

## X86 GPIO Testing Guidance

### 1. Install the Intel GPIO Configuration software;

Application	2017-08-01 15:43	文件夹
Bindata	2017-08-01 15:43	文件夹
Drivers	2017-08-01 15:43	文件夹
GPIODocuments	2017-08-01 15:44	文件夹
Share	2017-08-01 15:44	文件夹
UEFI	2017-08-01 15:44	文件夹
XMLTemplates	2017-08-01 15:44	文件夹
IIF2.ini	2016-03-15 5:23	配置设置
Intel.ico	2016-03-15 5:23	图标
<b>Setup.exe</b>	2016-03-15 5:23	应用程序
		1,543 KB

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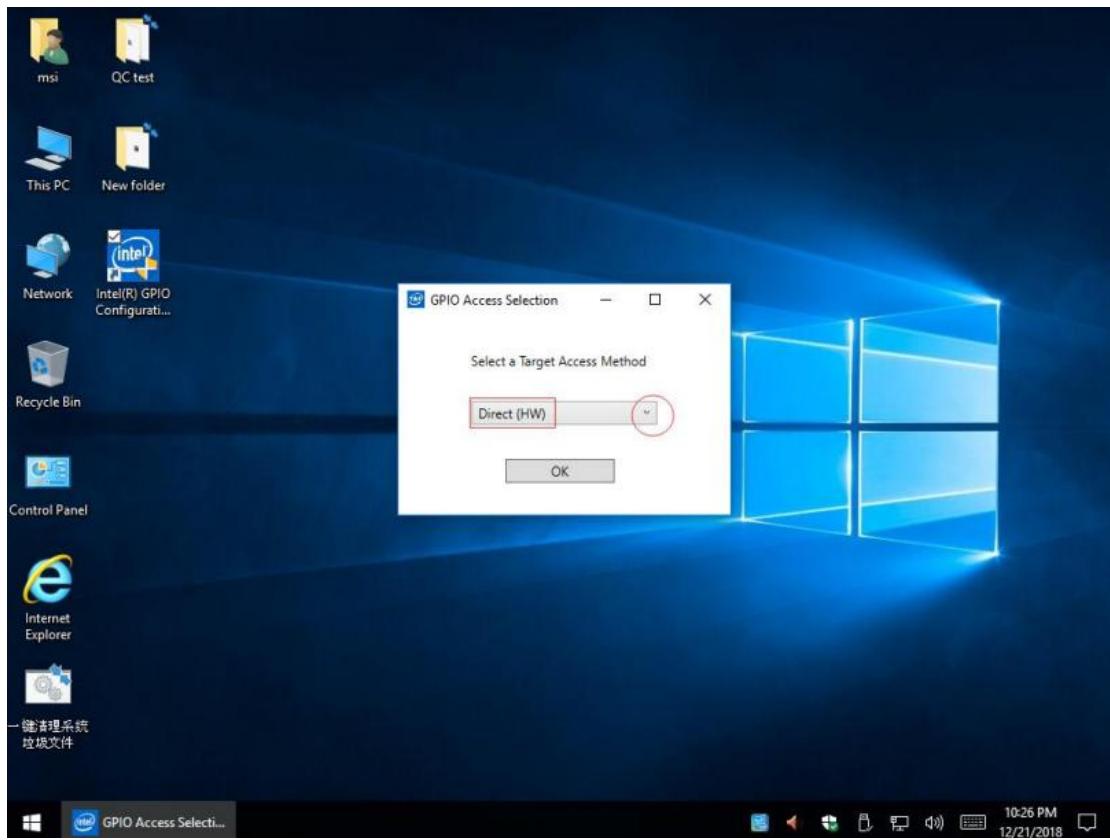


### 2. Test method

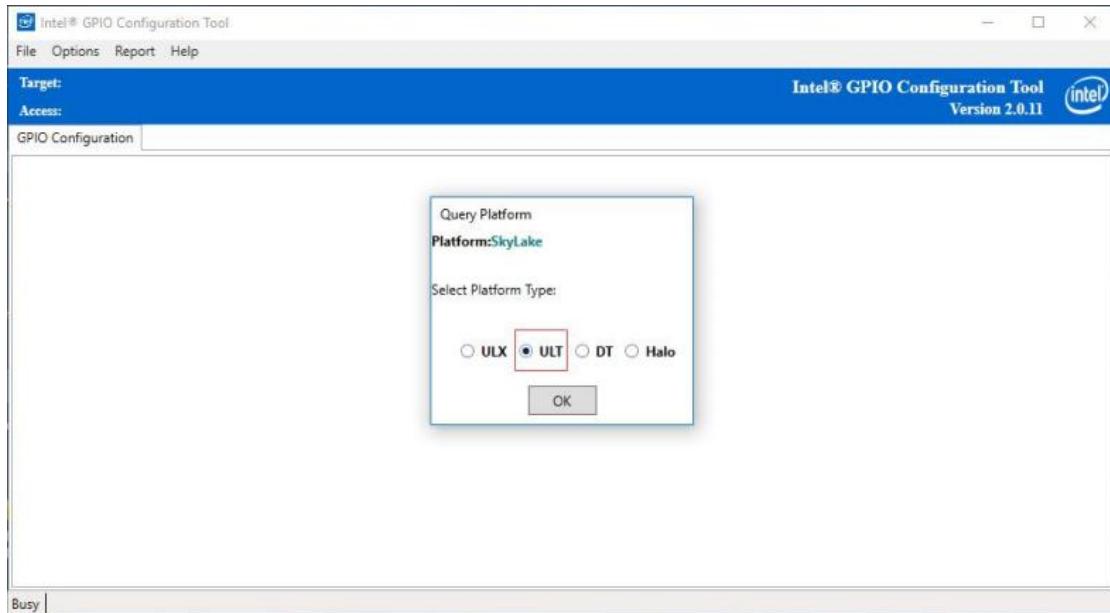
#### 2.1 Double click Intel GPIO Configuration tool;



