

Base Station & Smartphone

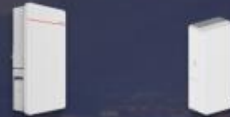
Huawei Provides E2E 5G Solution for R15 Commercialization

Massive MIMO Macro



AAU5613 AAU5310 HAAU5213

Massive MIMO Pole Site



HAAU5112 EasyBlink

Small Cell



5G LampSite

Device



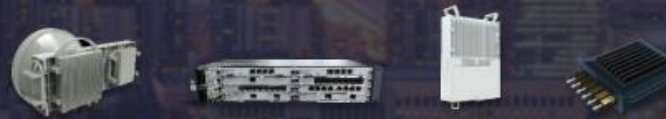
5G CPE

Baseband



BBU5900 CBU5900

Transport



Microwave IPRAN/PTN FO OTN WDM

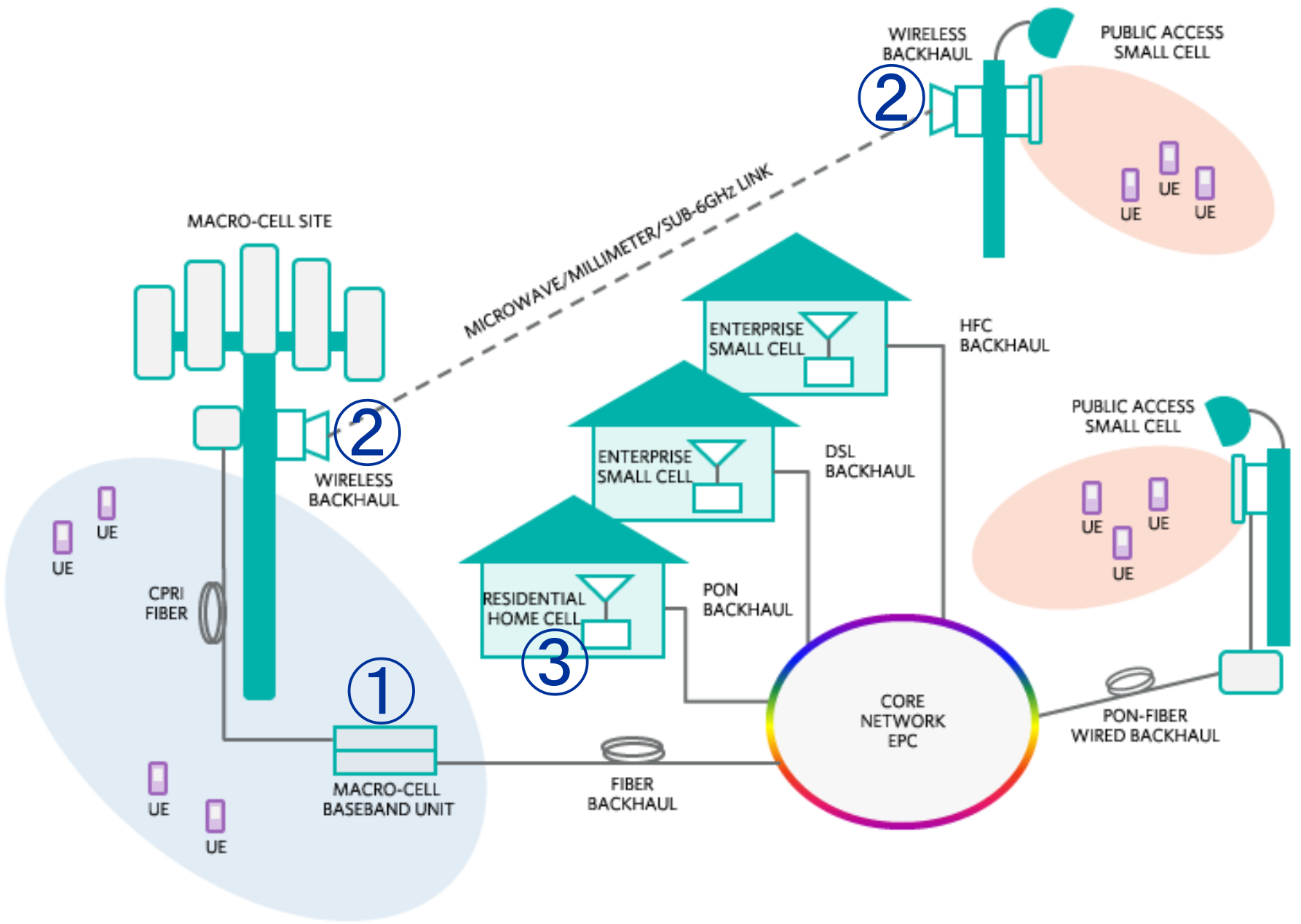
Core



Cloud Based

