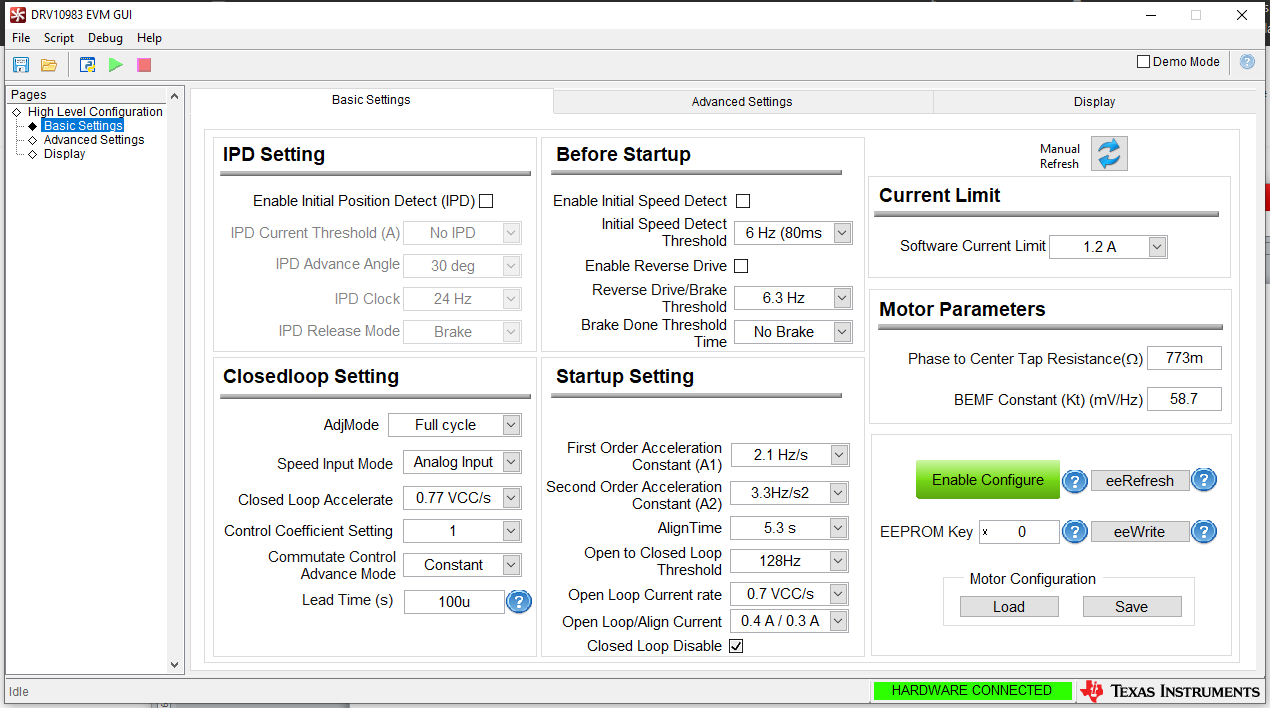
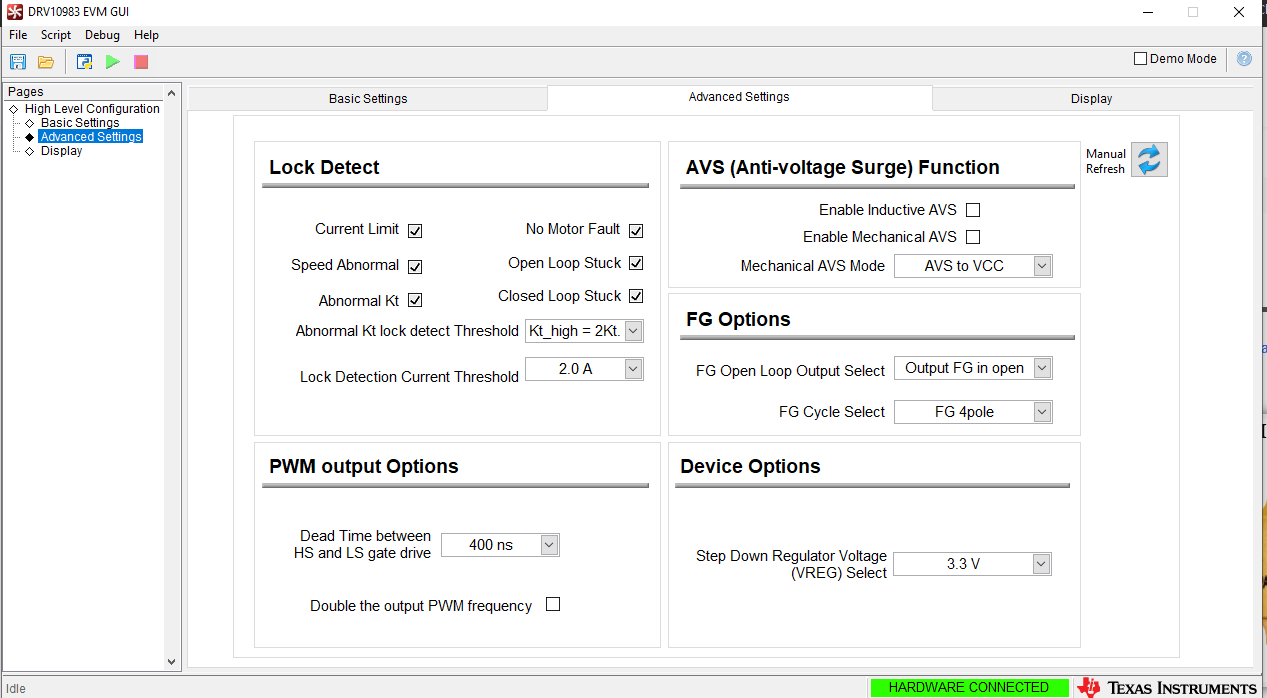
