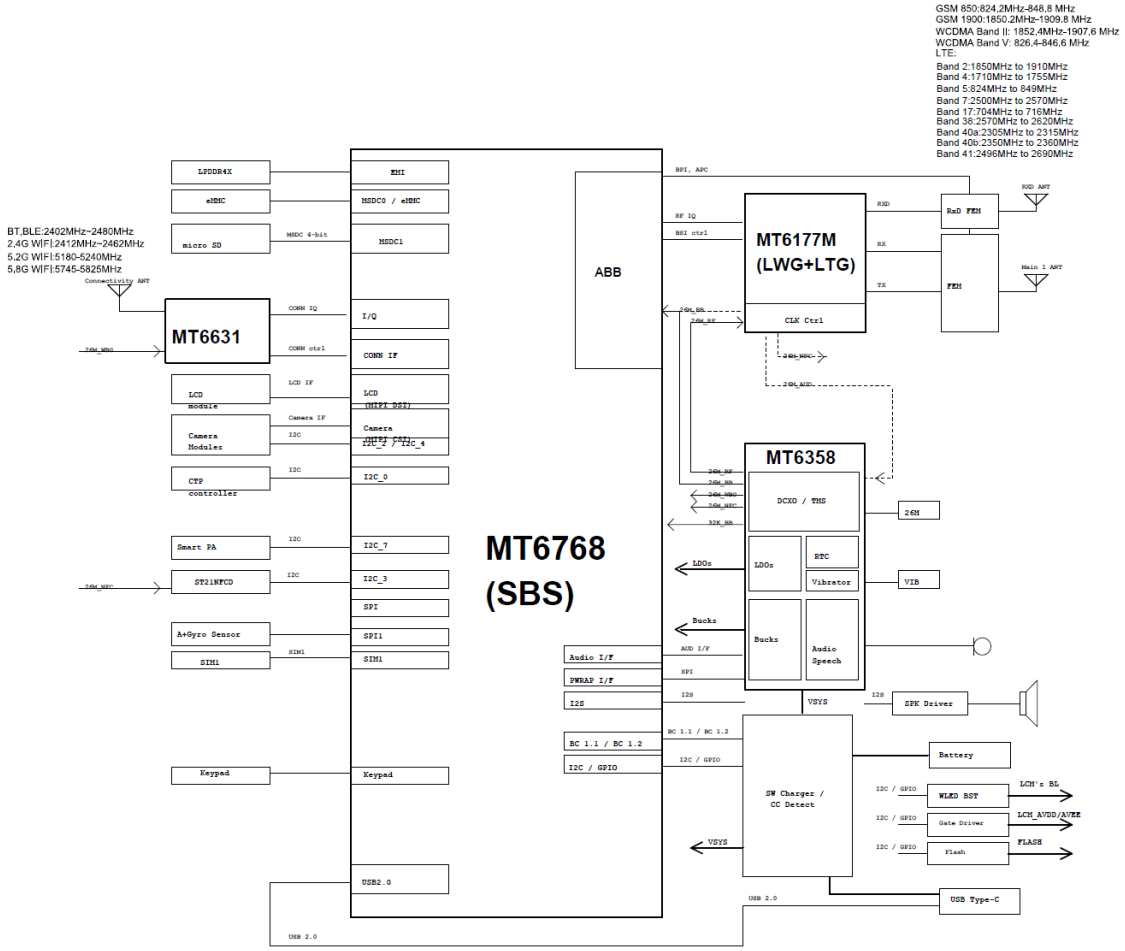
1. Block diagram



2 MCU :MT6768

The MT6768 device, with integrated Bluetooth, FM, WLAN and NFC modules, is a highly integrated baseband platform incorporating both modem and application processing subsystems to enable LTE/LTE-A and C2K tablet applications. The chip integrates two Arm®Cortex-A76 cores operating up to 2.2 GHz, six Arm® Cortex-A55 cores operating up to 2.0 GHz and powerful multi-standard video codec. In addition, an extensive set of interfaces and connectivity peripherals are included to interface to cameras, touch-screen displays and UFS/MMC/SD cards.

