

Hardware Configuration(1)

Rails & Enables								10 of 12 Assigned	<input checked="" type="checkbox"/>
Rail Name	Voltage	Temperature	Current	Enable	Enable Name	Trim/Margin PWM	Actions		
#1 P12V_MON	Pin 1 MON1	<Click to Assign>	<Click to Assign>	<Click to Assign>	EN #1	<Click to Assign>	Delete	Configure	
#2 P3V3_MON	Pin 2 MON2	<Click to Assign>	<Click to Assign>	Pin 13 GPIO3	P3V3_EN	Pin 23 FPWM7 GPIO11	Delete	Configure	
#3 P0V88_AVs_MON	Pin 3 MON3	<Click to Assign>	<Click to Assign>	Pin 30 GPIO15	P0V88_EN	<Click to Assign>	Delete	Configure	
#4 P0V8_MON	Pin 4 MON4	Pin 52 MON11	<Click to Assign>	Pin 33 GPIO16	P0V8_MAC_EN	Pin 18 FPWM2 GPIO6	Delete	Configure	
#5 P1V2_MON	Pin 5 MON5	<Click to Assign>	<Click to Assign>	Pin 25 GPIO13	P1V2_EN	Pin 19 FPWM3 GPIO7	Delete	Configure	
#6 P2V5_MON	Pin 6 MON6	<Click to Assign>	<Click to Assign>	<Click to Assign>	EN #6	Pin 17 FPWM1 GPIO5	Delete	Configure	
#7 P1V8_MON	Pin 59 MON7	<Click to Assign>	<Click to Assign>	Pin 12 GPIO2	P1V8_EN	Pin 21 FPWM5 GPIO9	Delete	Configure	
#8 P1V88_MON	Pin 62 MON8	<Click to Assign>	<Click to Assign>	Pin 29 DBG GPIO14	P1V88_EN	Pin 22 FPWM6 GPIO10	Delete	Configure	
#9 P5V_MON	Pin 63 MON9	<Click to Assign>	<Click to Assign>	<Click to Assign>	EN #9	Pin 20 FPWM4 GPIO8	Delete	Configure	
#10 ADP_current_MON	<Click to Assign>	<Click to Assign>	Pin 50 MON10	<Click to Assign>	EN #10	<None>	Delete	Configure	

[Add Rail](#)

Rail #7 Voltage Monitor Type

Voltage monitor type:

Standard

Hardware Comparator (N/A)

The response time to an over/under voltage fault is faster with the hardware comparator. The hardware comparator option is only available with up to six monitored voltages. There is no glitch filtering when using the hardware comparator.

You can not use either of the "continue to operate" or "retries" of voltage fault responses (OVF, UVF, Ton Max Fault responses) with a hardware comparator Voltage monitor.

Rail #7 Enable Pin Configuration

Polarity: Active Low Actively Driven

Active High Open-Drain

Note: Polarity defines output voltage level when the logic evaluation result is TRUE(active). In open-drain mode, High-level output means the output pin is in Hi-Z state; a pull-up resistor is required to make the output level High.

→ Monitor type: grey background
Is it normal???

→ Enable pin:

Rail #7 Trim/Margining

PWM Config:

Duty Cycle: %

Frequency: MHz

Frequency can be 15.275 kHz to 125 MHz

Margin Mode:

Tri-State
When not margining, the PWM pin is tri-stated.

Active Trim
When not margining, the PWM duty-cycle is continuously adjusted to keep the voltage at VOUT_COMMAND.

Active Duty Cycle
When not margining, the PWM duty-cycle is set to a fixed duty-cycle.

Ignore faults
When margining is enabled with a pin, this determines if faults (over-voltage and under-voltage) are ignored or not.

Increase Duty Cycle increases Voltage
When margining, this determines if increasing duty cycle will increase or decrease voltage

→ Trim/ Margin:
Cal by Excel from TI
Settings are suitable???

Hardware Configuration(2)

No more GPI and GPO(logic combination used)

GPIs - General Purpose Inputs	0 of 8 Assigned	<input checked="" type="checkbox"/>
You have not configured any sequencing inputs; click the Add link below to add		
Add GPI Move Selected Pins Up Move Selected Pins Down		
Logic Controlled GPOs - General Purpose Outputs with Programmable State Logic	0 of 12 Assigned	<input checked="" type="checkbox"/>
You have not configured any logic controlled GPOs; click the Add link below to add		
Add Logic Controlled GPO Move Selected Pins Up Move Selected Pins Down		
Command Controlled GPOs - General Purpose Outputs with Fixed State	0 of 22 Assigned	<input checked="" type="checkbox"/>
You have not configured any command controlled GPOs; click the Add link below to add		
Add Command Controlled GPO		
PWMs - General Purpose Pulse-Width Modulation Outputs	0 of 12 Assigned	<input checked="" type="checkbox"/>
You have not configured any PWMs; click the Add link below to add		
Add PWM		

Rail Configuration(1)

No more GPI and GPO(logic combination used)

Voltage setpoints for P1V8_MON		
Over Fault:	1.854 <input type="button" value="▲"/> V	3.0 <input type="button" value="▲"/> %
Over Warn:	1.845 <input type="button" value="▲"/> V	2.5 <input type="button" value="▲"/> %
Margin High:	1.836 <input type="button" value="▲"/> V	2.0 <input type="button" value="▲"/> %
Vout:	1.800 <input type="button" value="▲"/> V	<input checked="" type="checkbox"/> Synchronize margins/limits/PG to Vout
Margin Low:	1.764 <input type="button" value="▲"/> V	-2.0 <input type="button" value="▲"/> %
Under Warn:	1.755 <input type="button" value="▲"/> V	-2.5 <input type="button" value="▲"/> %
Under Fault:	1.746 <input type="button" value="▲"/> V	-3.0 <input type="button" value="▲"/> %
Power Good On:	1.764 <input type="button" value="▲"/> V	-2.0 <input type="button" value="▲"/> %
Power Good Off:	1.755 <input type="button" value="▲"/> V	-2.5 <input type="button" value="▲"/> %
Vout Exponent:	-13 <input type="button" value="▲"/> Max: 4.0 V	<input checked="" type="checkbox"/> Set for me

