Project Name: San Bernardino
PCB Number: 16561-1
PCBA Version: A00
SCH Version: A00
Project Code: 3PD06U010001,3PD06U01A001
PCB certification number: SB0601
ECO# number: 938383
PCB Size: 178.5mm x 174mm x 1.6mm, 6L

JMP1 Jumper Setting		
Service Mode	1-2 Short	With Jumper to Disable TXE
PW CLR	3-4 Open	Without Jumper to Clear PassWord
CMOS CLR	5-6 Short	With Jumper to Clear CMOS

JMP2 Jumper Setting		
Pin9 to 5V	1-3 Short	With Jumper to 5V
Pin1 to 5V	2-4 Short	With Jumper to 5V
Pin9 to RI	3-5 Short	With Jumper to RI
Pin1 to DCD	4-6 Short	With Jumper to DCD

BOM Configuration

(R_): Unmount
(X_): Debug
(64G_): eMMC 64GB
(16G_): eMMC 16GB
(32G_): eMMC 32GB
(T_): TPM
(2DP_): DP x2
(3DP_): DP x3
(AIC_): Gfx Add-In Card
(RJ45_): RJ45
(SFP_): SFP
(GCE_): GCE PCB vendor
(TRI_): Tripod PCB vendor
(HSB_): HSB PCB vendor
(TPT_): TPT PCB vendor
(A_): USB-C w/o BC1.2
(B_): USB-C w/ BC1.2
(E16G_): 5070E w/ 16G
(E_): 5070E
(S16G_): 5070S w/ 16G
(S_): 5070S
(EX16G_): 5070S-EX w/ 16G
(EX_): 5070S-EX
(E32G_): 5070E w/ 32G
(D_): X02.1

Key IC		
Location	Vendor part number	IC version
CPU1	Intel Gemini Lake SoC	B0
U2401	ITE IT8739E	FX
U2701	Realtek ALC3253-VA3	A
U3101	Realtek RTL8111HN	A
U3701	Parade PS8743B	B1
U3901	Cypress CYPD4125	A
U5501	Parade PS181	A1
U5801	Parade PS8468	A3
U5901	Parade PS8468	A3
U9101	Nuvoton NPCT750	A
U9501	Realtek RTS5411	A
U9601	Realtek RTS5415	A
U9701	Realtek RTL8211FS	A
U304	Broadcom BCM58102PB0KFBG	P

Header	
FANC1	021.60137.0104
JMP1	021.60810.0203
JMP2	021.60809.0203
PWRSW1	021.60747.0203
USB2F2	021.60892.0210
CAC1	20.F2220.005
SPK1	020.F1062.0006
LPT1	20.F1954.020
COM2	20.F2110.012
RTC1	062.70001.0021
VGA1	020.F0827.0030
LPC1	20.F1819.010
XDP1	20.F1412.040

SVID/SSID
San Bernardino SVID: 0x1028 SSID: 0x080C

Board ID Settings

MB Version	Board2	Board1
X00 (EVT)	0V	0V
X01 (DVT1)	0V	0.9V
X02 (DVT2)	0V	1.8V
Reserve	0.9V	1.8V
A00 (PVT)	1.8V	1.8V

	5070E (Economy)	5070S (Standard)	5070S Extended
Slim	✓	✓	
Wide			✓

Cable

More detail on Page 101

The PU and PD information for the following straps are different for Pre-ES, ES and ES2, QS GLK SoC.

This is update to information shared in WW28 MoW.

GPIO_83	SIO_SPI_0_TXD	LPC 1.8 V/3.3 V mode select	20K PU [Pre-ES and ES] 20K PD [ES2[1] and QS]	1=buffers set to 1.8 V mode 0=buffers set to 3.3 V mode (default)
GPIO_163	AVS_I2S1_WS_SYNC	SMBus 1.8 V/3.3 V mode select	20K PU [Pre-ES and ES] 20K PD [ES2[1] and QS]	1=buffers set to 1.8 V mode 0=buffers set to 3.3 V mode (default)
GPIO_168	AVS_HDA_SDI	PMU 1.8 V/3.3 V mode select	20K PU [Pre-ES and ES] 20K PD [ES2[1] and QS]	1=buffers set to 1.8 V mode 0=buffers set to 3.3 V mode (default)

[1]ES2 samples will be limited samples for targeted customers.