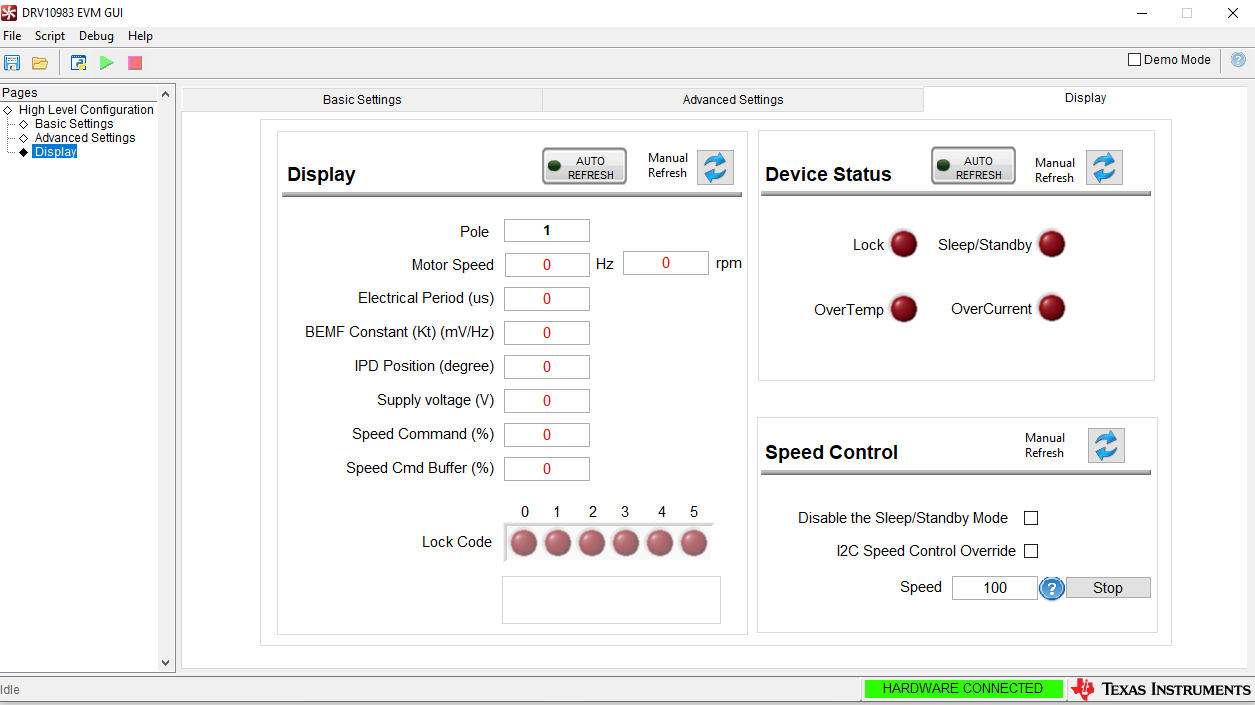
**Case 1: Open speed control of BLDC motor with I2C:**

