For full datasheet, click **HERE**.

Low Voltage 16-Bit I^{2}C-bus I/O Expander

Features

- I^{2}C to 16-bit I/O ports expander
- 1MHz Fast-mode Plus I^{2}C bus
- Operating voltage range of 1.65V to 5.5V for both I^{2}C bus and I/O ports
- Four adjustable I^{2}C slave addresses via ADDR
- I^{2}C multiple-register group programming with global loop or local loop
- Active low reset input ($\overline{\text{RESET}}$)
- Active low open-drain interrupt output ($\overline{\text{INT}}$)
- Internal power-on reset and I^{2}C software reset
- Noise filter on SCL/SDA inputs
- Input/Output port configurable
- Input with polarity/latch/pull-up/pull-down/ interrupt functions
- Allowing port input voltage above supply
- Interrupt with trigger/mask/clear/status features
- Programmable input debounce enable/time
- Output with bank/pin selectable push-pull or open-drain
- Bit-wise programmable output drive strength
- Low standby current of 4µA typical at 3.3V
- Maximum 25mA driving capability for each port

Applications

- Smartphone, Tablet and Wearables
- Laptop and Desktop

Brief Description

KTS1621 is a 16-bit general-purpose I/O expander via the I^{2}C bus for microcontrollers when additional I/Os are needed while keeping interconnections to the minimum.

KTS1621 has separate power rails (VDD_I2C and VDD_P) for I^{2}C bus and I/O ports, both ranging from 1.65V to 5.5V, allowing mixed power system where I^{2}C bus power is not compatible with I/O port power.

KTS1621 meets the I^{2}C Fast-mode Plus spec up to 1MHz. External reset input, internal power-on reset and I^{2}C software reset provide flexible ways to reset the IC. Four adjustable I^{2}C slave addresses allow multiple KTS1621s in one I^{2}C bus system.

KTS1621 provides multiple ways to program the 16-bit I/O ports. When the port works as input, it can program the polarity, latch, pull-up, pull-down and interrupt functions. The interrupt function includes the level/edge trigger, mask, clear, status features. For system with noisy input, KTS1621 also provides debounce function with programmable debounce time. When the port works as output, it can program output stage with bank/pin selectable push-pull or open-drain options, it can also program four drive strengths of the output stage to optimize the rise/fall times.

KTS1621 is available in a RoHS compliant 36-ball 2.6mm x 2.6mm FO-WLP package and 24-pin TQFN44 package.

Typical Application
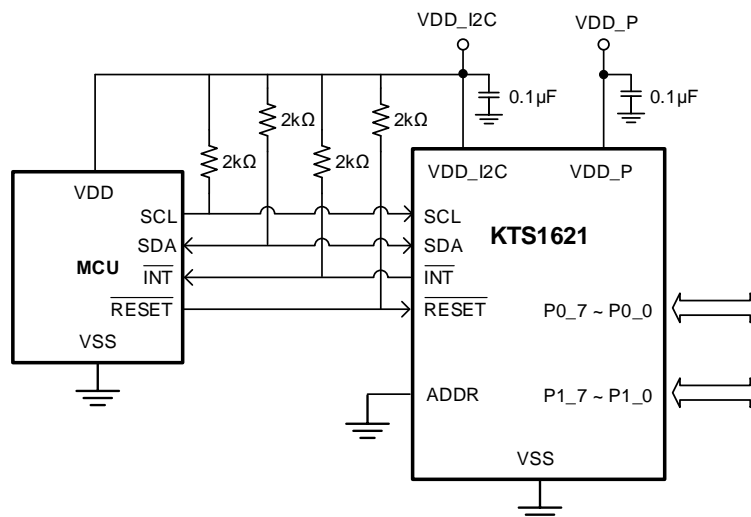
Ordering Information[1]

Part Number	Marking[2]	Operating Temperature	Package
KTS1621EWA-TR	**MYNGYWWJJAABB**	**-40°C to +85°C**	**FO-WLP66-36**
KTS1621EUAA-TR	MYYYZYYWWXXX	-40°C to +85°C	TQFN44-24

1. Items in **BOLD** available for immediate delivery. For other package options please contact sales.
2. "NGYWWJJAABB" is the manufacturing code, date code, assembly code and serial number.