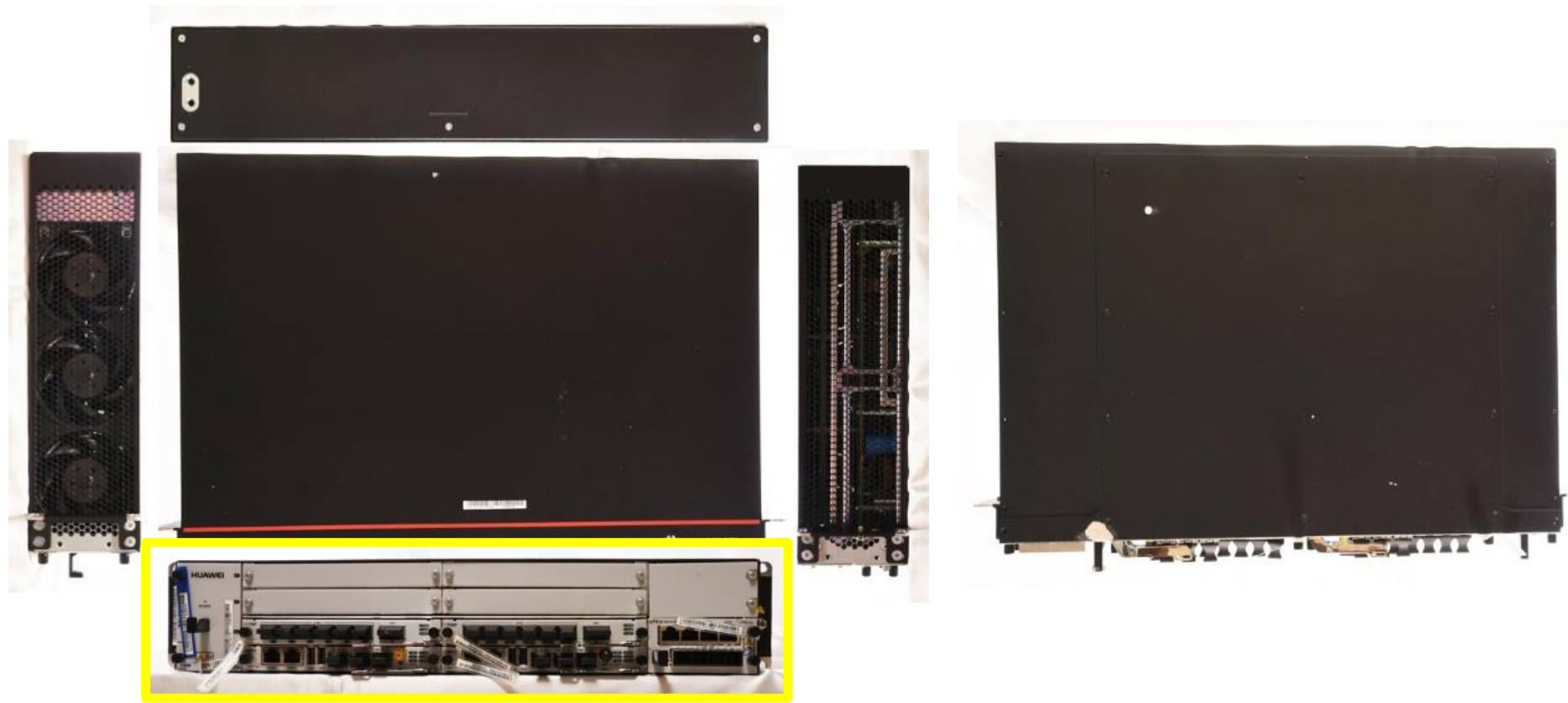
Source: Huawei

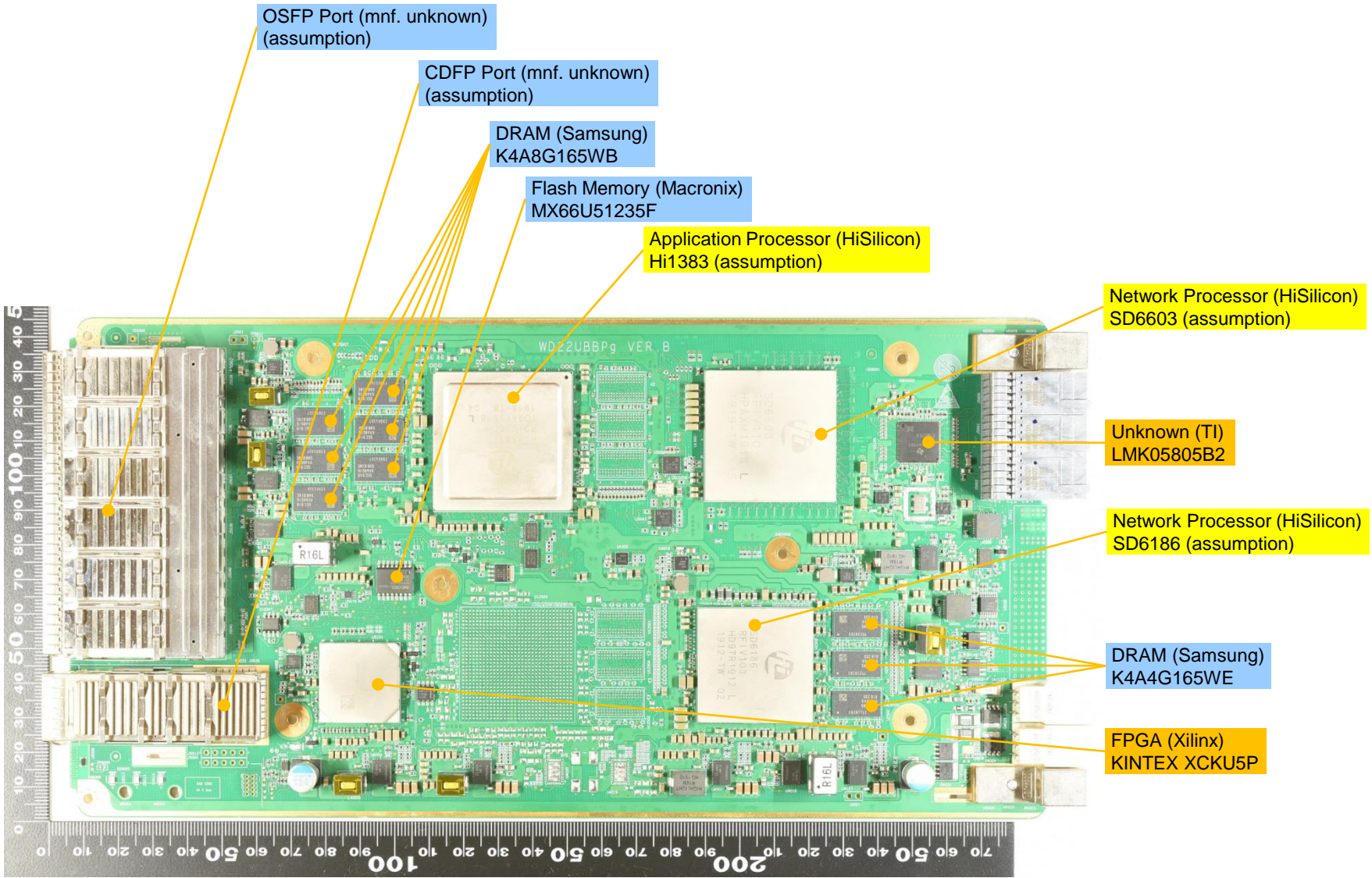
4G/5G WIRELESS NETWORK SYSTEM



Source: maximintegrated.com

1. HUAWEI 5G BASEBAND UNIT BBU5900





OSFP Port (mnf. unknown)
(assumption)

CDFP Port (mnf. unknown)
(assumption)

DRAM (Samsung)
K4A8G165WB

Flash Memory (Macronix)
MX66U51235F

Application Processor (HiSilicon)
Hi1383 (assumption)

Network Processor (HiSilicon)
SD6603 (assumption)