The following setting are followed as per tuning guide manual of DRV10983 EVM







**When motor OFF the following are register values**

DRV10983\_SpeedCtrl1 00

DRV10983\_SpeedCtrl2 00

DRV10983\_DevCtrl 00

DRV10983\_EECtrl 40

DRV10983\_Status 1F

DRV10983\_MotorSpeed1 3F

DRV10983\_MotorSpeed2 FF

DRV10983\_MotorPeriod1 00

DRV10983\_MotorPeriod2 00

DRV10983\_MotorKt1 1F

DRV10983\_MotorKt2 FF

DRV10983\_MotorCurrent1 03

DRV10983\_MotorCurrent2 FF

DRV10983\_IPDPosition 16

DRV10983\_SupplyVoltage C7

DRV10983\_SpeedCmd FF

DRV10983\_spdCmdBuffer 00

DRV10983\_AnalogInLvl 00

DRV10983\_FaultCode 01

DRV10983\_TBD 00

DRV10983\_MotorParam1 3A

DRV10983\_MotorParam2 38

DRV10983\_MotorParam3 2A

DRV10983\_SysOpt1 00

DRV10983\_SysOpt2 58

DRV10983\_SysOpt3 E5

DRV10983\_SysOpt4 C8

DRV10983\_SysOpt5 F0

DRV10983\_SysOpt6 69

DRV10983\_SysOpt7 B9

DRV10983\_SysOpt8 0D

DRV10983\_SysOpt9 0D

DRV10983\_SysOpt10 E0

DRV10983\_Trim0 C8

DRV10983\_Trim1 7C

DRV10983\_Trim2 B0

DRV10983\_Trim3 F4

DRV10983\_Trim4 D0

DRV10983\_Trim5 35

DRV10983\_Trim6 FE

DRV10983\_Trim7 F1

DRV10983\_Trim8 9D

DRV10983\_ID 12

DRV10983\_ADC1 01

DRV10983\_ADC2 11