Scaling		
Vout Scale Mon:	1.000 <input type="button" value="▲"/> V	
Vout Cal Mon:	0.000 <input type="button" value="▲"/> V	
Iout Cal Gain:	10.000000 <input type="button" value="▲"/> mΩ	
Iout Cal Offset:	0.000000 <input type="button" value="▲"/> A	
Temp Cal Gain:	100.0 <input type="button" value="▲"/> °C/V	
Temp Cal Offset:	0.00 <input type="button" value="▲"/> °C	

IOUT & Temp Limits		
Iout OC Fault:	0.000 <input type="button" value="▲"/> A	
Iout OC Warn:	0.000 <input type="button" value="▲"/> A	
Iout UC Fault:	0.000 <input type="button" value="▲"/> A	
OT Fault:	255 <input type="button" value="▲"/> °C	
OT Warn:	255 <input type="button" value="▲"/> °C	

Rail Configuration(2)

How to turn rail ON/OFF

On/Off Config: 0x16 (CONTROL Pin Only)

On/Off Timing

Turn On Delay: 2.0 ms Turn Off Delay: 0.0 ms
Max Turn On: ∞ ms Max Turn Off: ∞ ms
 No limit

Fault Shutdown Slaves

If Rail #7 shuts down due to a fault, turn off these rails as well:

1. P12V_MON 2. P3V3_MON 3. P0V88_AV5_MON 4. P0V8_MON
 5. P1V2_MON 6. P2V5_MON 7. P1V8_MON 8. P1V88_MON
 9. P5V_MON 10. ADP_current_MON

[Check All](#) [Uncheck All](#)

Sequence Timeout

Timeout Period: Timeout Action:
On Sequence: 0 msec On: Wait Indefinitely
Off Sequence: 0 msec Off: Wait Indefinitely

Sequence ON dependencies

Rails On Dependencies

1. P12V_MON 2. P3V3_MON
 3. P0V88_AV5_MON 4. P0V8_MON
 5. P1V2_MON 6. P2V5_MON
 7. P1V8_MON 8. P1V88_MON
 9. P5V_MON 10. ADP_current_MON

[Check All](#) [Uncheck All](#)

Sequence OFF dependencies

Rails Off Dependencies

1. P12V_MON 2. P3V3_MON
 3. P0V88_AV5_MON 4. P0V8_MON
 5. P1V2_MON 6. P2V5_MON
 7. P1V8_MON 8. P1V88_MON
 9. P5V_MON 10. ADP_current_MON

[Check All](#) [Uncheck All](#)

GPIs On Dependencies

No GPI is defined

GPIs Off Dependencies

No GPI is defined

Don't understand the “dependencies” usage

Rail turn on by CONTROL Pin only
PS: I don't understand the “operation cmd” usage

No more fault shutdown slaves requirements for now

Rail Configuration(3)

Fault Responses

Time between restarts:	4,608 <input type="button" value="▼"/> msec
Voltage fault max glitch time:	10.0 <input type="button" value="▼"/> msec
Non-voltage fault max glitch time:	0 <input type="button" value="▼"/> msec

Fault	Glitch F...	Re-Seque...	Response	Restart	
Vout Over Vol...	Disabled	No	Shut down with delay	Do not restart	<input type="button" value="Edit"/> <input type="button" value="X"/>
Vout Under V...	Disabled	No	Shut down with delay	Restart up to 1 ti...	<input type="button" value="Edit"/> <input type="button" value="X"/>
Iout Over Curr...	Disabled	No	Shut down with delay	Do not restart	<input type="button" value="Edit"/> <input type="checkbox"/>
Iout Under Cur...	Disabled	No	Shut down with delay	Do not restart	<input type="button" value="Edit"/> <input type="checkbox"/>
Over Temp	Disabled	No	Shut down with delay	Do not restart	<input type="button" value="Edit"/> <input type="checkbox"/>
Time On Max	Disabled	No	Ignore	N/A	<input type="button" value="Edit"/>

For now, Vout Under Voltage is configured

Options

Enable glitch filter
If checked, when the fault is first detected the device continues operation for the per-rail voltage max glitch time, 10.0 msec. If the fault is still present after this time, the response configured below is taken.

Enable re-sequencing
If checked, when the retries have been exhausted the associated rail and any Fault Slaves will be shutdown in a manner based on the Response selected. There will be a delay, and then all of those rails will be re-sequenced.

Response

Ignore fault and continue operation

Shut down immediately

Shut Down with delay configured using TOFF_DELAY

Restart

Do not restart
The unit does not attempt to restart. The output remains disabled until the fault is cleared.

Restart up to times
The device attempts to restart up to the specified number of times, with a maximum of 1 restarts permitted.
If the device fails to restart in the allowed number of retries, it disables the output and remains off until the fault is cleared.
The time between each restart attempt is configured globally for the rail, and is currently set to 4608 ms.
If configured to restart and the rail does not come back within regulation, the TON_MAX fault response will apply.

Restart continuously
The device attempts to restart continuously, without limitation, until it is commanded OFF (by the CONTROL pin or OPERATION command or both), bias power is removed, or another fault condition causes the unit to shut down.

There is 1.8V for MON



1.8V setting so far

