

Input settings... Vin Sense

This window have 3 tabs and the active tab is highlighted in bold blue text
Here **Vin Sense** is active

Vin Sense Type: In this how Vin can be sensed Grayed out as when not supported or selectable by controller

Clear Fault When Vin Toggle: If checked the fault flag will clear itself when Vin is removed and then restored

Vin Source: Selection of method Vin is detected. Measured or fixed.

If Fixed then a voltage can be entered in the **Vin Fixed** box

Vin Sense Network:

When Vin is measured an external resistor divider is needed. Vin Sense gain is the gainfactor and will depend on resistor divider resistance.

R1 and R2 resistor values to be entered.

Typical 19.1 kohm and 1.54 kohm

Offset makes it possible to compensate for voltage drops on the PCB and can be determined during testing of a board.

Vin OVP: at what input voltage shall regulator stop switching to protect powerstages and load

Vin OVP response: How should regulator behave when OVP detected. Ignore,Hiccup or Latch.

If Latch then enable pin or Vin need to be toggled to restart. Hiccup will automatic retry once fault is gone.

Vin Reading Offset

Used to compensate for offset error in the VIN sense for a more accurate VIN telemetry

Vin Settings:

Vin On determine at what voltage will switching start

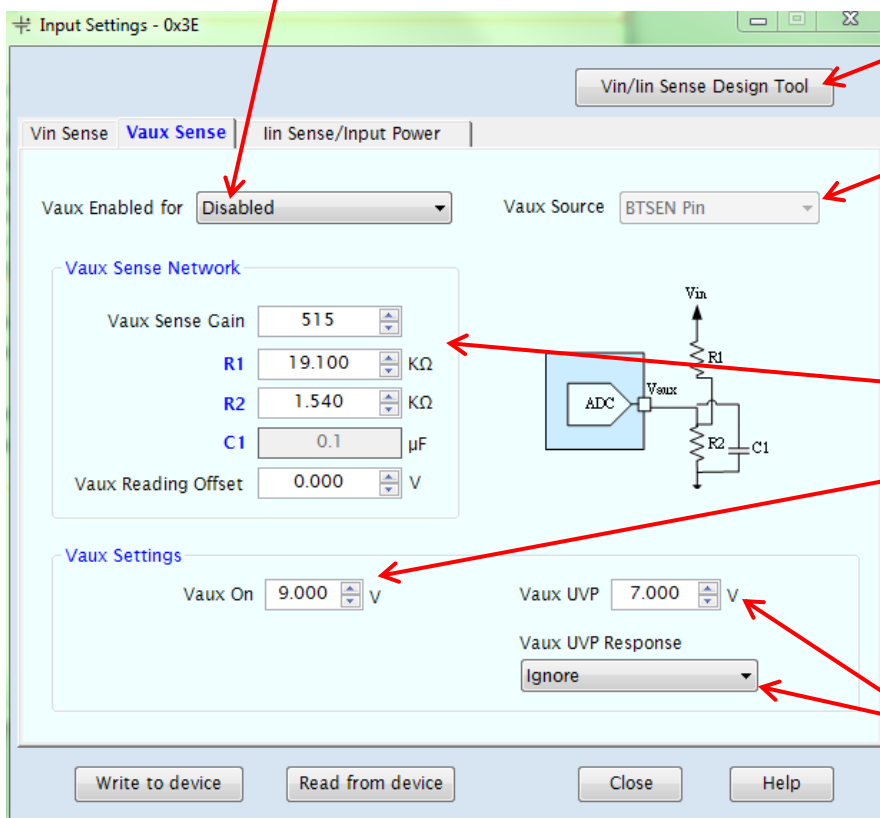
Vin off determine when to turn off switching

Use VDDQ as Input for Loop B:

When marked the internal FeedForward factor for loop B is fixed to 50% to optimise performance.
Function Not available for all operation modes.

Input settings... Vaux sense

Vaux enabled for: multiple selections available. If Vaux not used set to Disabled



Opens a new window for the **Input Sense Design Tool** that help calculate settings

Vaux source: selects which pin is used to sense the Vaux voltage

Vaux Sense Network:

Vaux Sense Gain: Enter gain factor to get correct voltage reading typical 515 but depend on board layout
Resistors: Enter the resistors from the divider typical 19.1kohm and 1.54kohm
Capacitor: capacitor value default set to 0.1uF
Vaux Reading offset: allow correction of any offset in value beeing read.

Vaux Settings:

Vaux On: at what voltage will regulator turn on.
 Assuming Vin also is above its threshold
Vaux UVP: what voltage is regarded as to low
Vaux response: What to do if UVP is detected
 Ignore, Hiccup or Latch off

Input settings... Iin Sense/Input Power

Iin Source: dropdown menu allow selection of how input current is measured. Disabled, Calculated, Pisense,... Depending on selected parts only possible selections are shown.

