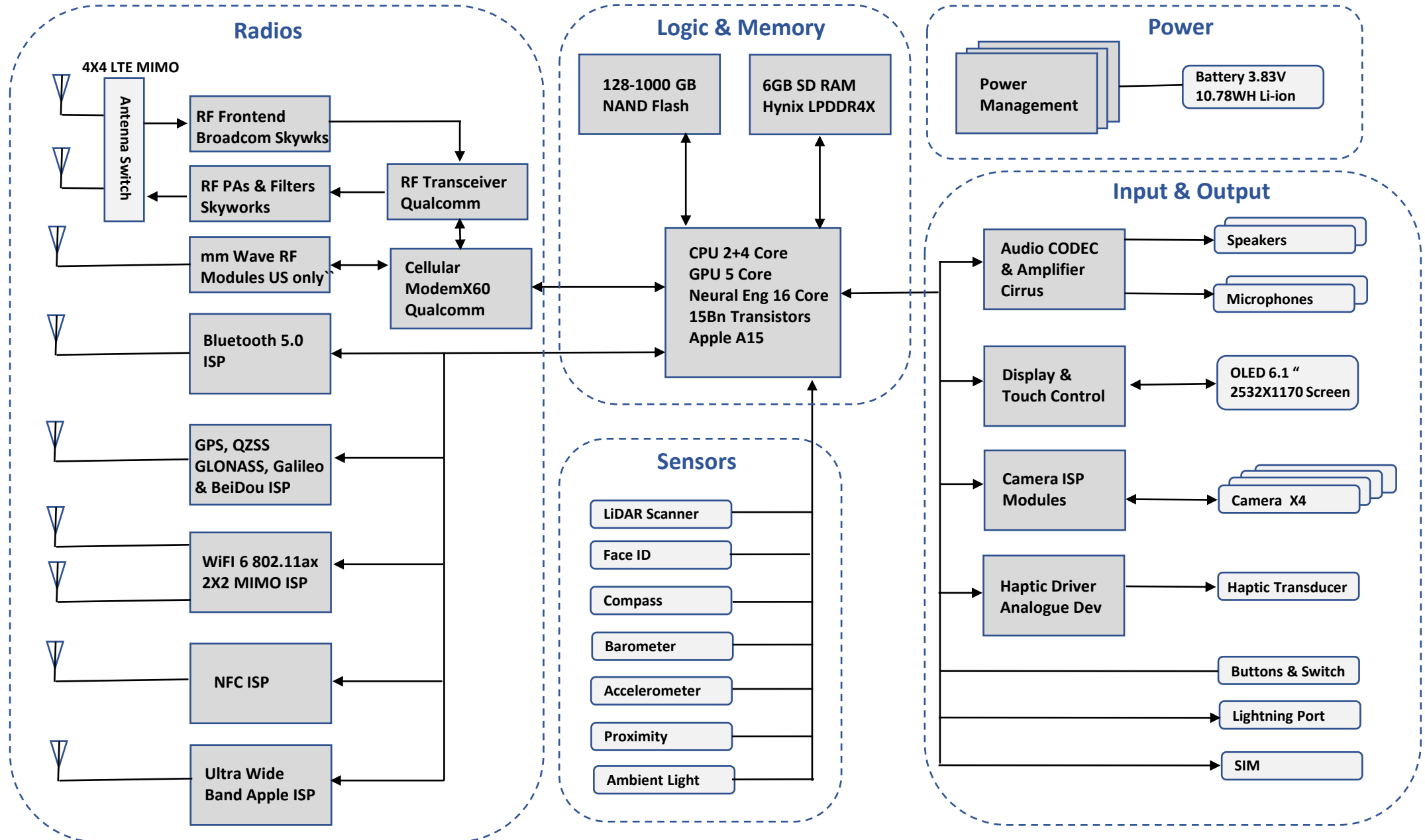


iPhone 13 Pro Block Diagram



iPhone 13 Radio Features

5G (sub-6 GHz)

Gigabit LTE with 4x4 MIMO and LAA4

Wi-Fi 6 (802.11ax) with 2x2 MIMO

Bluetooth® 5.0 wireless technology

Ultra Wideband chip for spatial awareness

NFC with reader mode

GPS, GLONASS, Galileo, QZSS and BeiDou

iPhone 13 Cellular Bands

5G NR (Bands n1, n2, n3, n5, n7, n8, n12, n20, n25, n28, n30, n38, n40, n41, n48, n66, n77, n78, n79)

FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 30, 32, 66)

TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)

CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)



iPhone 13 PRO Camera Features

Pro 12MP camera system: Telephoto, Wide and Ultra Wide cameras

Telephoto: f/2.8 aperture

Wide: f/1.5 aperture

Ultra Wide: f/1.8 aperture and 120° field of view

3x optical zoom in, 2x optical zoom out; 6x optical zoom range

Digital zoom up to 15x

Night mode portraits enabled by LiDAR Scanner

Dual optical image stabilisation (Telephoto and Wide)

