

## SPI Datasheet

# Serial Peripheral Interface

### Overview

- This IP is two channels of Serial Peripheral Interface (RSPI).
- The RSPI channels are capable of high-speed, full-duplex synchronous serial communications with multiple processors and peripheral devices.

### Key Features

- Number of channels : Two channels
- RSPI transfer functions
  - Use of MOSI (master out/slave in), MISO (master in/slave out), SSL (slave select), and RSPCK (RSPI clock) signals allows serial communications through SPI operation (4-wire method) or clock synchronous operation (3-wire method).
  - Transmit-only operation is available.
  - Communication mode: Full-duplex or transmit-only can be selected.
  - Switching of the polarity of RSPCK
  - Switching of the phase of RSPCK
- Data format
  - MSB first/LSB first selectable
  - Transfer bit length is selectable as 8, 9, 10, 11, 12, 13, 14, 15, 16, 20, 24, or 32 bits.
  - 128-bit transmit/receive buffers
  - Up to four frames can be transferred in one round of transmission/reception (each frame consisting of up to 32 bits).

### Block diagram