3 PMU: MT6358

MT6358 is a power management system chip optimized for 2G/3G/4G handsets and smart

phone. MT6358 contains 3 buck converters and 24 LDOs, which are optimized for specific 2G/3G/smart phone sub systems. MT6358 provides mono 0.7W into 8Ohm, high efficiency class AB/D audio amplifiers and flexibility for various applications of indicator LED drivers. It supports up to 2 channel LEDs with independent controlled. Flexible control includes: register mode, PWM mode and breathe mode. MT6358 supports lithium-ion battery and provides pre charge indication. The charger input voltage can be up to 12V and allows USB charging.

3 BT/FM/WIFI/GPS

MT6631 is a 4-in-1 connectivity chip which contains a WIFI/Bluetooth transceiver, a GPS receiver, and FM receiver front-ends, along with integrated passive device (IPD) in a QFN40 package. Simplified block diagram and how MT6631 connects to companion modem is shown in Figure 1. In Figure 1, RF input /output are labeled in orange, IF interface to companion chip in green, and control / reset in blue and red, respectively. An always on low-dropout regulator (ALDO) provides supply voltage to top control logics in MT6631. The top control logics can control each subsystem independently. Each subsystem also has dedicated LDOS, too. A thermal sensor and its ADC is provided to monitor MT6631 temperature variation. MT6631 does not have its dedicated crystal oscillator. It either uses an external (maybe temperature compensated) oscillator, or uses the clock source from companion chips in the platform such as MT6631.

MT6631 is 4-in-1 connectivity RF chip which contains front-ends of a 2.4GHZ WiFi and Bluetooth transceiver, a GPS/Glonass receiver, and an FM receiver. It also supports integrated passive device to save footprint on PCB and cost due to WiFi / Bluetooth / GPS external BOM(bill of materials) in a 40-pin QFN package. And also supports WiFi external LNA and GPS external LNA.

4 RF Transceiver: MT6177M

MT6177M is a multi-mode multi-band highly integrated transceiver in 40nm CMOS.

5 Technical Parameters

Product Name:	Body Worn Camera
Model/Type reference:	D06
Serial Model:	D01
Power Rating:	Input: DC 5V/2A DC 3.8V 3200mAh 12.16Wh Rechargeable Li-ion battery
Adapter information:	Model: YZDZ18-LD-01z Input: 100-240V~ 50/60Hz 0.3A Output: 5.0V⎓2000mA

