

## Pace DS230 Digital Satellite Set-top Box

### TECHNICAL SPECIFICATION



### Full-Feature Entry Level Set-top Box

Targeted at the highly competitive entry level market, the DS230 is uncompromising in its abilities to deliver exceptional audio visual quality into the home, using the same decode architecture as our other products in the Pace 200/400 families.

### Performance

The sparkling performance of the DS230 is based on a 166MHz CPU that delivers in excess of 110MIPs

The Pace digital design includes true colour 16 bit graphics capability and a multi channel burst DMA engine for enhanced real-time transfers

### Features

VBI Teletext and Wide Screen Signaling support for 4:3, 14:9 and 16:9 formats to EN 301 775

Pan & scan 4:3 presentation of 16:9 sources. Compliant with Active Format Descriptors as described in DVB TR 101 154

Macrovision V7.01 is used to prevent unauthorized copying

DVB subtitles is displayed as described in ETS 300 743

### Design

The DS230 uses a superb compact design.

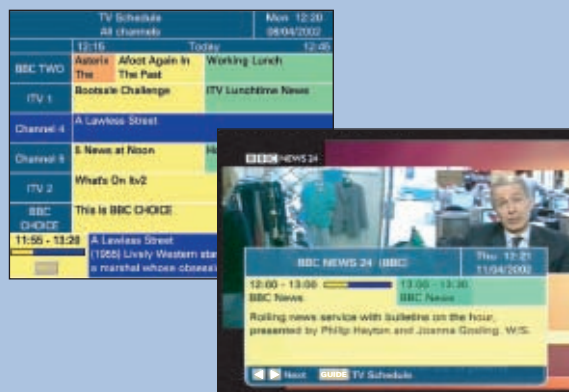
A total of 9 fully programmable front panel buttons and 4 LEDs ensures that a wide range of user requirements can be catered for. Together with a reduced form factor and low profile the DS230 design integrates well with existing home entertainment equipment.

### Software

Supporting popular middleware options including OpenTV and NDS Core the DS230 also offers an impressive on-screen navigator and embedded Electronic Programme Guide (EPG) delivering many advanced features. There is also the possibility of upgrading the middleware or Conditional Access (CA) with an over the air download.

- TDT clock updates over the network
- Automatic or manual channel scan
- Automatic bouquet updates
- Fast (NIT) scan and exhaustive scan
- Comprehensive banner info including current/next programme data
- Parental lock
- Multifunction timer
- Elegant display of all broadcast EIT data
- 8 day channel guide
- PIN based channel lock
- Multilingual user interface

In addition, the navigator and guide may be augmented to accommodate specific network requirements.



>> **DS230**  
Digital Satellite  
Set-top Box



- 1 RF Input** - Connector type IEC169-24 (F-type, female) for satellite dish LNB
- 2 RS232** - 9-Way D-type serial port connector for service and factory use
- 3 Analogue Audio Outputs** - An important addition for users wishing to integrate the set-top box into their home audio system. Volume can be adjusted or muted under software control
- 4 TV SCART** - Primary TV connection for RGB, composite video and L/R Audio. Audio volume level can be adjusted under software control
- 5 VCR SCART** - Composite video and L/R audio output connector for a VCR. Also provides loop-through facility to the TV SCART connector when the set-top box is in standby
- 6 Telephone Line Socket** - RJ11 type connector for internal V90 PSTN modem. Enables two-way interactive applications such as pay-per-view services and online gaming
- 7 Mains Input** - IEC320, style C8 male figure-of-8 connector

## GENERAL SPECIFICATION

### HARDWARE

Enhanced 166MHz processor delivering in excess of 110MIPs  
 950MHz-2150MHz QPSK tuner and demodulator giving 2Ms/s to 30Ms/s performance  
 Supports LNB switching and DiSEqC communications protocol  
 MPEG-2 video at MP@ML with support for incoming transport streams at bit rates up to 120Mbps  
 Display Resolution PAL: 576 lines by 720x25Hz 8bpp full screen onscreen graphics with support for alpha blending (6 bit, 64level) and arbitrary video scaling  
 5 video planes supported 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  
 PCM audio mixing with MPEG audio at MPEG audio sample rates (32, 44.1, 48 or 96KHz)  
 Multiple IR protocol support  
 Internal V92 modem for high-speed data connection and return path  
 Front panel with 9 software programmable buttons and 4 LEDs

### MEMORY CONFIGURATION

16Mbytes SDRAM with unified memory architecture  
 8Mbyte FLASH memory  
 128kb or 256kb EEPROM NVRAM options

### CONDITIONAL ACCESS

Support for DVB-CA based Conditional Access including: NDS, Nagra, Conax, Viaccess, Irdeto, Mediaguard  
 Macrovision V7.01 copy protection  
 ISO/IEC 7816 Smartcard Reader

### CONNECTIVITY

Signal Input:	F-type IEC 60169-24 female connector
TV SCART:	Peritelevision IEC 60807-9 connector
VCR SCART:	Peritelevision IEC 60807-9 connector
L/R Audio Outputs:	RCA phono cinch connectors
RS232:	9-Way D-type female connector
PSTN Modem:	RJ-11 jack socket

### POWER

Mains supply voltage 195-265V, 50-60Hz  
 Power Consumption < 18W  
 Standby Consumption <10W

### MECHANICAL

Dimensions: 275mm x 170mm x 40mm

For more information on the DS230 or any other Pace products you can visit our website [www.pacemicro.com/products](http://www.pacemicro.com/products)



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