Unknown (TI)
LMK05805B2

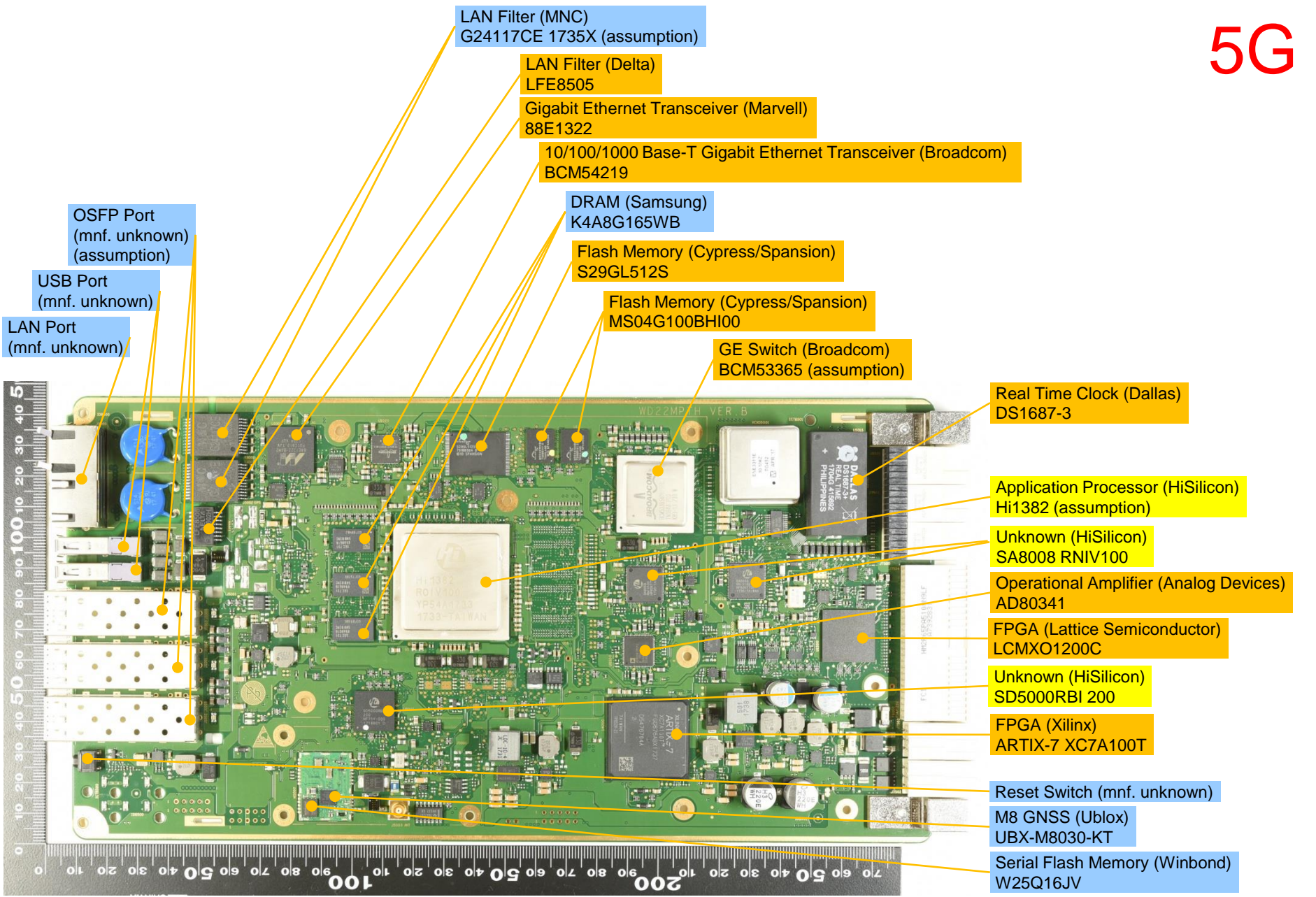
Network Processor (HiSilicon)
SD6186 (assumption)

