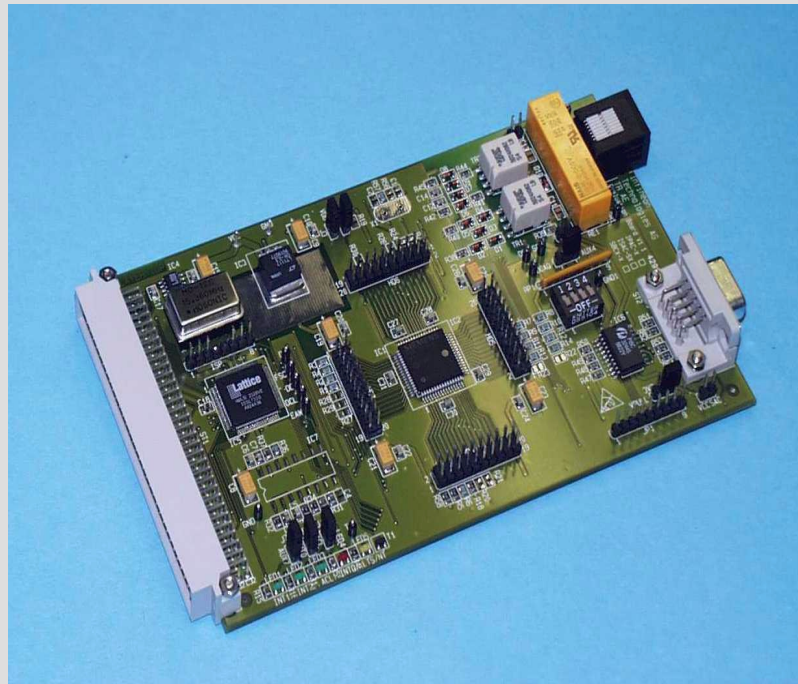


The IPAC-X Evaluation Board Package enables the initial steps in the design of an ISDN adapter. A complete clock- and PLL-unit facilitates evaluation of all possible modes.

The IPAC-X Evaluation Board Package includes PC-based WinEASY software for easy board configuration and for easy register access.



SMART 21150

Functionality

The Evaluation Board Package is dedicated to the IPAC-X chip (ISDN PC Adapter Circuit - Extended).

Up to two IPAC-X Evaluation Boards can be combined in a development platform together with SMART 2000 Mainboard.

With the PC-based WinEASY software the mainboard is controlled and all register accesses to the IPAC-X Evaluation Board are done. This software also enables fully transparent board configuration like mode setting, clock frequency selection, PLL enabling and swapping IOM-data lines. The various settings can be selected via graphical user interfaces.

The IPAC-X device combines an S_0 -transceiver and three bidirectional HDLC controllers for B- and D-channel access. Various functions of data control and manipulation make IPAC-X an ideal choice for ISDN data/voice access.

Hardware Features

- Complete clock unit for 512 kHz, 1536 kHz, and 4096 kHz DCL clocks on-board.
- PLL for 4096 kHz DCL clock
- TE, LT-S, LT-T, NT and intelligent NT modes are supported.
- S_0 -interface and protection circuitry is provided. A relay is used to select between NT/LT-S and TE/LT-T modes.
- Serial or multiplexed microcontroller interface access can be selected.
- All IPAC-X pins are connected to header arrays.
- 3.3 V power supply on-board. No additional power supply is needed (power is derived from the SMART 2000 Mainboard).
- Four LEDs are provided to indicate interrupts, S_0 -bus activation or for general purposes.

Software Features

- Easy access to all IPAC-X registers is provided. WinEASY allows to record log files that are used as command files for frequently used sequences of register settings.
- PC-based WinEASY software can be used with Windows 9x/NT.
- Graphical user interface ensures easy IPAC-X board configuration.
- Controller Data Access (CDA) for looping, switching, shifting and monitoring the data on the IOM-2 bus.
- A flexible and automatic monitor channel handler is integrated.
- A HDLC handler is implemented for transmitting and receiving data in D- or B-channels. This allows data sizes larger than the maximum HDLC-FIFO size to be transmitted and received.

SMART 21150

IPAC-X

Evaluation Board Package



Never stop thinking.

