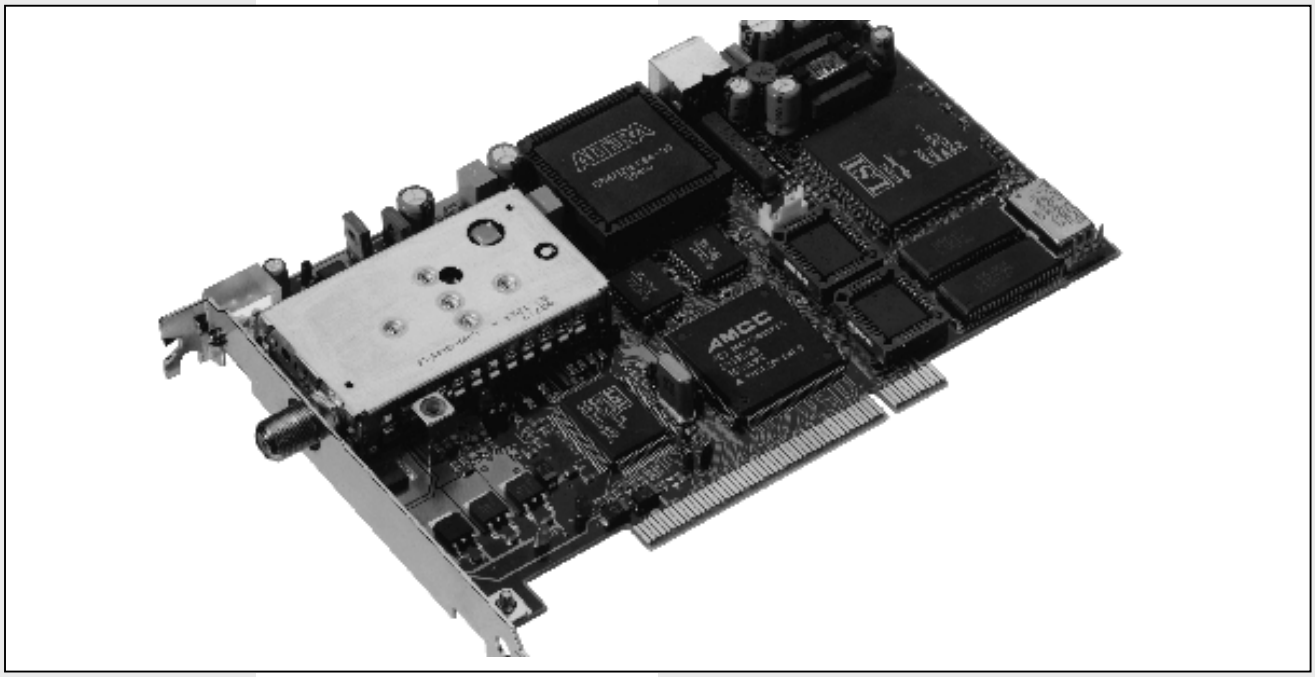
Digital Videocommunication Systems



Philips PC-DVB Digital Receiver INS 110/01

The DVB-compliant Digital Receiver for reception of satellite digital Data Broadcasts on Personal Computers.

The PC-DVB is a high performance DVB-compliant Digital Receiver for reception of DVB-compliant data broadcast services on a PC. The PC-DVB fits into any PC equipped with the PCI interface thanks to the small card size (short PCI).

The combination of an on-board fast microprocessor, together with a high performance PCI bridge, ensures high-speed data transfer to the host system.

The PC-DVB board offers advanced demultiplexing and Media Access Control (MAC) addressing capabilities in hardware, conforming to the DVB SI-DAT specification.

The PC-DVB is equipped with on-board hardware to support various Conditional Access (CA) systems, including Philips' CryptoWorks and other DVB-compliant systems. The Smart Card is accessible from the back, and it is integrated seamlessly with the on-board CA hardware.

The PC-DVB card can be integrated into PC software via the Plug-and-Play concept of Windows 95. The PC-DVB card is delivered with the software (miniport) to be incorporated into the NDIS 4.0 software architecture of Windows 95 and NT. Support for several protocols is planned, including IP and DSM-CC.

Full control over the PC-DVB functionality is achieved by three Application Programme Interfaces (API's):

- Control API
  The control API is used to change the card settings, for example frequency control, polarization and PID selection.
- Data API
  Data from several PIDs (max. 30) in the MPEG-2 streams can be transferred over the PCI bus to the host processor for further processing.
- Streams API
  Audio and Video services can be transported over the PCI bus to dedicated hardware or software. The PC-DVB board has hardware provisions to support settop boxes (STBs).

Power supply to the LNB is provided by the PC-DVB card without requiring additional wiring. Both 22 KHz LNB band switching and 14/18 V polariser switching are supported. All common ODU configurations can be connected.

The PC-DVB can be adapted to various receiver modules for DVB satellite, terrestrial and cable reception.