DRAM (Samsung)
K4A4G165WE

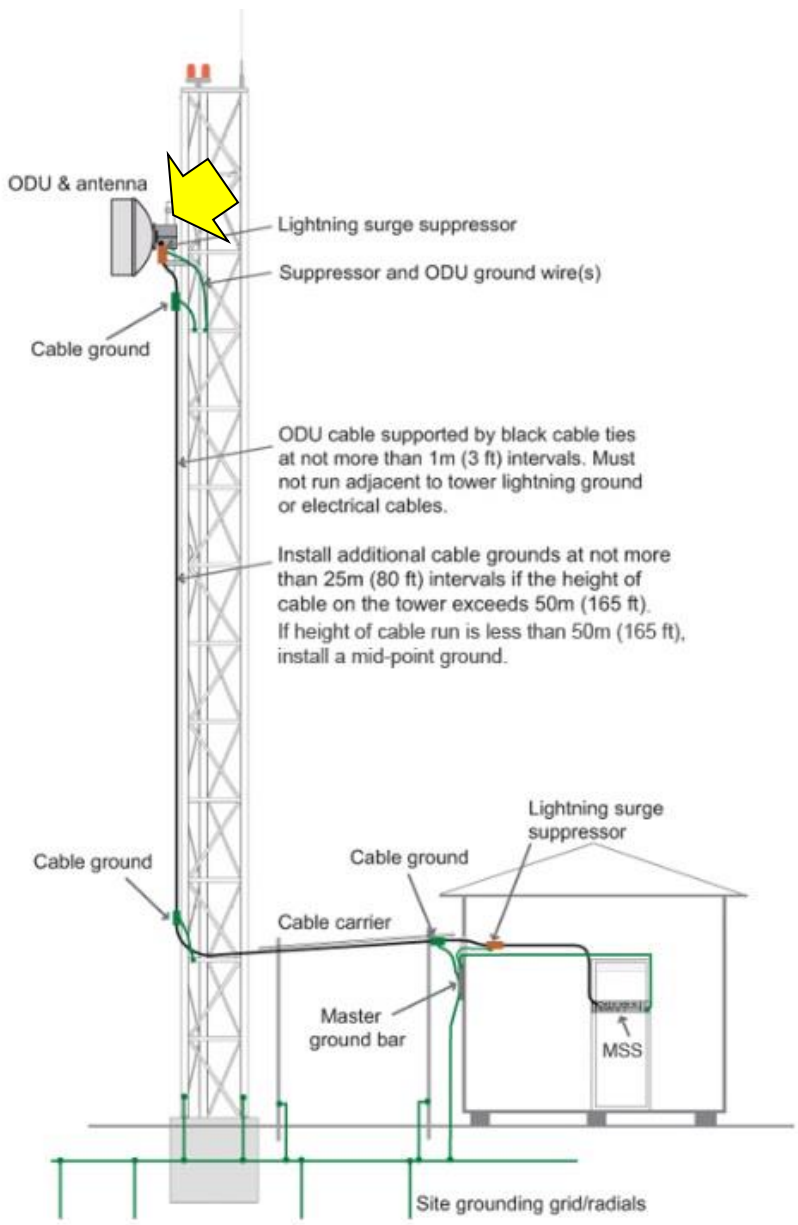
FPGA (Xilinx)
KINTEX XCKU5P

5G SUB-6 BBU

5G



2. ALCATEL LUCENT 38GHz TRANSPORT RADIO

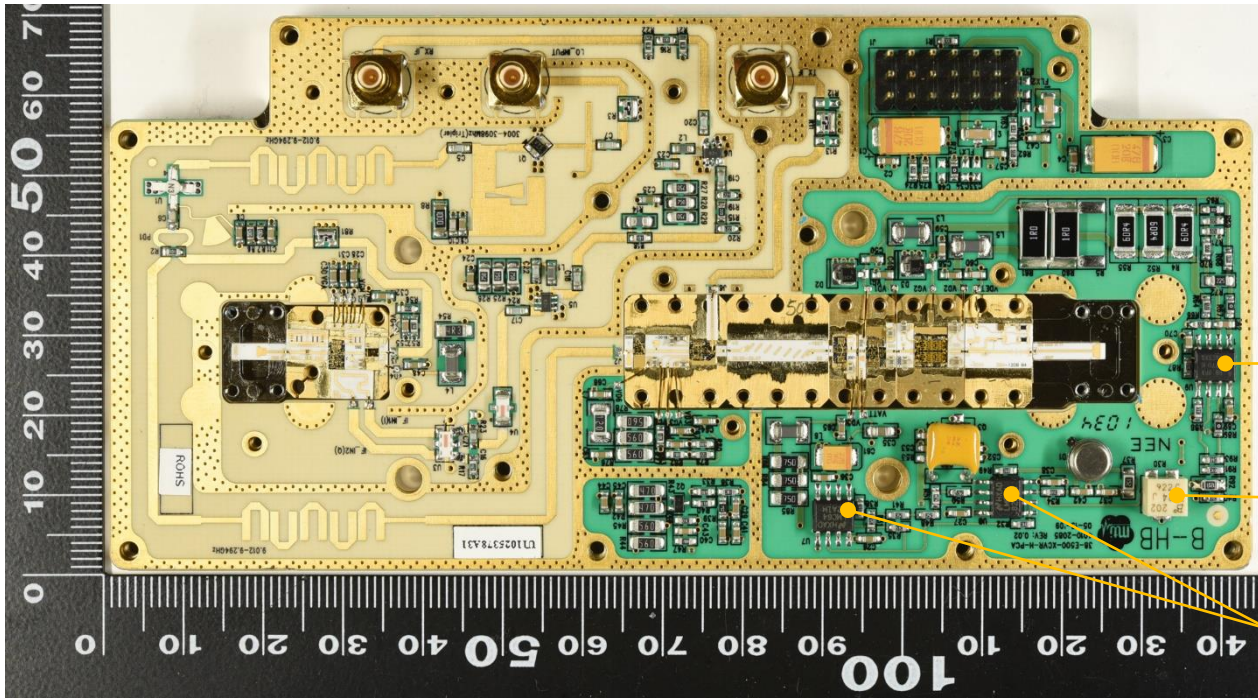


Voltage: -48VDC 
TX FREQ: 38568 - 38908 MHz
RX FREQ: 37308 - 37648 MHz
PART No. 3DB23258HDAA02 
SN: EBT1121K764 
ODU 300, 38 GHz, TX HIGH, HP



Source: https://documentation.nokia.com/html/3EM22841ABAA/odu_cables_connectors_installation.htm

RX TX

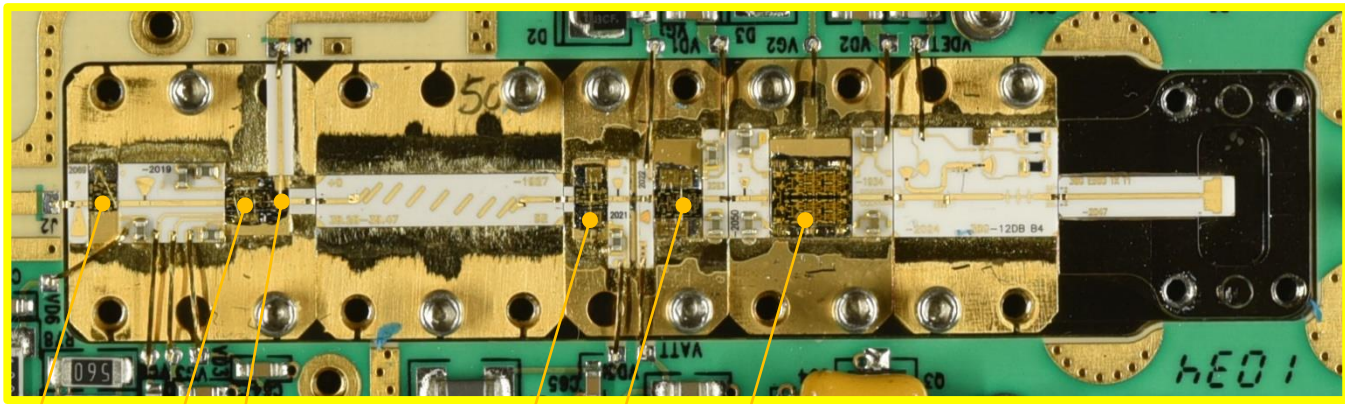
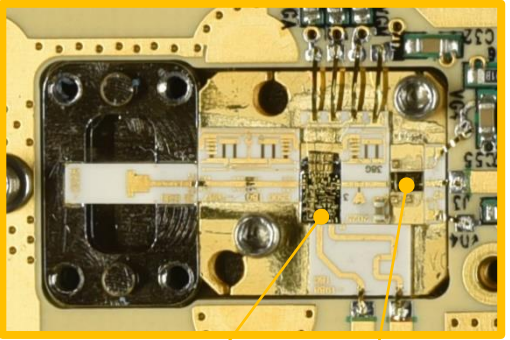
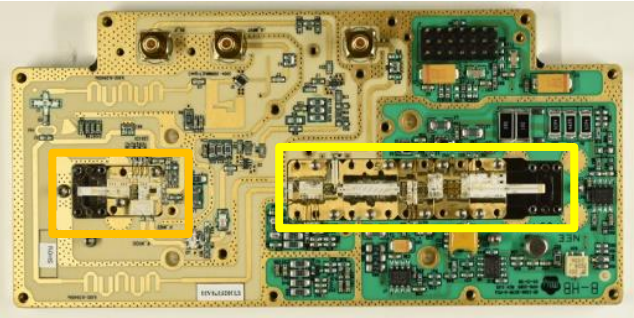


High Precision Operational Amplifier (TI)
OPA2277

Potentiometer, Variable Resistor (Bourns)
3224J-1-202E

Operational Amplifier (TI)
LMC6482

38GHz TX/RX



9401/UMS
WS23 W120 5-10-2-1 V1/Avago

12051/UMS

7921/UMS

99101 2010/HMC

0*01/UMS

FMM5714/Eudyna

EMM5839X/Eudyna

RX

TX

3. HUAWEI 5G SUB-6 SMALL CELL H112-372



HUAWEI 5G无线数据终端
 型号:H112-372
 WLAN名称:HUAWEI_H112_CB74
 WLAN名称(5G):HUAWEI_H112_CB74_5G
 IP:192.168.8.1
 CMIIT ID:2019CP5373
 输入:12V == 2A

扫码下载智能家居APP

IMEI:860730040062755
 S/N:LUNDW19729000375

华为技术有限公司 中国制造

SIM Card ● RESET

仅支持Nano-SIM

PRODUCT OVERVIEW

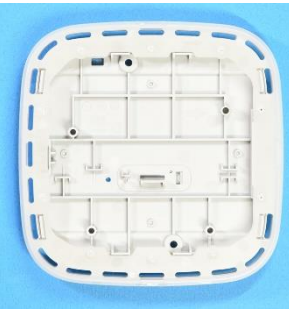
Top Cover



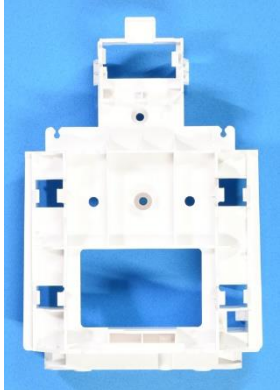
Outer Cover



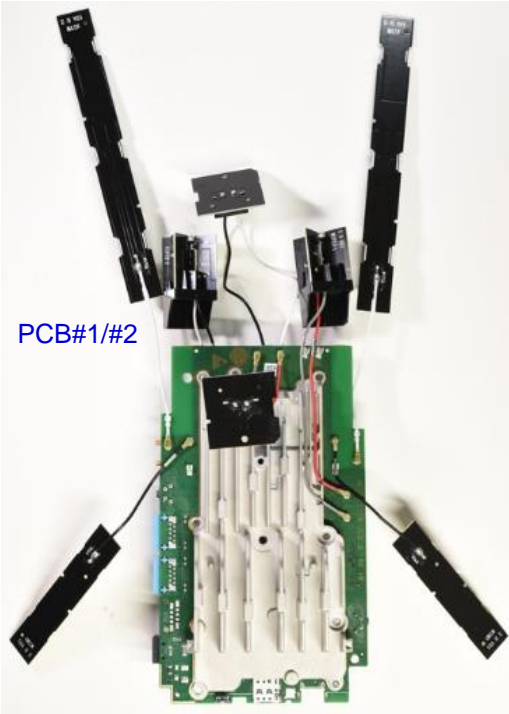
Bottom Cover



PCB Holder (L)