SKU ID Settings

SKU6 U49	SKU5 U51	SKU4 U46	SKU3 U48	SKU2 AA39	SKU1 AA41	Description
Reserve	Reserve	0	0	0	0	Reserve
Reserve	Reserve	0	0	0	1	5070E(W/ eMMC 16GB)
Reserve	Reserve	0	0	1	0	5070E(W/O eMMC 16GB)
Reserve	Reserve	0	0	1	1	5070S(W/ eMMC 16GB)
Reserve	Reserve	0	1	0	0	5070S(W/O eMMC 16GB)
Reserve	Reserve	0	1	0	1	5070S-EX(W/ eMMC 16GB)
Reserve	Reserve	0	1	1	0	5070S-EX(W/O eMMC 16GB)
Reserve	Reserve	0	1	1	1	5070E (W/ eMMC 32GB)

PWB DELL P/N
GCE: WWVX3$JA
Tripod: WWVX3$KA
HSB: WWVX3$CA
TPT: WWVX3$LA

SoC DELL P/N
Pentium J5005: NJR5K
Celeron J4105: MR9JG

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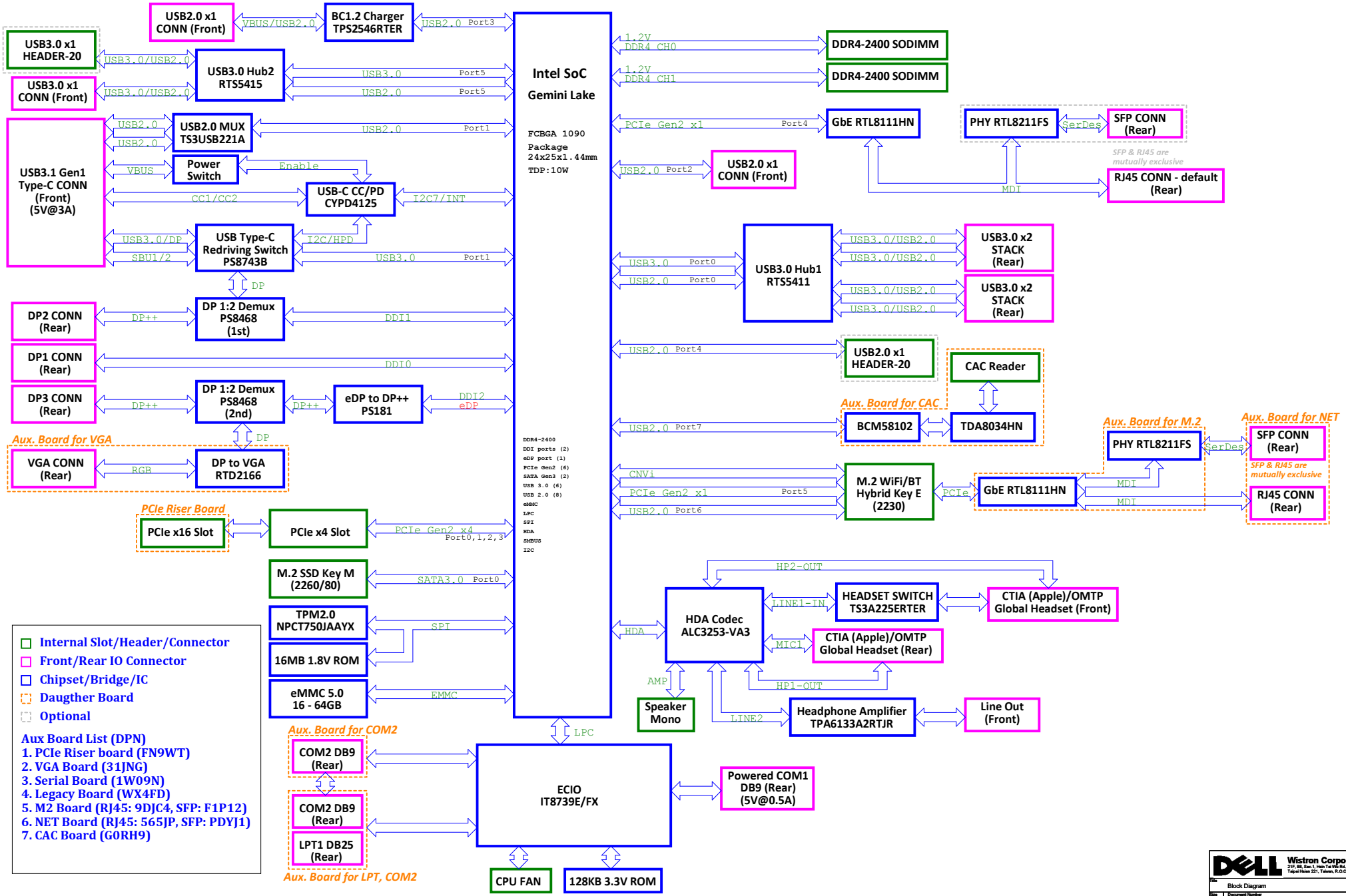
USB2.0 x1 CONN (Front)
VBUS/USB2.0
BC1.2 Charger TPS2546RTER
USB2.0 Port3
USB3.0 x1 HEADER-20
USB3.0/USB2.0
USB3.0 Hub2 RTS5415
USB3.0 x1 CONN (Front)
USB3.0 Port5
USB2.0 Port5
USB3.1 Gen1 Type-C CONN (Front) (5V@3A)
USB2.0
USB2.0 MUX TS3USB221A
USB2.0 Port1
VBUS
Power Switch
Enable
CC1/CC2
USB-C CC/PD CYPD4125
I2C7/INT
USB3.0/DP
SBU1/2
USB Type-C Redriving Switch PS8743B
I2C/HPD
USB3.0 Port1
DP
DP2 CONN (Rear)
DP++
DP 1:2 Demux PS8468 (1st)
DDI1
DP1 CONN (Rear)
DDI0
DP3 CONN (Rear)
DP 1:2 Demux PS8468 (2nd)
eDP to DP++ PS181
DDI2
eDP
Aux. Board for VGA
VGA CONN (Rear)
RGB
DP to VGA RTD2166
PCIe Riser Board
PCIe x16 Slot
PCIe x4 Slot
PCIe Gen2 x4
Port0,1,2,3
M.2 SSD Key M (2260/80)
SATA3.0 Port0
TPM2.0 NPCT750JAAYX
SPI
16MB 1.8V ROM
eMMC 5.0 16 - 64GB
EMMC
Aux. Board for COM2
COM2 DB9 (Rear)
COM2 DB9 (Rear)
LPT1 DB25 (Rear)
Aux. Board for LPT, COM2
Intel SoC
Gemini Lake
