



# ISPI110

## USB host and peripheral transceiver with UART signaling

Low-power & cost-effective solution for adding USB functionality and UART signaling mode support

### Key features

- Certified compliant to USB Specification Rev. 2.0
- Supports USB data transfer at full-speed (12 Mbit/s)
- Internal DP pull-up resistor implemented as described in ECN\_27%\_Resistor
- Designed for low power
  - Less than 20  $\mu$ A USB suspend current
  - Less than 3  $\mu$ A in power-off-mode
- Integrated 5V-to-3.3V voltage regulator
- Power supply input of 4.0V to 5.5V for USB operation
- Power supply input of 2.7V to 4.5V for UART signaling
- Wide range digital interface I/O voltage 1.65V to 2.85V
- Supports 2.8V UART signaling
- Full industrial-grade operation (-40 °C to +85 °C)
- In HBCC16 3 x 3 mm<sup>2</sup> lead-free and halogen-free package

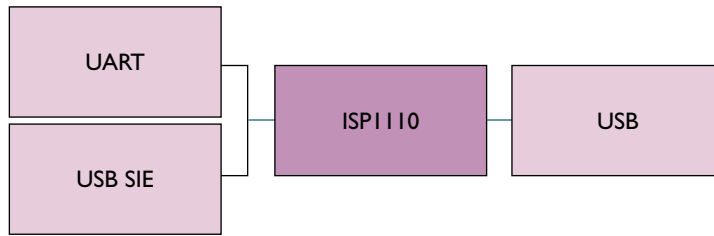
The ISPI110 is a USB transceiver that supports UART signaling mode. It supports the full-speed rate of 12 Mbit/s. It is designed to support application-specific integrated circuits (ASICs) with supply voltage for digital I/O pins  $V_{(I/O)}$  of 1.65V to 2.85V. Integrated also are the line pull-up resistor and a voltage regulator that supports the 3.3V powering via the USB supply line  $V_{BUS}$ . This helps to optimize the printed circuit board (PCB) and reduce the cost of designing USB with the ISPI110.

The ISPI110 supports a 2.8V UART signaling when in UART mode. The UART mode can be used during Service mode or when connected to other mobile phone peripherals.

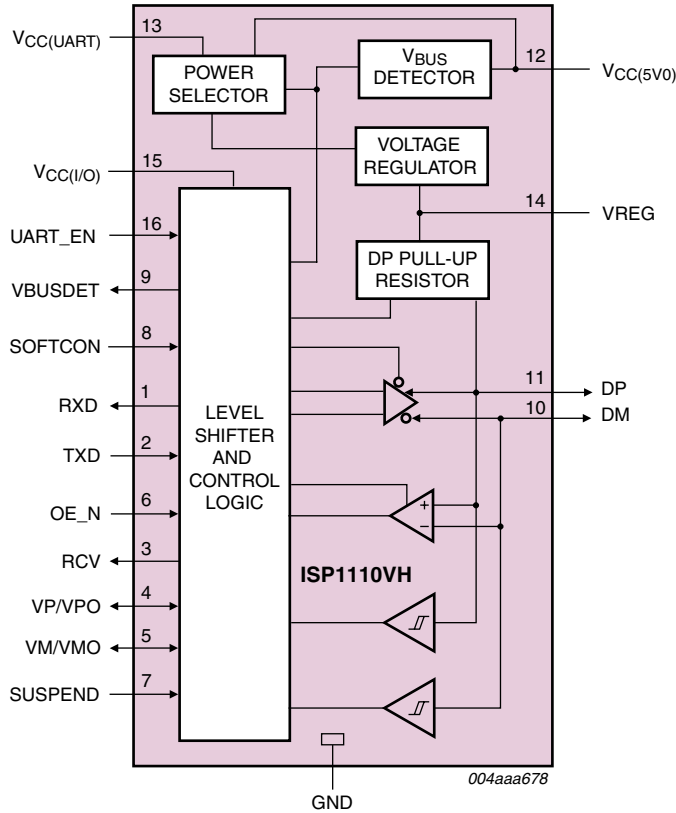
The ISPI110 consumes less than 3 $\mu$ A in power-off mode, which is critical for mobile applications. The small form factor of the ISPI110 also makes it extremely space saving on the PCB. It is available in the 3 mm x 3 mm HBCC16 package.

# PHILIPS

**Application diagram – block diagram of ISP1110**



**Block diagram**



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