PCB Holder (R)

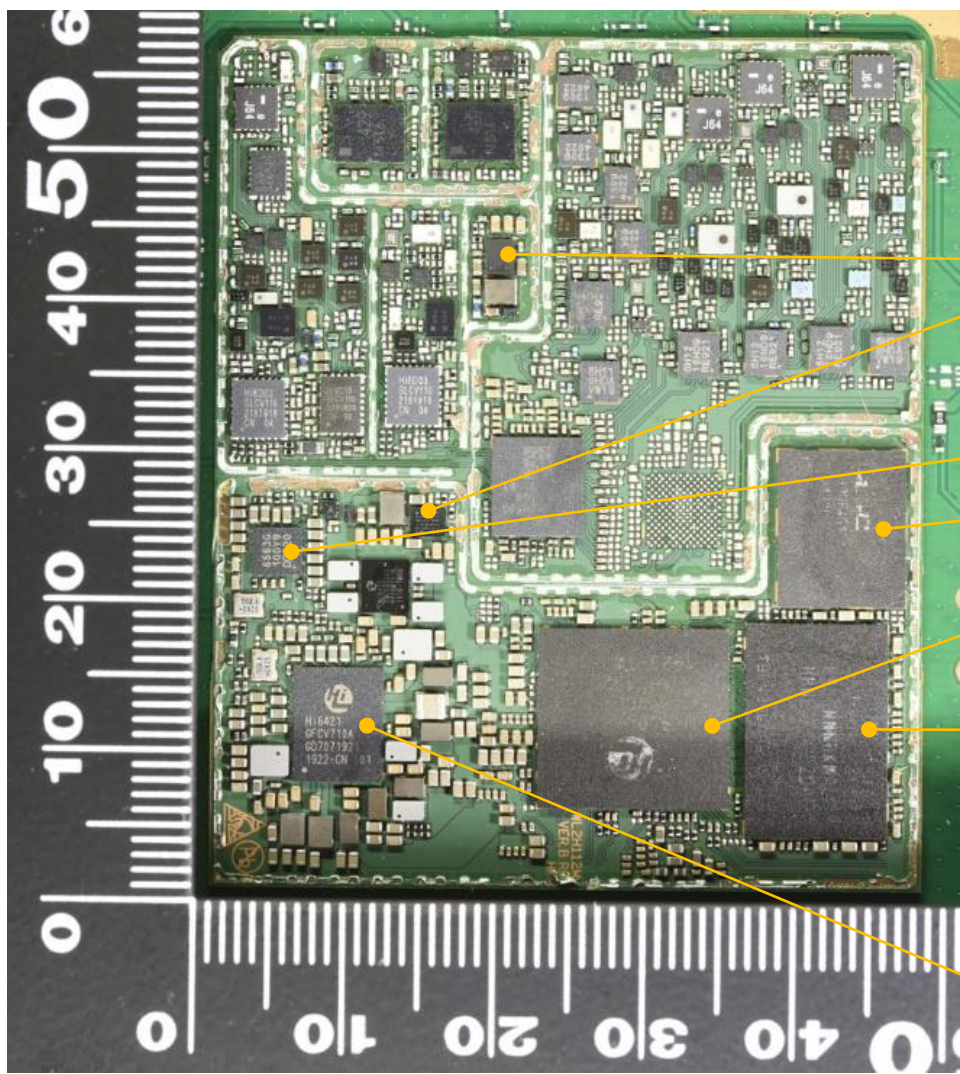


PCB#1/#2

Heatsink (x2)

PCB#2 SIDE A: KEY COMPONENTS

1 notch = 1mm



Unknown
656211 0HPATB 192801 1929TW 6x-54

Unknown
6563G 100Y9 DD920
Flash Memory (Macronix)
MX30UF4G18AB-XKI

Baseband/Application Processor (HiSilicon)
Hi9500 (Balong 5000)

DRAM (SK hynix)
H9HCNNNBKMAL-HRNEE

Power Management (HiSilicon)
Hi6421

PCB#2 SIDE A: KEY COMPONENTS

- SAW Duplexer (Murata) UAC 7E
- SAW Duplexer (Murata) ZAC 7D
- SAW Duplexer (Murata) MAZ 5R

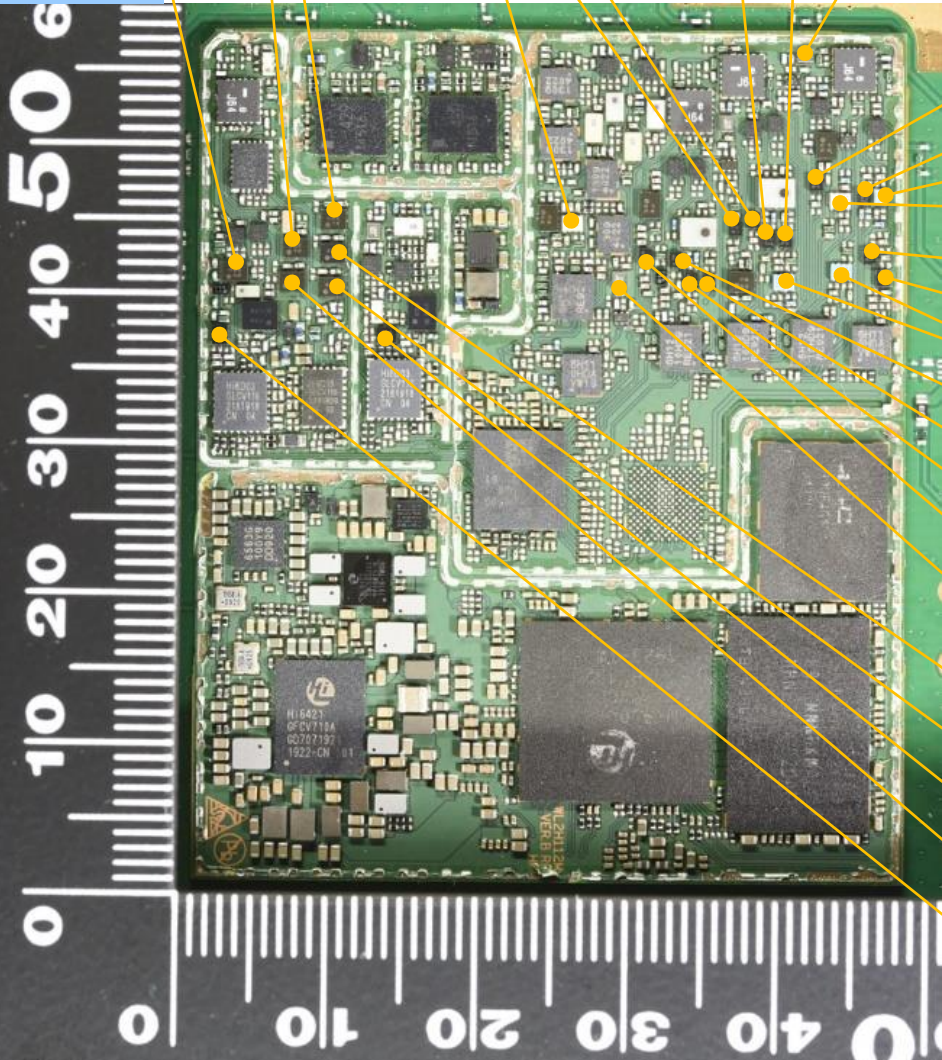
- Filter (Murata) 24 Lf
- Filter (Murata) XT ZZ
- SAW Duplexer (Taiyo Yuden) RDc4

