JPEG still image display  
MPEG-1 and MPEG-2 Audio Decode layers I, II, & III  
Stereo (inc. surround), Joint Stereo, Dual Channel, Mono audio modes supported  
PCM audio mixing with MPEG audio  
Downmix of PCM or AC-3 signal to analogue audio\*  
V.22, V.34, V.90 or V.92 Telco Modem options  
RC6 & MK4 RCU IR protocol support as standard

### MEMORY CONFIGURATION

8Mbyte unified SDRAM expandable to 32Mbyte  
2Mbyte NOR FLASH expandable to 8Mbyte  
128kbit or 256kbit EEPROM NVRAM options

### CONDITIONAL ACCESS

Support for DVB CSA based Conditional Access including:  
NDS, Nagra, Conax, Viaccess, Irdeto, Mediaguard

### CONNECTIVITY

TV SCART  
VCR SCART (Phono connectors are available in place of SCARTs)  
RF Remodulator\*  
Active Antenna Input\*  
S-Video Connector\*  
Optical SP-DIF output\*  
Analogue audio L & R phono outputs\*  
USB 1.1 Host Port Type A \*  
10Base-T 802.3 Ethernet Port\*  
Telco Modem Port \*  
RS232 Serial Port\*  
Conditional Access: ISO/IEC 7816 Smart Card Reader supporting embedded DVB CSA as specified in ETR 289 [13] with character transmission [T0] and block transmission [T1] protocols  
Second Smart Card Reader\*  
Common Interface PC card slot\*

### POWER

Mains Input Voltage: Auto Ranging 185V-265V ac 50/60Hz  
Power Consumption 15W typical (no external load except LNB supply)  
Standby Consumption <5W