#### 2.2 Select “Dirrect(HW)”



### 2.3 Select “ULT” ---> OK



### 2.4 Choose the red table, eg YS--I56200U motherboard, see below where marked yellow

Intel® GPIO Configuration Tool

File Options Report Help

Target: SkyLakeULT

Access: Direct

GPIO Configuration

Community 0	Community 1	Community 2	Community 3
GPP_A_0 CLKOUT_LPC_I	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 CLKOUT_LPC_I	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 PMEB	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ En ✓ Dis ✓ 0x4010 0x0000
GPP_A_1 BM_BUSYB_ISI	Pow ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x0400 0x0000
GPP_A_1 SUSWARNB_S	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SUS_STATB_ES	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SUSACKB	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SD_1P8_SEL	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ En ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SD_PWR_EN_E	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 ISH_GP_0	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Lt ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4000 0x0000
GPP_A_1 ISH_GP_1	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_2 ISH_GP_2	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_2 ISH_GP_3	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Lt ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4000 0x0000
GPP_A_2 ISH_GP_4	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_2 ISH_GP_5	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ Dis ✓ En ✓ 0x4010 0x0000
GPP_B_0 CORE_VID_0	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_B_0 CORE_VID_1	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_B_0 VRALERTB	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_B_0 CPU_GP_2	GPII ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ En ✓ Dis ✓ 0x8010 0x0000
GPP_B_0 CPU_GP_3	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_B_0 SRCLKREQB_	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ En ✓ Dis ✓ 0x4010 0x0000

Ready |

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2.5 Eg GP3 on rang where I marked with “1”-->“2” select enable --->“3” update to enable GP3;