FCBGA 1090
Package
24x25x1.44mm
TDP:10W
DDR4-2400
DDI ports (2)
eDP port (1)
PCIe Gen2 (6)
SATA Gen3 (2)
USB 3.0 (6)
USB 2.0 (8)
eMMC
LPC
SPI
HDA
SMBUS
I2C
LPC
ECIO IT8739E/FX
CPU FAN
128KB 3.3V ROM
1.2V
DDR4 CH0
DDR4-2400 SODIMM
1.2V
DDR4 CH1
DDR4-2400 SODIMM
PCIe Gen2 x1
Port4
GbE RTL8111HN
PHY RTL8211FS
SerDes
SFP CONN (Rear)
SFP & RJ45 are mutually exclusive
USB2.0 Port2
USB2.0 x1 CONN (Front)
MDI
RJ45 CONN - default (Rear)
USB3.0 Port0
USB2.0 Port0
USB3.0 Hub1 RTS5411
USB3.0/USB2.0
USB3.0 x2 STACK (Rear)
USB3.0/USB2.0
USB3.0 x2 STACK (Rear)
USB2.0 Port4
USB2.0 x1 HEADER-20
CAC Reader
Aux. Board for CAC
USB2.0 Port7
BCM58102
TDA8034HN
Aux. Board for M.2
Aux. Board for NET
PHY RTL8211FS
SerDes
SFP CONN (Rear)
SFP & RJ45 are mutually exclusive
CNVi
PCIe Gen2 x1
Port5
USB2.0 Port6
M.2 WiFi/BT Hybrid Key E (2230)
PCIe
GbE RTL8111HN
MDI
MDI
RJ45 CONN (Rear)
HP2-OUT
HDA
HDA Codec ALC3253-VA3
LINE1-IN
HEADSET SWITCH TS3A225ERTER
CTIA (Apple)/OMTP Global Headset (Front)
MIC1
CTIA (Apple)/OMTP Global Headset (Rear)
HP1-OUT
AMP
Speaker Mono
LINE2
Headphone Amplifier TPA6133A2RTJR
Line Out (Front)
Powered COM1 DB9 (Rear) (5V@0.5A)
Internal Slot/Header/Connector
Front/Rear IO Connector
Chipset/Bridge/IC
Daugther Board
Optional
Aux Board List (DPN)
1. PCIe Riser board (FN9WT)
2. VGA Board (31JNG)
3. Serial Board (1W09N)
4. Legacy Board (WX4FD)
5. M2 Board (RJ45: 9DJC4, SFP: F1P12)
6. NET Board (RJ45: 565JP, SFP: PDYJ1)
7. CAC Board (G0RH9)
Wistron Corporation
Block Diagram
Document Number
San Bernardino
Thursday, March 08, 2018