Hardware Version:	N/A
Software Version:	N/A
GSM/WCDMA:	
Support Networks:	GSM,GPRS, EDGE, WCDMA, HSDPA, HSUPA
Frequency Bands:	☒GSM 850 ☒PCS1900 (U.S. Bands) ☐GSM 900 ☐DCS 1800 (Non-U.S. Bands) ☒UMTS FDD Band II ☐UMTS FDD Band IV ☒UMTS FDD Band V (U.S. Bands) ☐UMTS FDD Band I ☐UMTS FDD Band VIII (Non-U.S. Bands)
Type of Modulation:	GMSK,8PSK Modulation For GSM/GPRS/EDGE
	BPSK,QPSK Modulation For WCDMA/HSDPA/HSUPA
Frequency Range:	GSM/GPRS/EDGE 850: 824.2MHz-848.8 MHz
	GSM/GPRS/EDGE 1900: 1850.2MHz-1909.8 MHz
	WCDMA Band II: 1852.4MHz-1907.6 MHz
	WCDMA Band V: 826.4-846.6 MHz
Antenna type:	PIFA Antenna
Antenna gain:	GSM850: -1.46dBi, PCS1900: 0.28dBi WCDMA II: 0.28dBi, WCDMA V: -1.46dBi
LTE:	
Operation Band:	FDD-LTE: Band 2/4/5//7/17/38/40a/40b TDD-LTE: Band 41
Support Bandwidth:	Band 2: ☑1.4MHz,☑3MHz,☑5MHz,☑10MHz,☑15MHz,☑20MHz Band 4: ☑1.4MHz,☑3MHz,☑5MHz,☑10MHz,☑15MHz,☑20MHz Band 5: ☑1.4MHz,☑3MHz,☑5MHz,☑10MHz Band 7: ☑5MHz,☑10MHz,☑15MHz,☑20MHz Band 17: ☑5MHz,☑10MHz Band 38: ☑5MHz,☑10MHz,☑15MHz,☑20MHz Band 40: ☑5MHz,☑10MHz Band 41: ☑5MHz,☑10MHz,☑15MHz,☑20MHz
Frequency Range:	Band 2:uplink 1850MHz to 1910MHz; downlink 1930MHz to 1990MHz Band 4:uplink 1710MHz to 1755MHz; downlink 2110MHz to 2155MHz Band 5:uplink 824MHz to 849MHz; downlink 869MHz to 894MHz Band 7:uplink 2500MHz to 2570MHz; downlink 2620MHz to 2690MHz Band 17:uplink 704MHz to 716MHz;downlink 734MHz to 746MHz Band 38:uplink 2570MHz to 2620MHz;downlink 2570MHz to 2620MHz Band 40a:uplink 2305MHz to 2315MHz; downlink 2305MHz to 2315MHz Band 40b:uplink 2350MHz to 2360MHz; downlink 2350MHz to 2360MHz Band 41:uplink 2496MHz to 2690MHz;downlink 2496MHz to 2690MHz

Power Class:	Power Class 3			
Modulation Type:	QPSK, 16QAM			
Antenna type:	PIFA Antenna			
Antenna gain:	LTE Band 2: 0.28dBi; LTE Band 4: -1.31dBi; LTE Band 5: -1.46dBi; LTE Band 7: 1.34dBi; LTE Band 17: -3.10dBi; LTE Band 38: 1.81dBi; LTE Band 40: 2.29dBi; LTE Band 41: 1.81dBi			
2.4G WIFI:				
Supported type:	802.11b/802.11g /802.11n(HT20)/802.11n(HT40)			
Modulation:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM			
Operation frequency:	802.11b/802.11g/802.11n(H20): 2412MHz~2462MHz 802.11n(H40): 2422MHz~2452MHz			
Channel number:	802.11b/802.11g/802.11n(H20): 11 802.11n(H40): 7			
Channel separation:	5MHz			
Antenna type:	PIFA antenna			
Antenna gain:	1.24dBi			
5G WIFI:				
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system
	802.11a 802.11n 802.11ac	802.11n 802.11ac	802.11ac	N/A
Operation frequency:	5180-5240MHz 5745-5825MHz	5190-5230MHz 5755-5795MHz	5210MHz 5775MHz	N/A
Modulation:	OFDM	OFDM	OFDM	N/A
Channel number:	9	4	2	N/A
Channel separation:	20MHz	40MHz	80MHz	N/A
Antenna type:	PIFA antenna			
Antenna gain:	1.77dBi			
Bluetooth :				
Supported type:	Bluetooth BR/EDR			
Modulation:	GFSK, π/4DQPSK, 8DPSK			
Operation frequency:	2402MHz~2480MHz			
Channel number:	79			
Channel separation:	1MHz			
Antenna type:	PIFA antenna			
Antenna gain:	1.24dBi			
Bluetooth LE:				
Supported type:	Bluetooth LE			

Modulation:	GFSK
Operation frequency:	2402MHz~2480MHz
Channel number:	40
Channel separation:	2MHz
Antenna type:	PIFA antenna
Antenna gain:	1.24dBi

The product uses three FPC Antennas, one for BT&WIFI , one for WWAN main(TX&RX) and one for WWAN diversity(RX only) BT&WIFI antenna and WWAN main antenna can transmit simultaneously