- Filter (Murata) P2 Ke

- Filter (Murata) 28 Wb

- SAW Duplexer (Taiyo Yuden) 175 b47

- Filter (Murata) XT ZZ
- Filter (Murata) 7U BC
- SAW Duplexer (TDK) 8KE KZU
- SAW Duplexer (Taiyo Yuden) RDc4
- Filter (Murata) Y1 Sa
- Filter (Murata) P5 Lb
- SAW Duplexer (TDK) 9P6 YH>
- Filter (Murata) 24 Lf
- Filter (Murata) 28 Wb
- Filter (Murata) P2 Ke
- Filter (Murata) XT ZZ
- SAW Duplexer (Taiyo Yuden) 175 b47
- SAW Duplexer (Murata) SAC 8Z
- SAW Duplexer (Murata) eAa 7M
- SAW Duplexer (Kyocera) KAA A023
- SAW Duplexer (Murata) TAC 6L
- SAW Duplexer (Kyocera) KAA A023



Hisense
海信手机

炫彩夺目 天生就要备受关注

光影流转的炫彩外观



F50 5G 04月20日
海信5G手机F50 邀您见证5G中国芯

海信手机

Hisense
海信手机

5G“芯”生强大 性能强悍锐不可当

5G双模(NSA&SA)全网通
骁龙7751D
Hi-TURBO智慧引擎



F50 5G 04月20日
海信5G手机F50 邀您见证5G中国芯

海信手机

Hisense
海信手机

充沛电量 持续输出更尽兴

超长续航5010mAh大电池
18W快充
PC级液冷散热

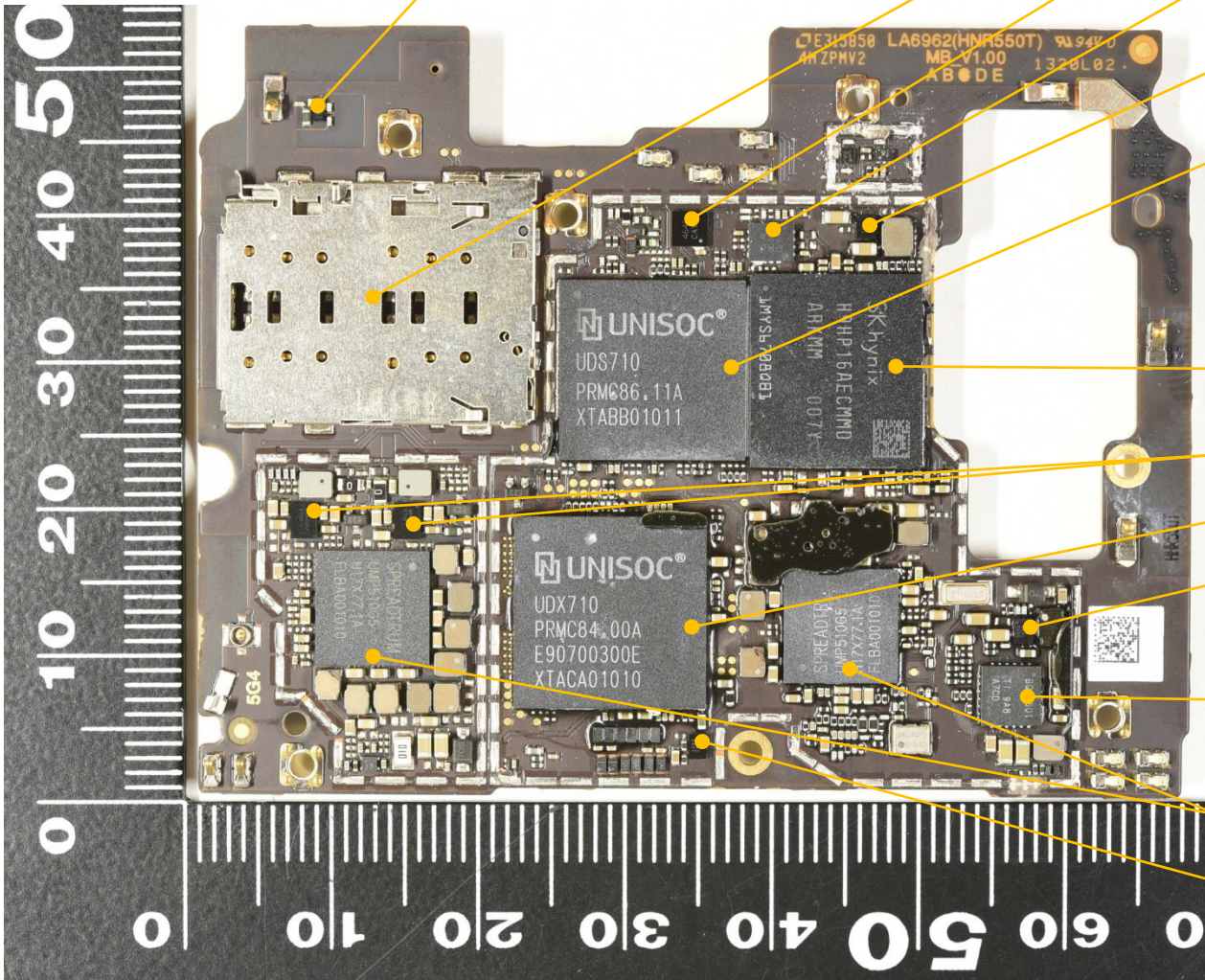


F50 5G 04月20日
海信5G手机F50 邀您见证5G中国芯

海信手机

Source: https://www.gsmarena.com/the_hisense_f50_5g_will_use_a_new_5g_modem_developed_by_a_company_in_china_no_not_huawei-news-42676.php

PCB#1 DISPLAY SIDE: KEY COMPONENTS



Digital Compass (Asahi Kasei)
AK09918

SIM Card Slot (mnf. unknown)

Unknown
4646 CAYx

Accelerometer & Gyroscope (Bosch Sensortec)
BMI160

Unknown
3642 ABE4

Baseband/Application Processor (Unisoc)
UDS710 (assumption)

