# LCFC Confidential

## Y530 M/B Schematics Document

### Coffee Lake H-Processor with DDR4 + NV N17E-G1 GPU

**FY510**

**2018-06-27**

**REV:1.0**

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|---|---|---|---|
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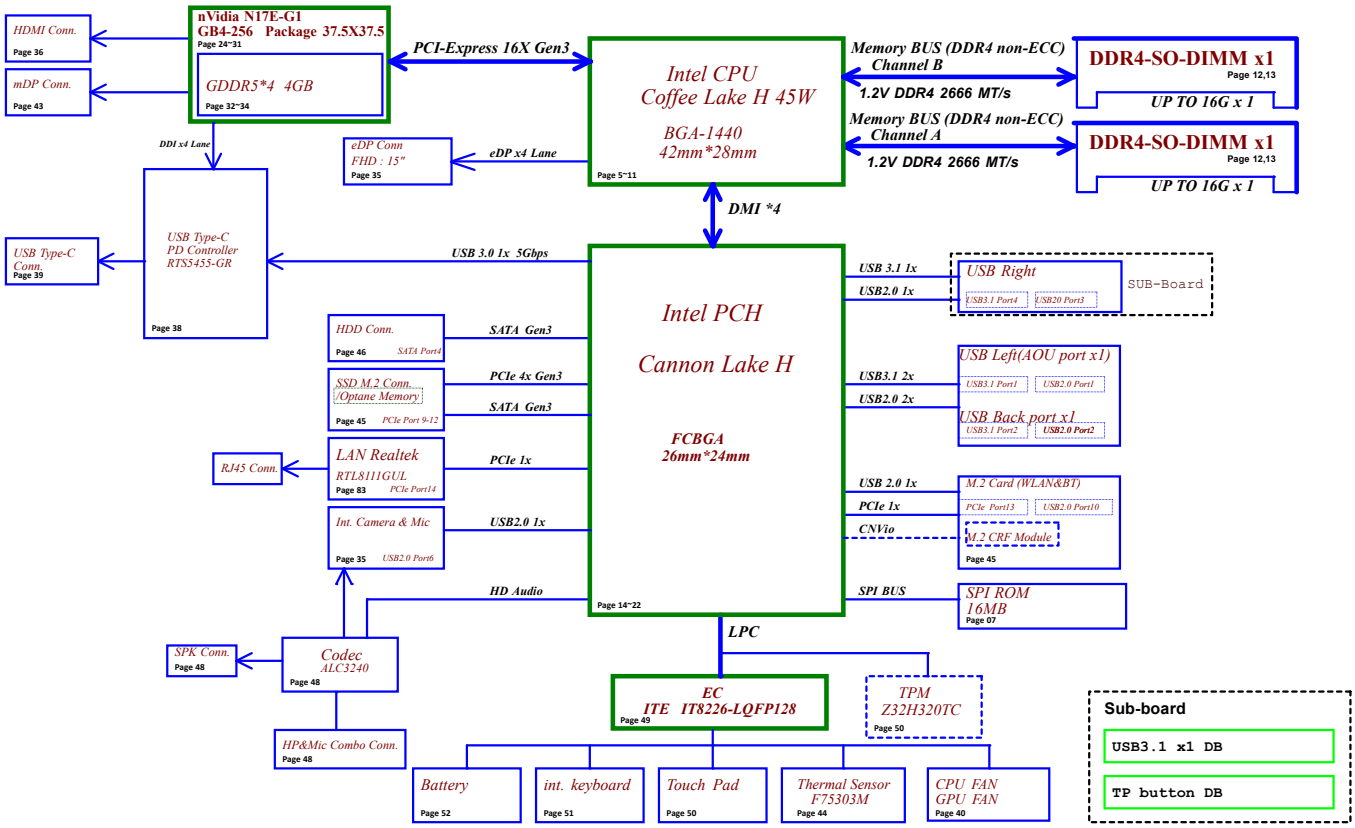


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|---|---|---|---|
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## Voltage Rails ( O --> Means ON , X --> Means OFF )

| Power Plane / State | B+ | +3VALW<br>+5VALW | +3VALW_PCH | +1.2V | +5VS<br>+3VS<br>VCCIO<br>VCCSA<br>VCCSTG<br>VCCCPUCORE<br>VCCGPXCORE<br>+1.8VS_AON<br>+1.8VGS<br>NVVDD<br>NVVDDS<br>+1.0VGS<br>FBVDDQ |
|---|---|---|---|---|---|
| S0 | O | O | O | O | O |
| S3 | O | O | O | O | X |
| S3 Battery only | O | O | O | O | X |
| S5 S4/AC Only | O | O | O | X | X |
| S5 S4 Battery only | O | X | X | X | X |
| S5 S4 AC & Battery don't exist | X | X | X | X | X |

| STATE / SIGNAL | SLP_S1# | SLP_S3# | SLP_S4# | SLP_S5# | +VALW | +V | +VS | Clock |
|---|---|---|---|---|---|---|---|---|
| Full ON | HIGH | HIGH | HIGH | HIGH | ON | ON | ON | ON |
| S1(Power On Suspend) | LOW | HIGH | HIGH | HIGH | ON | ON | ON | LOW |
| S3 (Suspend to RAM) | LOW | LOW | HIGH | HIGH | ON | ON | OFF | OFF |
| S4 (Suspend to Disk) | LOW | LOW | LOW | HIGH | ON | OFF | OFF | OFF |
| S5 (Soft OFF) | LOW | LOW | LOW | LOW | ON | OFF | OFF | OFF |