Sensor-shift optical image stabilisation (Wide)

Six-element lens (Telephoto and Ultra Wide); seven-element lens (Wide)

True Tone flash with Slow Sync

Sapphire crystal lens cover

100% Focus Pixels (Wide)

Smart HDR 4

Macro photography

Apple ProRAW

Photo geotagging

Auto image stabilisation

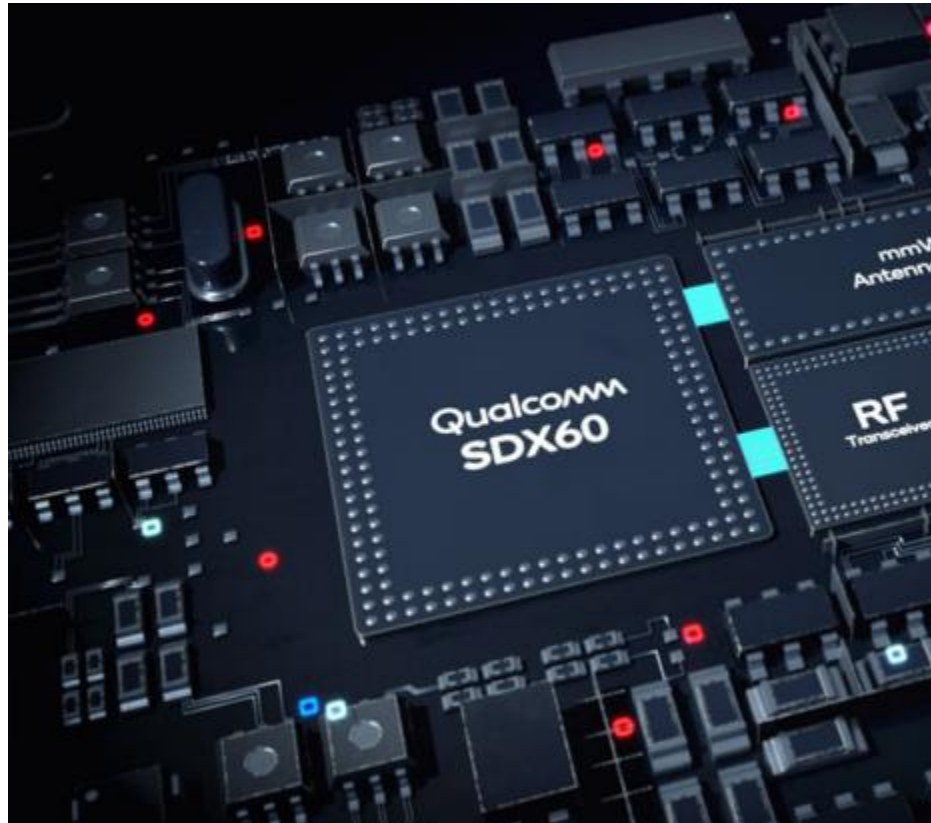
Burst mode

Image formats captured: HEIF and JPEG



iPhone 13 Cellular Modem X60 Qualcomm

Fabricated in 5nm TSMC technology (same as A15)
Has companion RF System which Apple don't use
Has mmWave capability which is not equipped in iPhone 13 outside USA



Specifications

5G

5G Chipset	Snapdragon X60 5G Modem-RF System
5G Technology	5G NR
5G Spectrum	mmWave-sub6 carrier aggregation, sub-6 carrier aggregation (FDD-TDD, FDD-FDD, TDD-TDD), Dynamic Spectrum Sharing (DSS), mmWave, sub-6 GHz
5G Modes	FDD, TDD, SA (standalone), NSA (non-standalone)
5G mmWave	800 MHz bandwidth, 8 carriers, 2x2 MIMO
5G sub-6 GHz	200 MHz bandwidth, 4x4 MIMO
5G Peak Download Speed	7.5 Gbps
5G Peak Upload Speed	3 Gps
5G SIM	5G Dual SIM support

Performance Enhancement Technologies:

Qualcomm® 5G PowerSave, Qualcomm® Smart Transmit™ technology, Qualcomm® Signal Boost, Qualcomm® RF Gaming Mode Boost, Qualcomm® Wideband Envelope Tracking

Cellular Technology

Cellular Technology	5G NR, LTE, WCDMA (DB-DC-HSDPA, DC-HSUPA), TD-SCDMA, CDMA 1x, EV-DO, GSM/EDGE
LTE Technology	LTE FDD, LTE TDD including CBRS support, LAA, LTE Broadcast
5G Technology	5G TDD, SA, 5G FDD, NSA