DRV10983\_SCORE0 FE

DRV10983\_SCORE1 00

DRV10983\_SCORE2 00

DRV10983\_SCORE3 06

DRV10983\_SCORE4 00

DRV10983\_Test0 00

DRV10983\_Test1 00

DRV10983\_Test2 00

DRV10983\_Test3 40

DRV10983\_Test4 08

DRV10983\_Test5 00

DRV10983\_Test6 00

DRV10983\_Test7 00

DRV10983\_Test8 00

DRV10983\_ScanEn1 00

DRV10983\_ScanEn2 00

**When motor is running in constant speed irrespective of input speed command, the following are register values**

DRV10983\_SpeedCtrl1 2C

DRV10983\_SpeedCtrl2 01

DRV10983\_DevCtrl 00

DRV10983\_EECtrl 40

DRV10983\_Status 1F

DRV10983\_MotorSpeed1 3F

DRV10983\_MotorSpeed2 FF

DRV10983\_MotorPeriod1 00

DRV10983\_MotorPeriod2 00

DRV10983\_MotorKt1 1F

DRV10983\_MotorKt2 FF

DRV10983\_MotorCurrent1 03

DRV10983\_MotorCurrent2 FF

DRV10983\_IPDPosition 16

DRV10983\_SupplyVoltage C7

DRV10983\_SpeedCmd FF

DRV10983\_spdCmdBuffer 00

DRV10983\_AnalogInLvl 00

DRV10983\_FaultCode 01

DRV10983\_TBD 00

DRV10983\_MotorParam1 3A

DRV10983\_MotorParam2 38

DRV10983\_MotorParam3 2A

DRV10983\_SysOpt1 00

DRV10983\_SysOpt2 58

DRV10983\_SysOpt3 E5

DRV10983\_SysOpt4 C8

DRV10983\_SysOpt5 F0

DRV10983\_SysOpt6 69

DRV10983\_SysOpt7 B9