Intel® GPIO Configuration Tool

File Options Report Help

Target: SkyLakeULT

Access: Direct

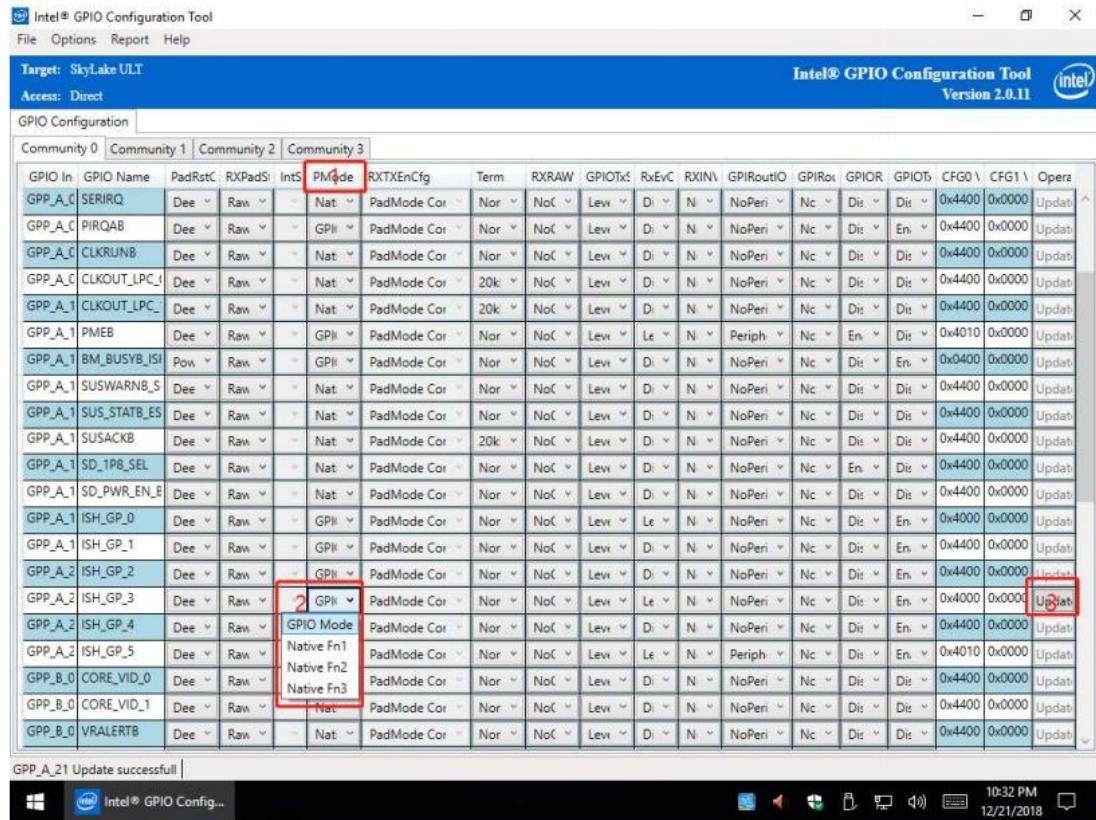
GPIO Configuration

Community 0	Community 1	Community 2	Community 3
GPP_A_0 SERIRQ	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_0 PIRQAB	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_0 CLKRUNB	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_0 CLKOUT_LPC_I	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 CLKOUT_LPC_I	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 PMEB	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ En ✓ Dis ✓ 0x4010 0x0000
GPP_A_1 BM_BUSYB_ISI	Pow ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x0400 0x0000
GPP_A_1 SUSWARNB_S	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SUS_STATB_ES	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SUSACKB	Dee ✓ Raw ✓	Nat ✓	PadMode Cor 20k ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SD_1P8_SEL	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ En ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 SD_PWR_EN_E	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_A_1 ISH_GP_0	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Lt ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4000 0x0000
GPP_A_1 ISH_GP_1	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_2 ISH_GP_2	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4400 0x0000
GPP_A_2 ISH_GP_3	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Lt ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ En ✓ 0x4000 0x0000
GPP_A_2 ISH_GP_4	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Enable 0x4400 0x0000
GPP_A_2 ISH_GP_5	Dee ✓ Raw ✓	GPII ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Le ✓ N ✓ Periph ✓ Nc ✓ Dis ✓ Disable 0x4010 0x0000
GPP_B_0 CORE_VID_0	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_B_0 CORE_VID_1	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000
GPP_B_0 VRALERTB	Dee ✓ Raw ✓	Nat ✓	PadMode Cor Nor ✓ NoC ✓ Levi ✓ Di ✓ N ✓ NoPeri ✓ Nc ✓ Dis ✓ Dis ✓ 0x4400 0x0000

GPP\_A\_21 Update successful |

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2.6 on “1” Pmode range, select GPIO Mode ---> update;



2.7 On “1”GPIOTxS range--->select level 0/level1 --->update for high and low level switching.

Intel® GPIO Configuration Tool

File Options Report Help

Target: SkyLake ULT

Access: Direct

GPIO Configuration

Community 0 | Community 1 | Community 2 | Community 3

GPIO In	GPIO Name	PadRstC	RXPadS	IntS	PMode	RXTXEnCfg	Term	RXRAW	GPIOTx5	RxEvC	RXINV	GPIROUTIO	GPIOx	GPIOy	GPIOz	CFG0 \	CFG1 \	Operz
GPP_A_C	SERIRQ	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_C	PIRQAB	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	En	0x4400	0x0000	Update
GPP_A_C	CLKRUNB	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_C	CLKOUT_LPC_J	Dee	Raw	-	Nat	PadMode Cor	20k	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	CLKOUT_LPC_	Dee	Raw	-	Nat	PadMode Cor	20k	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	PMEB	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Le	N	Periph	Nc	En	Dir	0x4010	0x0000	Update
GPP_A_1	BM_BUSYBJSI	Pow	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	En	0x0400	0x0000	Update
GPP_A_1	SUSWARNB_S	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	SUS_STATB_ES	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	SUSACKB	Dee	Raw	-	Nat	PadMode Cor	20k	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	SD_1P8_SEL	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	En	Dir	0x4400	0x0000	Update
GPP_A_1	SD_PWR_EN_E	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_A_1	ISH_GP_0	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Le	N	NoPeri	Nc	Dir	En	0x4000	0x0000	Update
GPP_A_1	ISH_GP_1	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	En	0x4400	0x0000	Update
GPP_A_2	ISH_GP_2	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	En	0x4400	0x0000	Update
GPP_A_2	ISH_GP_3	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Levi	Le	N	NoPeri	Nc	Dir	En	0x4000	0x0000	Update
GPP_A_2	ISH_GP_4	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Level 0	Di	N	NoPeri	Nc	Dir	En	0x4400	0x0000	Update
GPP_A_2	ISH_GP_5	Dee	Raw	-	GPi	PadMode Cor	Nor	NoC	Level 1	Le	N	Periph	Nc	Dir	En	0x4010	0x0000	Update
GPP_B_0	CORE_VID_0	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_B_0	CORE_VID_1	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update
GPP_B_0	VRALERTB	Dee	Raw	-	Nat	PadMode Cor	Nor	NoC	Levi	Di	N	NoPeri	Nc	Dir	Dir	0x4400	0x0000	Update

GPP\_A\_21 Update successful!

Windows Intel® GPIO Config...

10:31 PM 12/21/2018