## BOM Structure Control Table

| BOM Structure | BTO Item |
|---|---|
| @ | Not stuff |
| AOAC@ | AOAC support part |
| CNVI@ | CNVi support part |
| ME@ | ME part(connector, hole) |
| | |
| | |
| OPT@ | For NV GPU part |
| OPTANE@ | Optane memory support part |
| TPM@ | For support TPM sku part |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| CD@ | Cost down part |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

| USB2.0 Port table | |
|---|---|
| Port | Function |
| 1 | Back USB3.0 |
| 2 | Left USB3.0 |
| 3 | Right USB3.0 |
| 4 | Type-C Port |
| 5 | NA |
| 6 | Camera |
| 7:13 | NA |
| 14 | BT |
| | |

| USB3.0 Port table | |
|---|---|
| Port | Function |
| 1 | Back USB3.0 |
| 2 | Type-C Port |
| 3 | Left USB3.0 |
| 4 | Right USB3.0 |
| 5 | NA |
| 6 | NA |
| | |
| | |
| | |

| SATA Port table | |
|---|---|
| Port | Function |
| 0A | NA |
| 0B | NA |
| 1A | M.2 SSD Gen3 |
| 1B | NA |
| 2 | HDD Gen3 |
| 3 | NA |
| 4 | NA |
| 5 | NA |
| | |

| PCIE Port table | |
|---|---|
| Port | Function |
| 1:8 | NA |
| 9 | M.2 SSD/Optane |
| 10 | M.2 SSD/Optane |
| 11 | M.2 SSD/Optane |
| 12 | M.2 SSD/Optane |
| 13 | WLAN Gen1 |
| 14 | LAN Gen1 |
| 15:24 | NA |
| | |

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Title: **Notes List**

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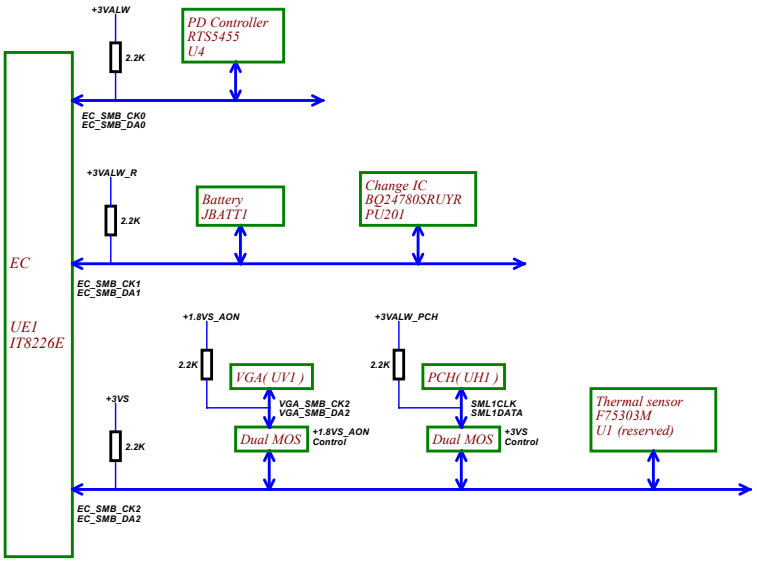


**SMBUS Control Table**

| | SOURCE | VGA | BATT | IT8226E | SODIMM | WLAN WIMAX | Thermal Sensor | PCH | TP Module | Charger | RGB KB Backlight | USB-C PD | Hi-Fi Audio |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EC_SMB_CK1 EC_SMB_DA1 | IT8226E +3VALW_R | X | V +3VALW_R | V +3VALW_R | X | X | X | X | X | V +3VALW_R | X | X | X |
| EC_SMB_CK2 EC_SMB_DA2 | IT8226E +3VS +1.8VS_AON | V +1.8VS_AON | X | V +3VS | X | X | V +3VS | V +3VALW_PCH | X | X | X | X | X |
| PCH_SMBCLK PCH_SMBDATA | PCH +3VALW_PCH | X | X | X | V +3VS | V +3VS Reserve | X | V +3VALW_PCH | V +3VS | X | X | X | X |
| PCH_RGBKB_SCL PCH_RGBKB_SDA | X | X | X | X | X | X | X | X | X | X | X | X | X |
| EC_SMB_CK0 EC_SMB_DA0 | IT8226E +3VALW | X | X | X | X | X | X | X | X | X | X | V +LDO_3V3 | X |

**EC SM Bus1 address**

| Device | Address |
|---|---|
| Smart Battery Charger | 0X16 0001 0110 b |

**EC SM Bus2 address**

| Device | Address |
|---|---|
| Thermal Sensor F75303M | 1001_100x b |
| VGA | 0x9E (default) |
| PCH | Need to update |

**PCH SM Bus address**

| Device | Address |
|---|---|
| DDR DIMMA | 1010 000X b |
| DDR DIMMB | 1010 010X b |
| TP Module | Need to update |
| Wlan | Reserved |

**PCH I2C 2 Bus address**

| Device | Address |
|---|---|
| RGB Backlight | Need to update |

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Title: **CPU (1/7) DMI,PEG**

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