DRV10983\_SysOpt8 0D

DRV10983\_SysOpt9 0D

DRV10983\_SysOpt10 E0

DRV10983\_Trim0 C8

DRV10983\_Trim1 7C

DRV10983\_Trim2 B0

DRV10983\_Trim3 F4

DRV10983\_Trim4 D0

DRV10983\_Trim5 35

DRV10983\_Trim6 FE

DRV10983\_Trim7 F1

DRV10983\_Trim8 9D

DRV10983\_ID 12

DRV10983\_ADC1 01

DRV10983\_ADC2 11

DRV10983\_SCORE0 FE

DRV10983\_SCORE1 00

DRV10983\_SCORE2 00

DRV10983\_SCORE3 06

DRV10983\_SCORE4 00

DRV10983\_Test0 00

DRV10983\_Test1 00

DRV10983\_Test2 00

DRV10983\_Test3 40

DRV10983\_Test4 08

DRV10983\_Test5 00

DRV10983\_Test6 00

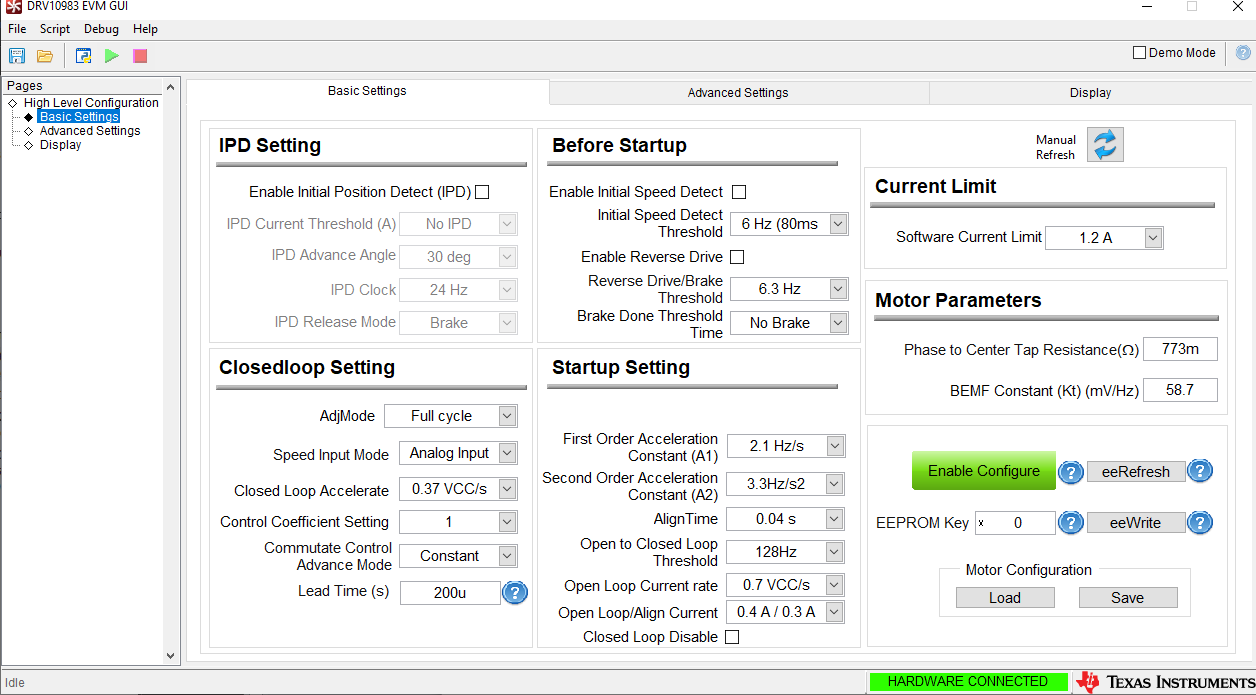
DRV10983\_Test7 00

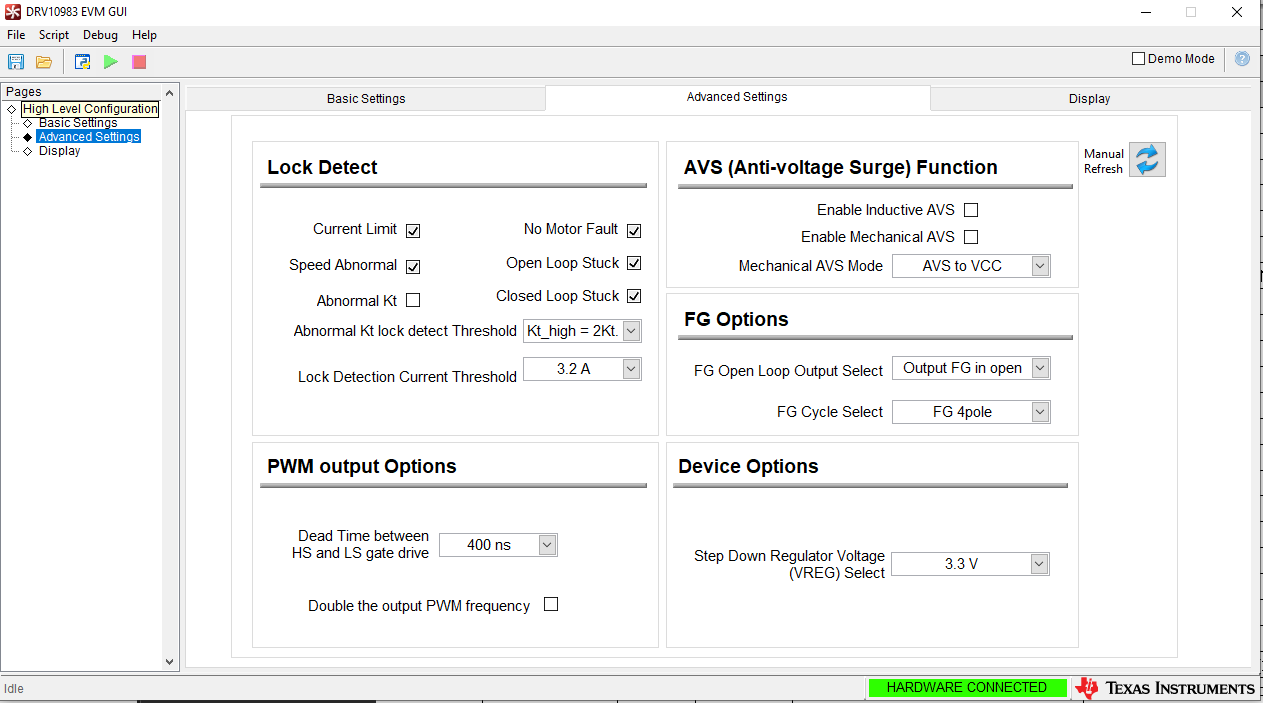
DRV10983\_Test8 00

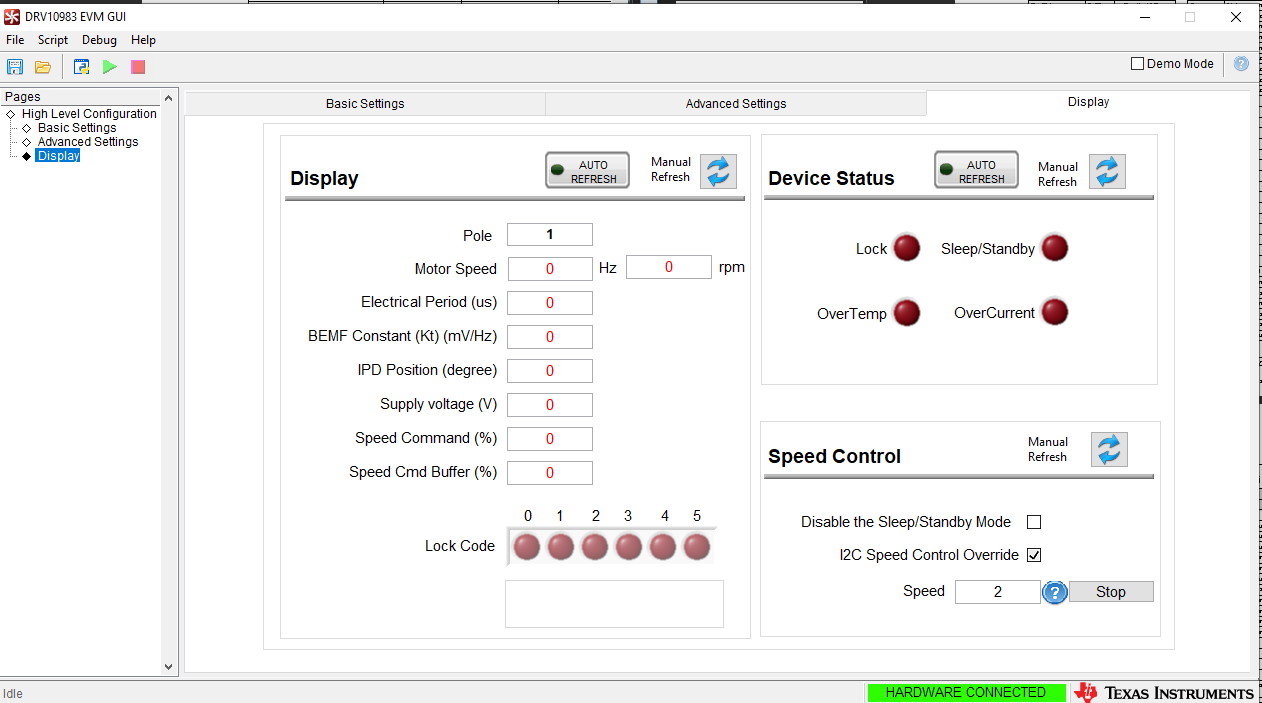
DRV10983\_ScanEn1 00

DRV10983\_ScanEn2 00

Case2: Closed loop Speed of BLDC motor in I2C mode, the following are display settings







**motor speed is rotating constant speed below (100), Above 100 only speed control is happening. the following are register values**

DRV10983\_SpeedCtrl1 02

DRV10983\_SpeedCtrl2 80

DRV10983\_DevCtrl 00

DRV10983\_EECtrl 40

DRV10983\_Status 1F

DRV10983\_MotorSpeed1 00

DRV10983\_MotorSpeed2 11

DRV10983\_MotorPeriod1 E9