Services

Thanks to its flexibility, the PC-DVB card offers support for various services including: broadcast file transfer, subscriber access to broadcast data, and full interactivity such as "turbo Internet." ThePC-DVB card includes an easy-to-use installation program for system setup. The PC-DVB card can be offered together with the Philips DVS ***CleverCast* PC** end-to-end solution for data broadcasting.

* also available with SmartCard connector

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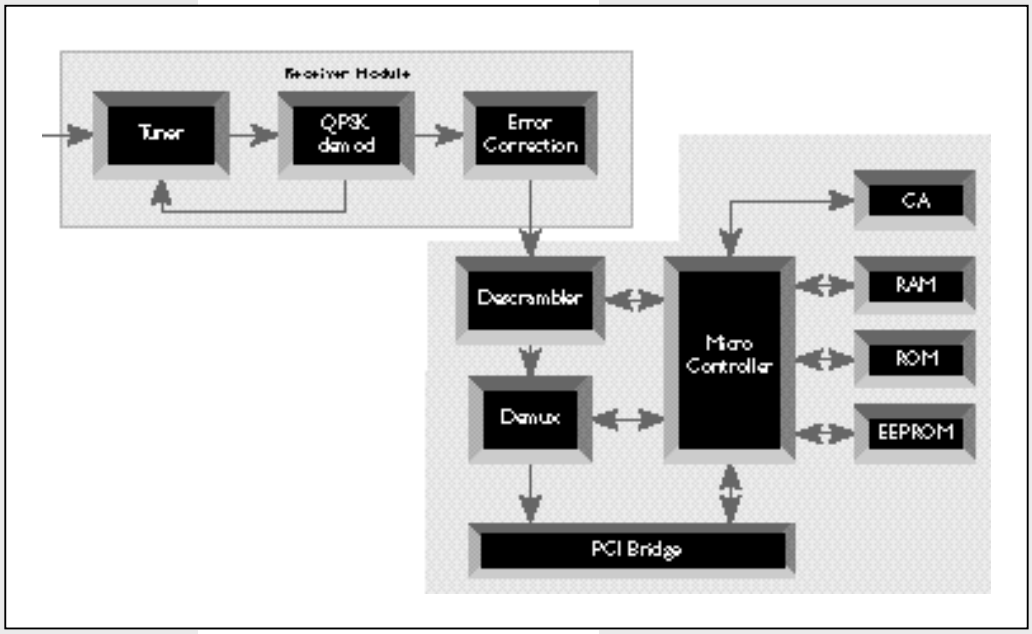

DVB Digital Video Broadcasting

S P E C I F I C A T I O N S

System Capabilities

- DVB-compliant MPEG-2 reception of broadcasts up to Main Profile @ Main Level

LNB Power Supply and Tone Switching

- Supply voltage for vertical polarisation: 13.5 V
- Supply voltage for horizontal polarisation: 18 V
- Maximum supported LNB current: 400 mA
- Short circuit protection

RF Tuning

- Input connector: Female F type
- Impedance: 75 Ohms
- Return loss : > 8 dB
- 3rd order intercept point:
  -10 dB min @ -65 dBm i/p
  -5 dB min @ -30 dBm i/p
- Input level per carrier: -25 to -65 dBm
- Frequency range: 920-2150 Mhz.
- Intermediate frequency: 480 Mhz.
- IF bandwidth: 36 Mhz.
- Input phase mask:
  -75 dBc /Hz @ 10 Khz.
  -95 dBc /Hz @ 100 Khz.
- VCO range: 5 Mhz.
- Synthesizer step size: 125 Khz.

QPSK

- Symbol rates: 22.0 - 27.5 MS/s
- Filtering: 35% Square root raised cosine
- Implementation loss: <0.5 dB
- Cycle slip probability: <1 per day.

FEC

- Decoder: 3 bit soft decision Viterbi decoder
- Inner code rates supported: 1/2, 2/3, 4/5, 5/6,7/8
- Outer code: RS (204, 188, T=8) shortened code
- Output bitrate range: 28.0-60.0 Mbps

Demultiplexer

- Max. input rate: 60 Mbit/s
- Max. no. sections per TS packet: 13
- Max. no. data streams (PIDs): 30
- Max. no. section filters: 30

PCI Interface

- Plug-and-Play compatible
- Throughput rate: 16 Mbit/s

Processor Specifications

- Processor: LSI 64008
- Clock frequency: 54 Mhz.
- Memory:
  * 1 MB DRAM
  * 1 MB FLASH ROM
  * 1 KB NVRAM
- Physical dimensions - Short PCI:
  174.63 x 106.68 x 14.48
  (L x W x H, mm)

Supported Standards

- DVB (SI-DAT), DSM-CC, TCP(UDP)/IP (Winsock)

PC Software

- Miniport driver for NDIS 4.0
- Integrated with standard Winsock transport libraries
- Control, Data and Streaming API
- Easy to use installation tool

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