Flash Memory + DRAM (SK hynix)
H9HP16AECMMD-ARKMM

Boost-Buck DC/DC Converter (Qorvo)
QM81050

5G Baseband Processor (Unisoc)
UDX710 (assumption)

Unknown
MA KAAU BXBQ

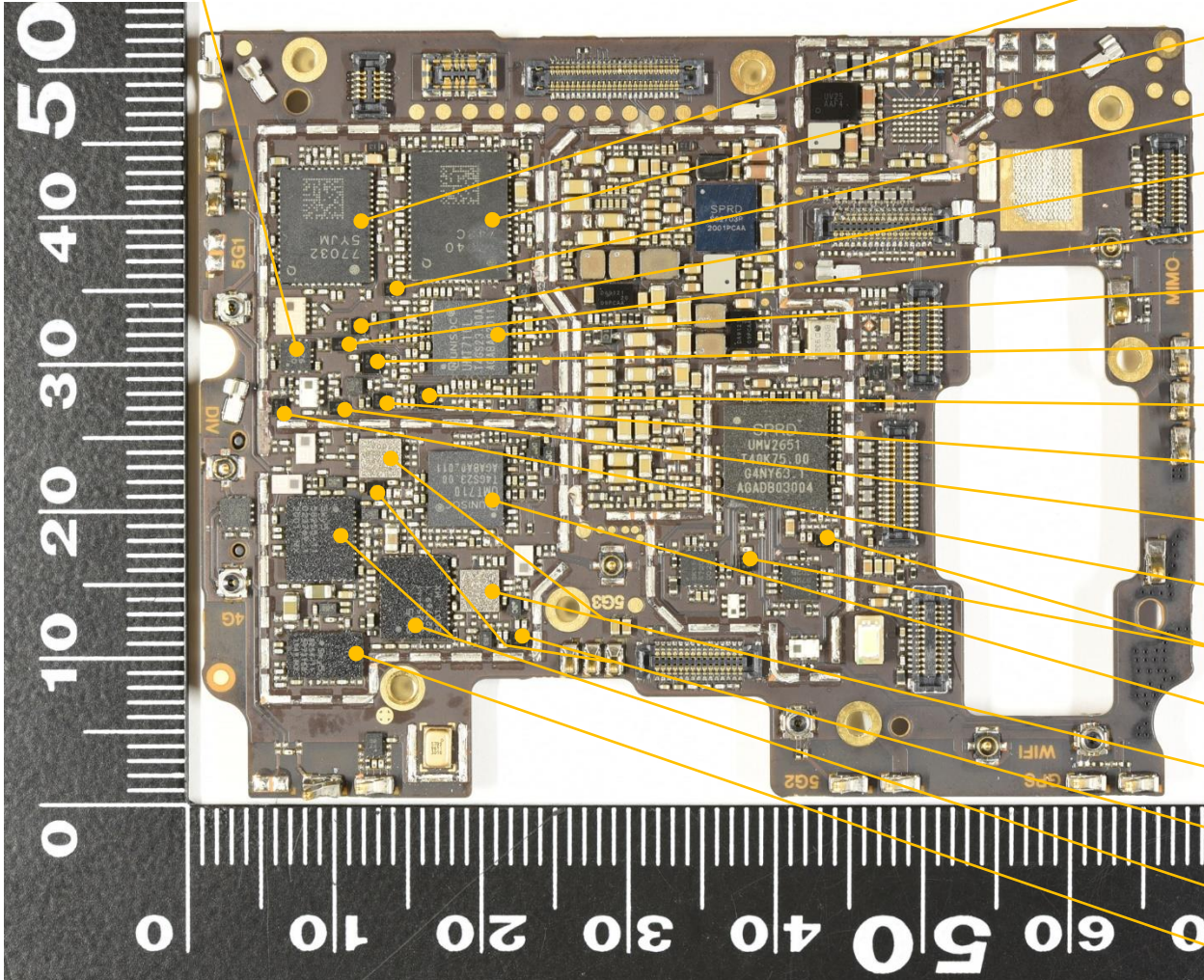
Battery Charger (TI)
BQ25601

Power Management (Unisoc)
UMP510G5 (assumption)

Unknown
LS JYAC BBDF

PCB#1 BATTERY SIDE: CELLULAR

RF Switch
(mnf. unknown)
O8T 9ZQ



LTE/WCDMA/TD-SCDMA/GSM Power Amplifier (Qorvo)
QM77032

5G Sub6/LTE/WCDMA/TD-SCDMA Power Amplifier
(Qorvo)
QM77040

Filter (Murata)
VO MP

Filter (Murata)
XT cm

Filter (Murata)
X6 Em

LTE/WCDMA/TD-SCDMA/GSM Transceiver (Unisoc)
UMT710L (assumption)

Filter (Murata)
Fm HD

Filter (Murata)
Em OJ

Filter (Murata)
P1 Uc

Filter (Murata)
P5 Rc

Filter (Murata)
P4 Xn

Filter (Murata)
73 Zm

5G Sub-6 Transceiver (Unisoc)
UMT710 (assumption)

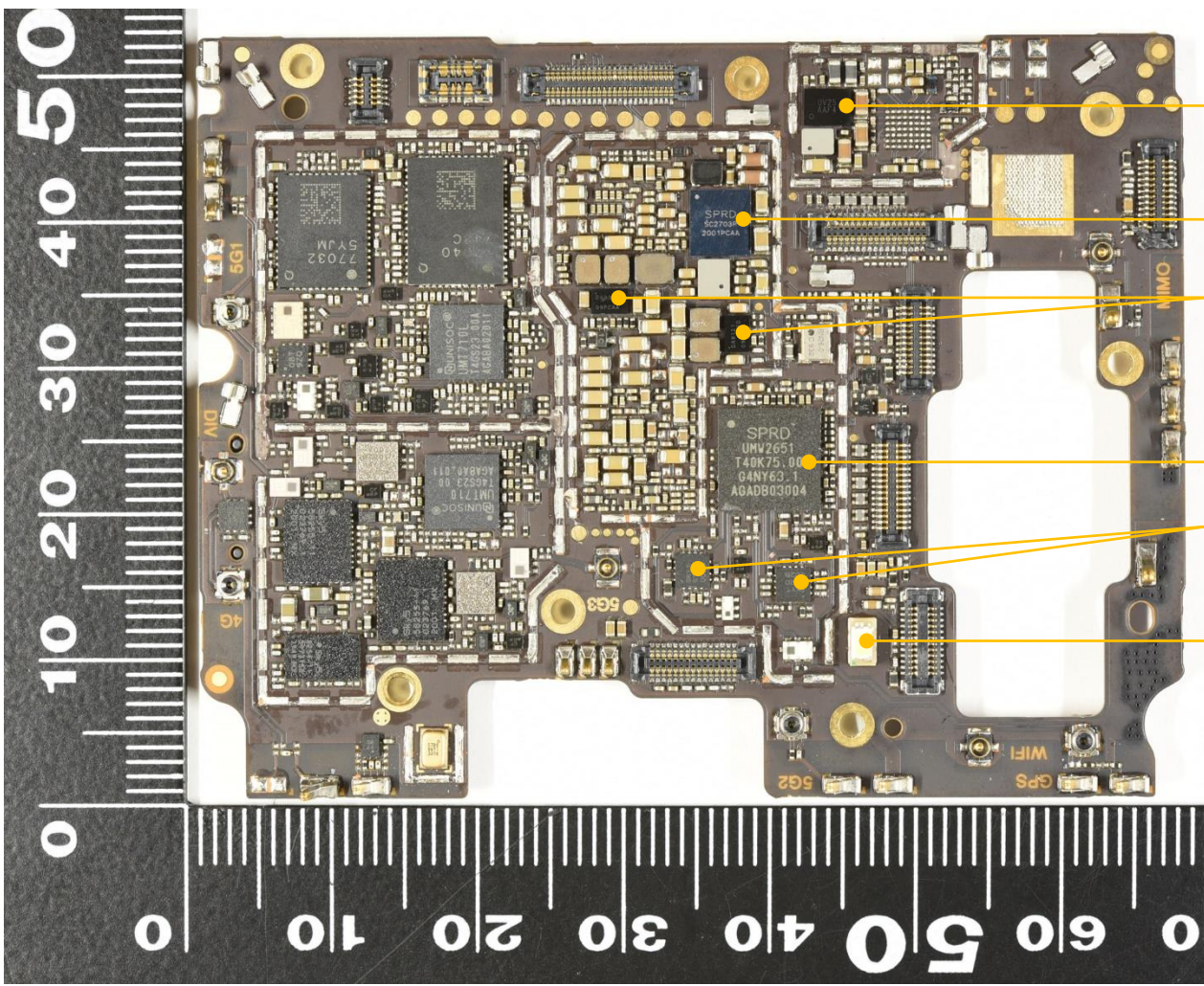
5G Sub6 Diversity Receiver (Skyworks)
SKY5-3728

