# PE26100 GUI Requirements

# Device Tab



Figure . Control Tab

Control Selection Buttons

1. Disable (0), Enable (1).
2. Step-down (00), Step-down÷3 (01), Reverse Step-up (10 or 11).
3. VINRES control. When disabled, input sense resistor box will become active. Note it is greyed out when enabled.
4. EXTG1 (00), EXTG2 (01), EXTG1 and EXTG2 (10 or 11).
5. EXTG1 (0), EXTG1 and/or EXTG2 enables based on EXTGX bit (1).
6. 5V (0), 9V (1).
7. 2MHz (000), 1.5 MHz (001), 1.2 MHz (010), 1 MHz (011), 800 kHz (011), 750 kHz (101), 600 kHz (110), 500 kHz (111).
8. 4level÷3 (0), 3level÷2 (1).
9. In Step-Down Regulation mode, which is set by PT\_OPER[1:0] = 00, the VOUT\_REG [7:0] bits set the step-down regulation output voltage at VOUT pin. The LSB is 10mV. The programmable range is 2.56V to 5.11V, with code 0 = 2.56V.

In Reverse Step-Up mode, which is set by PT\_OPER[1:0] = 10 or 11, the VOUT\_REG [7:0] bits set the reverse step-up regulation output voltage at VIN pin. The LSB is 80mV. The programmable range is 0V to 16V, with code 0 = 0V.

1. The selectable range is 2.56V to 5.11V in 10mV steps, with code 0 = 2.56V.
2. The LSB is 100uV (25mA with a 4mΩ sense resistor). Note that external Rsense output is user selectable in the Telemetry window and the LSB may vary. The programmable range is 0V to 24mV, with code 0 = 0V. The controllable range starts at 1mV. The target IOUT\_MAX setting current should not exceed 5A or 20mV with a 4mΩ sense resistor. When using a different sense resistor, limit IOUT\_MAX to 5A by calculating 5/Rsense output.
3. With internal sensing (VINRES=0), the LSB is 40mA. The ADC range is 0A to 8A, with code 0 = 0A. The controllable range starts at 400mA. With external sensing (VINRES=1), the LSB is 200uV (20mA with a 10mΩ sense resistor). Note that external Rsense output is user selectable in the Telemetry window and the LSB may vary. The ADC range is 0V to 40mV, with code 0 = 0V. The controllable range starts at 2mV.

Telemetry

1. Internal (0), External (1).

Watchdog

1. 00 = 80 seconds (00), 40 seconds (01), 20 seconds (10), 10 seconds (11).
2. No reset (0), Reset (1).

Status

1. 0= No fault (0), Fault triggered (1 - Indicator turns red).



Figure . Fault Thresholds Tab.

1. Sets the IC over-temperature fault threshold in 2’s complement format. The LSB is 2℃. See datasheet for -40℃ to 160℃ settings.
2. Based on internal or external sense setting (VINRES) in Control tab. With internal sensing (VINRES=0), the LSB is 40mA. The ADC range is 0A to 8A, with code 0 = 0A. With external sensing (VINRES=1), the LSB is 200uV (20mA with a 10mΩ sense resistor). The ADC range is 0V to 40mV, with code 0 = 0V.
3. Sets the output over-current fault threshold on the voltage measured across the current sense resistor (25mA with a 4mΩ sense resistor). The LSB is 100uV. The programmable range is 0V to 24mV, with code 0 = 0V.
4. The LSB is 80mV. The programmable range is 0V to 20V, with code 0 = 0V.
5. The LSB is 20mV. The programmable range is 0V to 5V, with code 0 = 0V.
6. With internal sensing (VINRES=0), the LSB is 40mA. The ADC range is 0A to 8A, with code 0 = 0A. With external sensing (VINRES=1), the LSB is 200uV (20mA with a 10mΩ sense resistor). The ADC range is 0V to 40mV, with code 0 = 0V.
7. No shutdown (0), Shutdown (1).
8. 0= Follow Table 7 “Fault and Warning Detection” table; 1= Always Active.
9. 0= No mask; 1= Masked.
10. Program the deglitch filter from 1x to 31x of ADC sample time.

# I2C Registers Tab

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Figure . Registers Tab

# Protocols Tab

## Same as previous GUIs

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Figure . Protocols Tab