Name	Type	Description
GPP_B15 / **TIME_SYNC0**/ ISH_GP7	I	**Time Synchronization**: Used for synchronization both input (latch time when pin asserted) and output (toggle pin when programmed time is hit).
GPP_B14/ **TIME_SYNC1** / SPKR / ISH_GP6	I	**Time Synchronization**: Used for synchronization both input (latch time when pin asserted) and output (toggle pin when programmed time is hit).
GPP_B2 / **VRALERT#**	I	**VR Alert**: ICC Max. throttling indicator from the PCH voltage regulators. VRALERT# pin allows the VR to force PCH throttling to prevent an over current shutdown. PMC based on the VRALERT# and messages from the processor. The messages from the processor allows the processor to constrain the PCH to a particular power budget.
WAKE#	I/OD	**PCI Express* Wake Event in Sx**: Input Pin in Sx. Sideband wake signal on PCI Express* asserted by components requesting wake up. *Notes:* • This is an output pin during S0ix states hence this pin can not be used to wake up the system during S0ix states. • An external pull-up resistor is required.
VCCST_OVERRIDE	O	**VccST Override**: Signal that allows the PCH to keep VCCST powered ON (in case VCCST is powered down) for USB-C wake capability (connected to VCCSTPWRGOOD_TCSS on board). Signal will stay high when plug-in device on USB Type-C Subsystem port and signal will stay low when no device is connected.
GPP_F22 / **VNN_CTRL**		**VNN_Control**: External bypass rail control pin. Without requiring BIOS to be involved during the S0ix states. This pin use to control of the VCC_VNNEXT_1P05 voltage.
GPP_F23 / **V1p05_CTRL**		**V1p05_Control**: External bypass rail control pin. Without requiring BIOS to be involved during the S0ix states. This pin use to control of the VCC_V1P05EXT_1P05 voltage.

22.3 Integrated Pull-Ups and Pull-Downs

Signal	Resistor Type	Value	Notes
ACPRESENT	Pull-down	15 kohm - 40 kohm	1
LAN_WAKE#	Pull-down	15 kohm - 40 kohm	1
PWRBTN#	Pull-up	20 kohm +/- 30%	
SUSACK#	Pull-up	20 kohm+/- 30%	
WAKE#	Pull-down	15 kohm - 40 kohm	1
Note: 1. Pull-down is configurable and can be enabled in Deep Sx state; refer to DSX_CFG register for more details.			

22.4 I/O Signal Planes and States

Signal Name	Power Plane	During Reset[18]	Immediately after Reset[18]	S4/S5	Deep Sx
ACPRESENT[6,10,15]	DSW	Undriven /Driven Low4	Undriven	Undriven	Undriven/Internal Pull-down[8]
BATLOW#	DSW	Undriven	Undriven	Undriven	OFF
CORE_VID0[11,17]	Primary	Driven High	Driven High	Driven High	OFF
CORE_VID1[11,17]	Primary	Driven High	Driven High	Driven High	OFF
PROC_C10_GATE# [1,17]	Primary	Undriven [19]	Undriven [19]	Driven Low	OFF
DRAM_RESET# [14]	DSW	Undriven	Undriven	Undriven	Undriven
DSW_PWROK	RTC	Undriven	Undriven	Undriven	Undriven

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Signal Name	Power Plane	During Reset[18]	Immediately after Reset[18]	S4/S5	Deep Sx
SPIVCCIOSEL	DSW	Undriven	Undriven	Undriven	Undriven
LAN_WAKE# [15]	DSW	Undriven	Undriven	Undriven	Undriven/Internal Pull-down[8]
LANPHYPC[10,16]	DSW	Undriven	Undriven	Undriven [7]	Undriven [7]
PCH_PWROK	RTC	Undriven	Undriven	Undriven	Undriven
PLTRST# [16]	Primary	Driven Low	Driven High	Driven Low	OFF
PWRBTN# [15]	DSW	Internal Pull-up	Internal Pull-up	Internal Pull-up	Internal Pull-up
RSMRST#	RTC	Undriven	Undriven	Undriven	Undriven
SLP_A# [6,16]	DSW	Driven Low	Driven High	Driven High/ Driven Low[12]	Driven High/ Driven Low[12]
SLP_LAN# [6,14]	DSW	Driven Low	Driven Low	Driven High/ Driven Low[7]	Driven High/ Driven Low[7]
SLP_S0# [1]	Primary	Driven High	Driven High	Driven High	OFF
SLP_S3# [6,16]	DSW	Driven Low	Driven High	Driven Low	Driven Low
SLP_S4# [6,16]	DSW	Driven Low	Driven High	Driven Low	Driven Low[9]
SLP_S5# [6,16]	DSW	Driven Low	Driven High	Driven High/ Driven Low[3]	Driven High/ Driven Low[9]
SLP_SUS# [6,14]	DSW	Driven Low	Driven High	Driven High	Driven Low
SLP_WLAN# [6,16]	DSW	Driven Low	Driven Low	Driven High/ Driven Low[7]	Driven High/ Driven Low[7]
SUSACK# [15]	Primary	Internal Pull-up	Internal Pull-up	Internal Pull-up	OFF
SUSCLK [10,16]	DSW	Driven Low	Toggling	Toggling	Toggling[10]
SUSWARN# / SUSPWRDNACK [10,16]	Primary	Driven Low	Driven Low	Driven Low[5]	OFF
SX_EXIT_HOLDOFF# [15]	Primary	Undriven	Undriven	Undriven	OFF
SYS_PWROK	Primary	Undriven	Undriven	Undriven	OFF
SYS_RESET#	Primary	Undriven	Undriven	Undriven	OFF

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