Filter (Murata)
Cr RP

5G Sub6/LTE Power Amplifier (Skyworks)
SKY5-8255

5G Sub6/LTE Power Amplifier (Skyworks)
SKY5-8254

PCB#1 BATTERY SIDE: KEY COMPONENTS 1 notch = 1mm



Unknown
UV25 AAF4

Power Management + Audio Codec (Unisoc)
SC2703P (assumption)

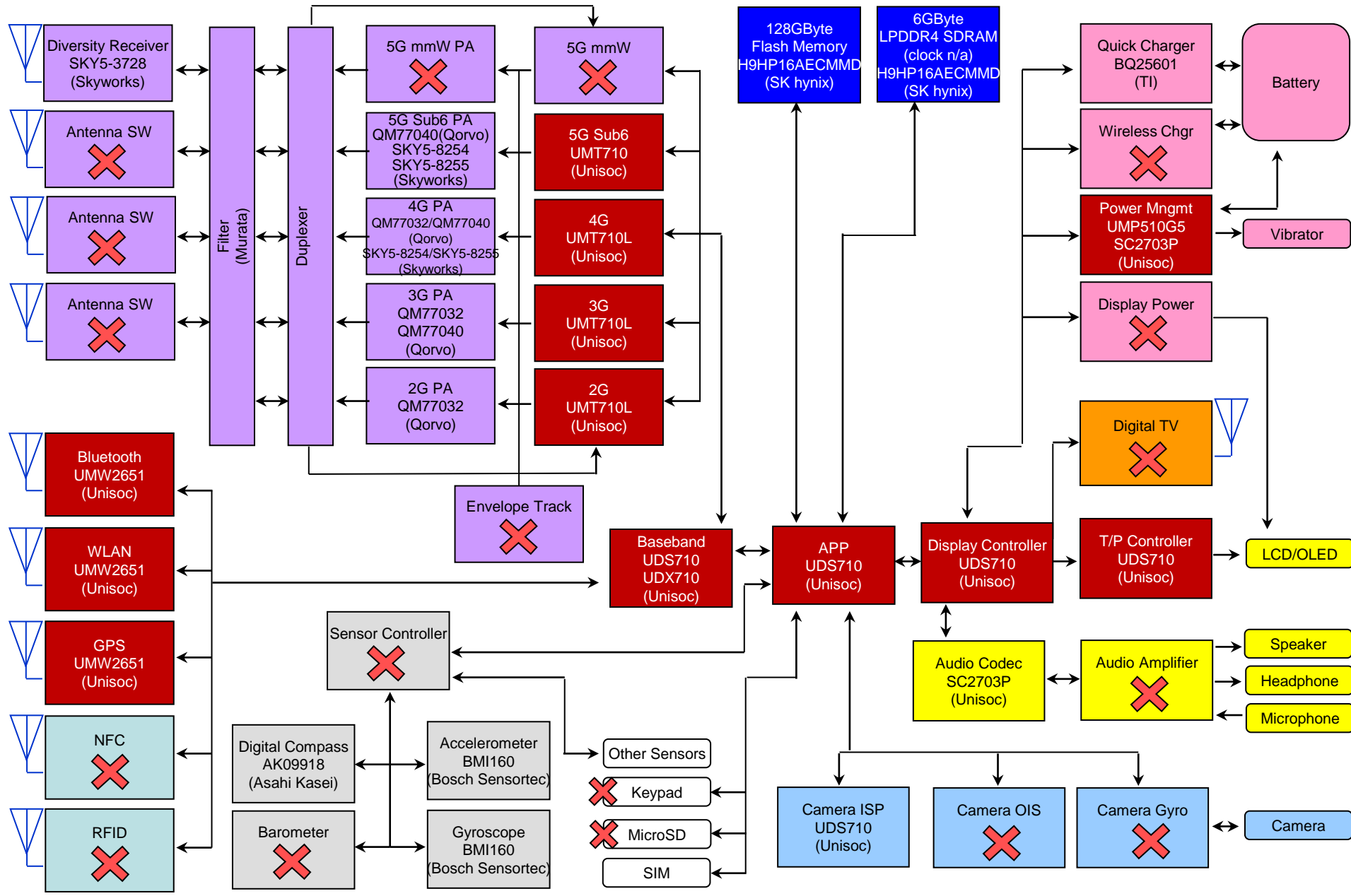
DC/DC Buck Converter (Dialog)
DA9121

WLAN + Bluetooth + GPS (Unisoc)
UMW2651 (assumption)

WLAN Front End Module (Skyworks)
SKY85720

LED Flash (mnf. unknown)

BLOCK DIAGRAM (with assumption)



1. Baseband unit:
Hisilicon controllers used with US FPGA.
2. Small cell:
Hisilicon chipset with Japanese front end components.
3. 38GHz:
Front end uses Teflon material.
4. Hisense smartphone:
Chinese chipset manufacturer “Unisoc” is used with Japanese front end components.

SERVICES

- TEARDOWN: on cellular phone, smartphone, tablet, laptop PC, digital still camera, LCD TV, and other mobile equipments.
- BILL OF MATERIALS: all-component-cost breakdown into more than 100 categories.
- MARKET REPORT: based on requests.
- SEMINAR: based on requests. Free seminars offered to regular subscribers every quarter.
- INTELLECTUAL PROPERTY: old phones available since 1996 up to date. Most of them are functional.

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