Hardware Description

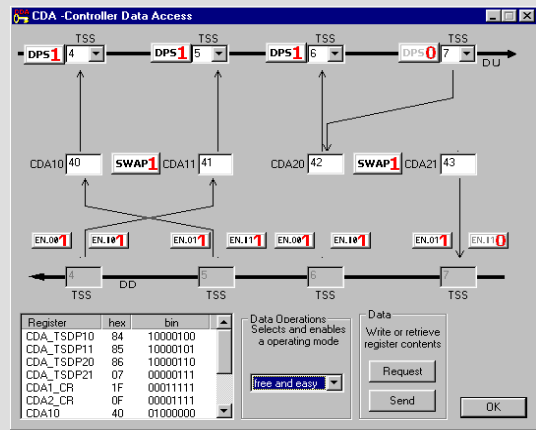
The SMART 21150 IPAC-X Evaluation Board allows all ISDN modes (TE, LT-S, LT-T, NT, and intelligent NT) to be evaluated. It includes a complete clock unit for 512 kHz, 1536 kHz, and 4096 kHz DCL clocks. A PLL unit with 1536 kHz SCLK input and 4096 kHz output for LT-T mode is also provided. The board manages the entire pin strapping process during reset. The IOM-channel assignment in LT/NT mode is selected by a DIP switch.

A Service Access Connector (SAC) is available to connect the IOM-2 bus of the IPAC-X evaluation board to other boards, such as the SIPB 5117 QUAT-S board or the SMART 2100 ELIC board. To adapt the DU/DD directions of other boards the DU/DD lines can be swapped. The SMART2000 Mainboard includes an additional IOM-2 swap unit to allow connection of two add-on modules.

An on-board S₀-interface with protection circuitry is provided. A relay is used to swap the RX and TX lines automatically with the mode selection (TE/LT-T and NT/LT-S). A LED indicates this status. Four other LEDs indicate interrupts, S₀-bus activation and can be used for general purposes. All pins are connected to headers.

Software Description

WinEASY software controls the SMART 2000 Mainboard and provides a graphical interface to IPAC-X Evaluation Board. Via this interface, the board can be configured and the IPAC-X registers can be accessed. This makes it quite easy to get familiar with the IPAC-X chip without writing any test program.



Easy register access to the Controller Data Access (CDA) unit of the IPAC-X device is enhanced with a graphical user interface.

Accessories

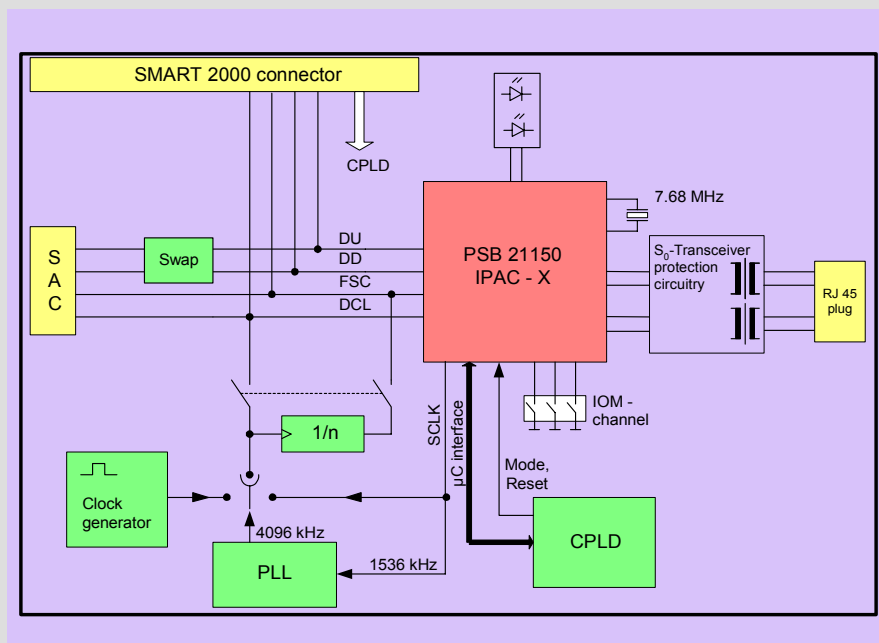
- SMART 21150 IPAC-X Evaluation Board
- WinEASY software package
- Documentation folder and CD

Purchase Information

- SMART 21150: Q67230-H1162

Additional Tools

- SMART 2000: Q67230-H1040.



IPAC-X Evaluation Board Overview

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Published by
Infineon Technologies AG,
 Bereich Kommunikation,
 St.-Martin-Strasse 53,
 D-81541 München

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