5-wire Serial Peripheral Interface

1. Features

Voltage Operating:1.2V
Output Voltage:0V-2.6V
8x32 bit registers
1.2V logic (through a 1.2V LS) or 2.6V logic directly control

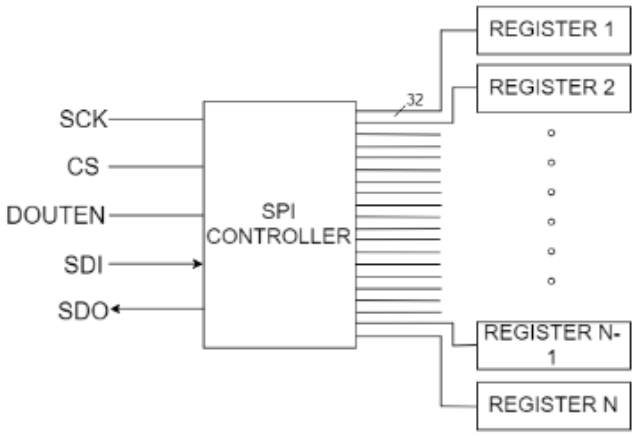
2. Applications

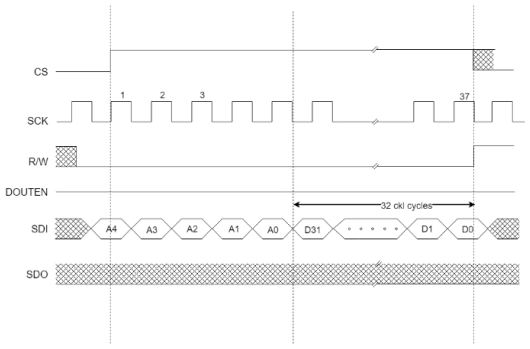
Generic purpose SPI

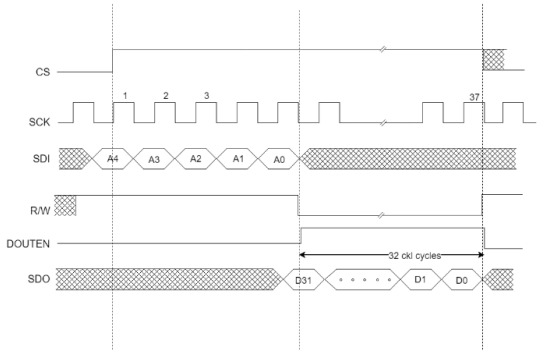
3. Description

The WEA32R4SPI22 is a high-speed synchronous serial input/output port that allows a serial bit stream of programmed length (1 to 8 bits) to be shifted into and out of the device at a programmed bit-transfer rate. The WEA32R4SPI22 consists of a Serial-In Register circuit, a Serial-Out Register circuit, R/W state selector, address decoder and 32b registers. The first 5 data bits are referring to the register address that will be selected while the rest of the 32 bits refer to the data that have been read from the specific selected register. The Serial In Register is responsible for selecting the serial address word and the serial data word at the proper timing and control address selector. The Serial Out register is responsible for latching the data at the proper R/W falling edge and to export them serially through a high–Z output buffer that is controlled by DOUTEN signal. The register selector is responsible for accessing the proper register so that we perform a read/write operation.

Simplified Schematic







4. Availability

Globalfoundries 22FDX process

5. Deliverables

GDSII, Database, SystemVerilog Models

About weasic

Weasic Microelectronics S.A. designs, develops, and markets high quality complex analog and RF IP for the wired and the wireless communications industries, helping semiconductor and system companies to shrink the product design cycle. Weasic, silicon verified, IP is designed in the state-of-the-art CMOS and SiGe processes and can be easily ported and customized to serve the development of transceivers for 5G communications, Mobile Backhaul, RADAR sensors and 802.11.* applications.

Contact us

a 1 Alamanas str., 15125 Marousi, Greece

t +30 210 6100770

e info@weasic.com

w weasic.com