

Overclocking...

Fsw Spread Spectrum

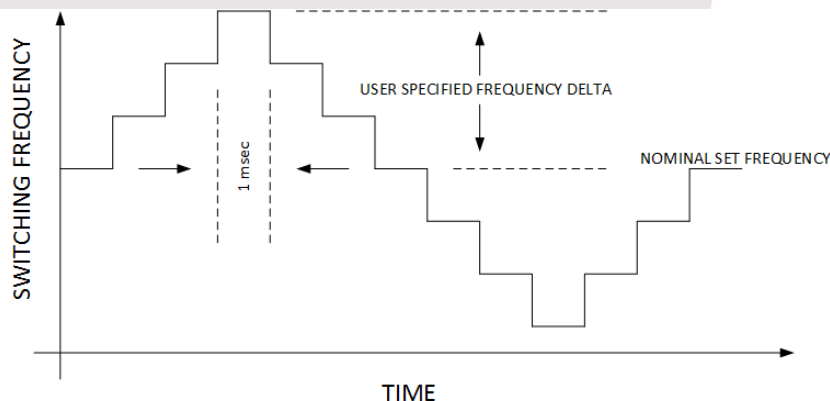
Frequency will step up and down between a Maximum **Max Fsw** and a Minimum frequency **Min Fsw**. Step size will depend on number of phases and the set duration

Enable Fsw Spread Spectrum

If marked the frequency will shift between a max and a min value with a selectable repetition frequency

Fsw Spectrum Sweep Duration

How long time for a full cycle of frequency change



Max Delta for Fsw Spectrum

If changing from one **Max Delta** value to another you must first set it to 0 and write to the controller to stop the present spectrum and then write the new value for the new spectrum to take effect.

The screenshot shows the 'Overclocking - 0x5A' software interface. The 'Fsw Spread Spectrum' section is highlighted, showing the 'Enable Fsw Spread Spectrum' checkbox, 'Fsw Spectrum Sweep Duration' set to 5ms, 'Max Delta for Fsw Spectrum' set to 0, 'Max Fsw' set to 595.2 KHz, and 'Min Fsw' set to 595.2 KHz. The 'SVID Register in Overclocking Mode' section shows 'SR Fast (24h)' set to 8 mV/μs, 'Vout Max (30h)' set to 2.55 V, and 'Pwrln Max (2Eh)' set to 510 W. The 'Vout Control in Overclocking Mode' section shows 'High Byte (Offset)' set to 0, 'Low Byte (VID Code)' set to 0, and 'Vout' set to 0.000 V. The 'Misc' section shows 'Iout Scaling in Overclocking Mode' set to 100%, 'Temp Scaling in Overclocking Mode' set to 100%, 'Max Vout in Overclocking Mode' set to 3.1 V, 'Manual VID Type' set to Fixed Vout Mode, 'Manual Min VID Type' set to Take Manual VID, and 'Loadline in overclocking mode' set to 0.303 mΩ. The interface includes buttons for 'Write to device*', 'Read from device', 'Close', and 'Help'.

Overclocking...

Iout Scaling in Overclocking Mode and Temp Scaling in Overclocking Mode

will allow the user to select 25%, 50% or 100% reporting of IOUT(SVID/SVI2) and temperature(SVID) per loop.

These scaling settings will be valid when VOUT is set by the Manual VID or overclocking is enabled.

Only SVID/SVI2 telemetry will be scaled

I2C and PMBUS reporting will not be scaled, they will report 100% of the actual IOUT and temperature.

Over temperature shutdown will be based on the unscaled (100%) temperature value

OCP will be based on the unscaled (100%) IOUT value

Overclocking - 0x5A

Loop A | Loop B |

Fsw Spread Spectrum

☐ Enable Fsw Spread Spectrum

Fsw Spectrum Sweep Duration: 5ms

Max Delta for Fsw Spectrum: 0

Max Fsw: 595.2 KHz

Min Fsw: 595.2 KHz

SVID Register in Overclocking Mode

SR Fast (24h): 8 mV/us

Vout Max (30h): 2.55 V

PwrIn Max (2Eh): 510 W

Vout Control in Overclocking Mode

High Byte (Offset): 0

Low Byte (VID Code): 0

Vout = 0.000 V

Misc

Iout Scaling in Overclocking Mode: 100%

Temp Scaling in Overclocking Mode: 100%

Max Vout in Overclocking Mode: 3.1

Manual VID Type: Fixed Vout Mode

Manual Min VID Type: Take Manual VID

Loadline in overclocking mode: 0.303 mΩ

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

Max Vout in Overclocking Mode:

Allow a maximum Vout to be set. Any command to set a higher Vout will be ignored and actual Vout will stop at the selected voltage even if commanded to go higher. Valid for Intel mode and Pmbus. Not active for AMDmode.

Icc Max and Loadline:

As default this gets copied from regular loadline setting. Can be changed here if other values are wanted for overclocking mode.

Overclocking...

Vout control in overclocking mode

Allow MANUAL VID settings

Offset : can be + or - offset values >80 count as negative. 2 complement hex

VID code: Vout follows the AMD VID table except for 0 that will cause VOUT to return to the SVID/SVI2 commanded voltage

This function also work in non overclocking mode to manually enter VID code to set Vout.

Manual VID type:

Fixed Vout Mode

Fixed offset mode

In 'Fixed VOUT' Mode, VOUT is set by the VID code specified by the operating mode.

In 'Fixed VOUT' Mode, the SVID ALERT# will assert immediately upon receipt of an SVID command to change VOUT.

Because VOUT will not change, T_alert assertion will **not** be delayed by VID_DELTA/SLEW_RATE

In AMD SVI2, VOTF Complete will not assert in Fixed VOUT mode

In 'Fixed VOUT' Mode, changes to the Manual VID register will cause VOUT to change but will not cause SVID ALERT# to assert.

Writing the Manual VID register to 0 will cause VOUT to return to the SVID/SVI2 commanded voltage

Manual Min VID type

Select between "Take Manual VID" or

"Take MAX of SVID or Manual VID"

The last setting will limit the voltage to the lowest of the 2 settings.

Overclocking...

Overclocking - 0x5A

Loop A | Loop B

Fsw Spread Spectrum

☐ Enable Fsw Spread Spectrum

Fsw Spectrum Sweep Duration: 5ms

Max Delta for Fsw Spectrum: 0

Max Fsw: 595.2 KHz

Min Fsw: 595.2 KHz

SVID Register in Overclocking Mode

SR Fast (24h): 8 mV/μs

Vout Max (30h): 2.55 V

PwrIn Max (2Eh): 510 W

Vout Control in Overclocking Mode

High Byte (Offset): 0

Low Byte (VID Code): 0

Vout = 0.000 V

Misc

Iout Scaling in Overclocking Mode: 100%

Temp Scaling in Overclocking Mode: 100%

Max Vout in Overclocking Mode: 3.1 V

Manual VID type: Fixed Vout Mode

Manual Min VID Type: Take Manual VID

Loadline in overclocking mode: 0.303 mΩ

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

SR fast

Allow another setting for slew rate while in overclocking mode

Vout Max

Allow another setting for maximum Vout while in overclocking mode

PwrIn max

Allow another setting for maximum input power while in overclocking mode