DRV10983\_MotorPeriod2 F5

DRV10983\_MotorKt1 00

DRV10983\_MotorKt2 31

DRV10983\_MotorCurrent1 04

DRV10983\_MotorCurrent2 01

DRV10983\_IPDPosition 16

DRV10983\_SupplyVoltage C7

DRV10983\_SpeedCmd 1B

DRV10983\_spdCmdBuffer 00

DRV10983\_AnalogInLvl 00

DRV10983\_FaultCode 01

DRV10983\_TBD 00

DRV10983\_MotorParam1 3A

DRV10983\_MotorParam2 38

DRV10983\_MotorParam3 3A

DRV10983\_SysOpt1 00

DRV10983\_SysOpt2 98

DRV10983\_SysOpt3 E5

DRV10983\_SysOpt4 C8

DRV10983\_SysOpt5 B0

DRV10983\_SysOpt6 6F

DRV10983\_SysOpt7 B9

DRV10983\_SysOpt8 0D

DRV10983\_SysOpt9 0D

DRV10983\_SysOpt10 E0

DRV10983\_Trim0 C8

DRV10983\_Trim1 7C

DRV10983\_Trim2 B0

DRV10983\_Trim3 F4

DRV10983\_Trim4 D0

DRV10983\_Trim5 35

DRV10983\_Trim6 FE

DRV10983\_Trim7 F1

DRV10983\_Trim8 9D

DRV10983\_ID 12

DRV10983\_ADC1 FF

DRV10983\_ADC2 12

DRV10983\_SCORE0 FE

DRV10983\_SCORE1 01

DRV10983\_SCORE2 00

DRV10983\_SCORE3 06

DRV10983\_SCORE4 00

DRV10983\_Test0 00

DRV10983\_Test1 00

DRV10983\_Test2 00

DRV10983\_Test3 40

DRV10983\_Test4 08

DRV10983\_Test5 00

DRV10983\_Test6 00

DRV10983\_Test7 00

DRV10983\_Test8 00

DRV10983\_ScanEn1 00

DRV10983\_ScanEn2 00