SPI INTERFACE

Is this the correct definition of our SPI Interface?

‘The serial interface is compatible with the 4-wire SPI standard in Motorola specification:

Clock Phase Bit = 1

Clock Polarity Bit = 0’

What does this mean in real?

Let us analyze following setting:

/\* SPI1 parameter configuration\*/

hspi1.Instance = SPI1;

hspi1.Init.Mode = SPI\_MODE\_MASTER;

hspi1.Init.Direction = SPI\_DIRECTION\_2LINES;

hspi1.Init.DataSize = SPI\_DATASIZE\_8BIT;

hspi1.Init.CLKPolarity = SPI\_POLARITY\_LOW;

hspi1.Init.CLKPhase = SPI\_PHASE\_2EDGE;

hspi1.Init.NSS = SPI\_NSS\_HARD\_OUTPUT;

hspi1.Init.BaudRatePrescaler = SPI\_BAUDRATEPRESCALER\_4;

hspi1.Init.FirstBit = SPI\_FIRSTBIT\_MSB;

hspi1.Init.TIMode = SPI\_TIMODE\_DISABLE;

hspi1.Init.CRCCalculation = SPI\_CRCCALCULATION\_DISABLE;

hspi1.Init.CRCPolynomial = 7;

hspi1.Init.CRCLength = SPI\_CRC\_LENGTH\_DATASIZE;

hspi1.Init.NSSPMode = SPI\_NSS\_PULSE\_DISABLE;

<https://docs.goodix.com/en/goodix-web/online_api/gr551x_api_reference/null/html/d1/d24/group___s_p_i___clock___polarity.html>

SPI Clock Polarity

Macro Definition Documentation

◆ SPI\_POLARITY\_HIGH

#define SPI\_POLARITY\_HIGH LL\_SSI\_SCPOL\_HIGH

Inactive state of CLK is high

◆ SPI\_POLARITY\_LOW

#define SPI\_POLARITY\_LOW LL\_SSI\_SCPOL\_LOW

Inactive state of CLK is low

SPI Clock Phase

Macro Definition Documentation

◆ SPI\_PHASE\_1EDGE

#define SPI\_PHASE\_1EDGE LL\_SSI\_SCPHA\_1EDGE

CLK toggles at start of first data bit

◆ SPI\_PHASE\_2EDGE

#define SPI\_PHASE\_2EDGE LL\_SSI\_SCPHA\_2EDGE

CLK toggles in middle of first data bit

Temperature

Supply Voltage

Quality of Edge of SPI Interface