Input Settings - 0x7C

Vin Sense | Vaux Sense | **Iin Sense/Input Power**

Iin Source: Estimate

Input Current Estimate Settings

Iin Sense Gain: 16

Iin Offset: 0.313 A

Input Current Warning Threshold: 50.000 A

Input Power Protection Threshold: 450.00 W

Input Power Protection Response: Ignore

PI Measurement Method

Iin Sen Gain: 480

Vin Sen Gain: 542

Vin Offset: 1.500 V

Calibration: Enabled with Every hour

Current Sense Amplifier

Iin Sen Gain: 192

Iin Offset: 0.000 A

Write to device* | Read from device | Close | Help

Opens a new window for the **Input Sense Design Tool** that help calculate settings

Input Current Estimate Settings:

Used to calculate the input power and depends on real efficiency, Iout, Vin, dutycycle and losses.

Change values as needed to make reported Pin match an externally measured Pin.

Iinsense Gain

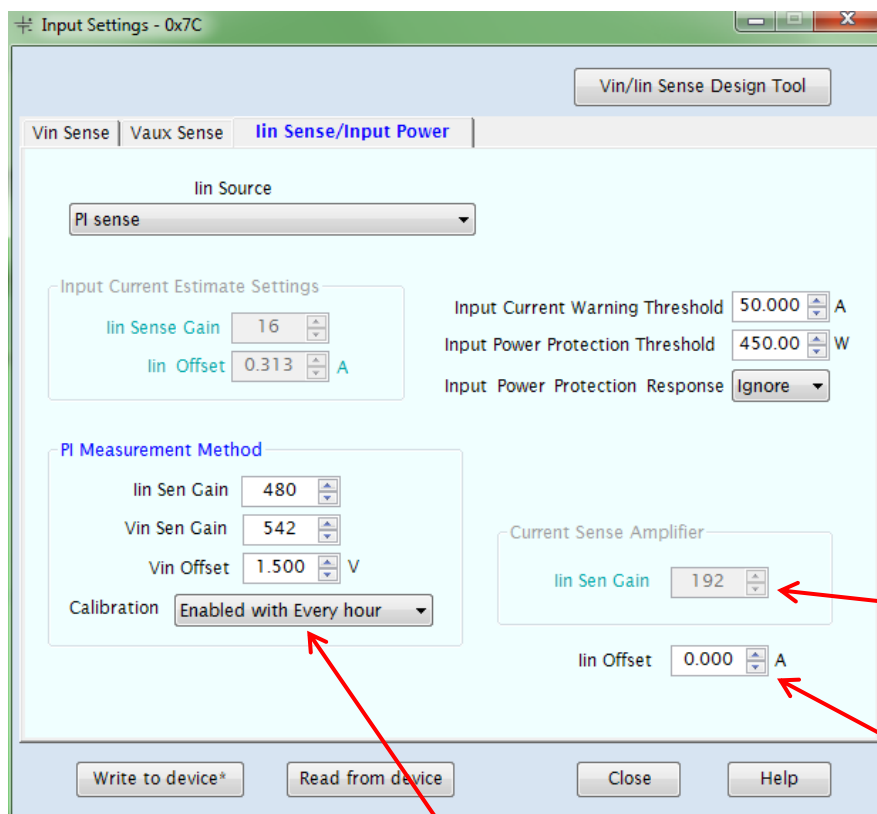
Iin offset

At which input current should the warning happen

At which power level should protection trigger

What action to be performed when protection level have triggered

Input settings... Iin Sense/Input Power



Current Sense Amplifier:

Allow adjusting gain for the sensed signal when Source is selected to be a current sense amplifier

In any of the input modes an Iin offset can be adjusted

PI Measurement Method:

Allow adjustment to gain and offset values when PI sense is selected as Source

How often an calibration cycle should be done.

This can compensate temperature drift and more.

Input settings... Input Sense Design Tool

Input Sense Circuit diagram:

Will show the needed external components for the different sense schemes

Input Sense Type:

Select which type of input current sensing to be used

Input Sense Design Tool

Input Sense Circuit Diagram

Input Sense Design

Input Current Sense Type: **Current Sense Amplifier**

Enter Design Targets:

Vin Max: **16V**

Iin Max: **10** A

Rshunt: **1.1** mΩ

Current Sense AMP Gain: **25**

Selected Sense Network based on recommended

R1: **0.001** KΩ

R2: **1.000** KΩ

Recommended Sense Network:

R1: **19.1** KΩ

R2: **1.54** KΩ

C1: **0.1** uF

Calculated Characteristics:

Vin Sense Gain: **38.00**

Iin Sense Gain: **1396**

Iin Max Digitized: **43.64** A

Vin Max Digitized: **1.20** V

Copy to Input Setting

Depending on selected configuration enter design target numbers and a calculation of recommended values for the external components will be shown