

### General Description

The PSB 2197, SmartLink-P, implements the subscriber access functions for a digital terminal to be connected to a two-wire U<sub>PN</sub> interface.

The PSB 2197 SmartLink-P is an optimized device for TE applications, covering the complete layer-1 and basic layer-2 functions for digital terminals.

The PSB 2197 SmartLink-P combines the functions of the U<sub>PN</sub> transceiver with reduced loop length (one channel of the OCTAT-P PEB 2096) and a simple HDLC controller for signaling data onto one chip.

A pulse width modulator is included to provide an LCD-contrast control or a ring tone signal.

The serial control port of the SmartLink-P is compatible to most serial interfaces of microcontrollers. In addition it provides the microcontroller clock signal as well as an undervoltage detector and reset generation including a watchdog function.

The Terminal Repeater function of the SmartLink-P allows to cascade two telephones which are controlled by one U<sub>PN</sub> interface from the line card or to extend the loop length by using an IEC-Q transceiver.

The SmartLink-P can also be used as a simple HDLC controller which provides the TIC-bus access procedure. In this mode, the U<sub>PN</sub> transceiver is inactive.

The PSB 2197 SmartLink-P interfaces to voice/data devices via the IOM-2 interface and provides an additional bit clock and strobe signal for standard codecs. The upstream B-channel information may be muted or loop back the downstream data.

The PSB 2197 SmartLink-P is a 1-micron CMOS device offered in a P-DSO-28 package. It operates from a single 5-V supply.

**Note:** U<sub>PN</sub> in the document refers to a version of the U<sub>P0</sub> standard with a reduced loop length.

Type	Package
PSB 2197-T	P-DSO-28-1 (SMD)

### Features

- Cost/performance-optimized U<sub>PN</sub> interface transceiver, compatible to PEB 2096 OCTAT-P or PSB 2196 ISAC-P TE
- HDLC controller with 2 × 4-byte FIFO per direction
- IOM-2 interface for terminal application including bit clock and strobe signal
- Uplink MUTE function
- Selective B-channel loop back
- Serial control port
- Pulse width output LCD-contrast control or ring tone generation
- CPU clock and reset output
- Watchdog timer
- Test loops
- Advanced CMOS technology
- Low power consumption: active: 100 mW max.

