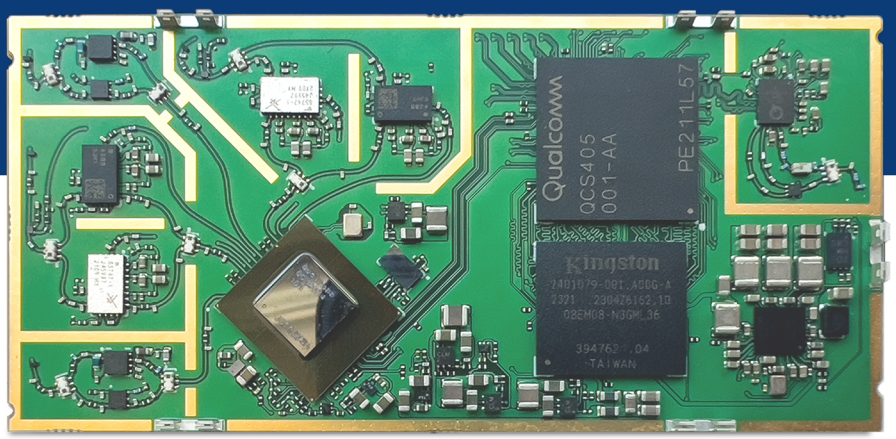
TobuFi SoM

TobuFi is an advanced SOM (system on module) built using the cutting-edge Qualcomm® QCS405 chip and a high-end dual-band Wi-Fi 6 radio powered by QCN9074 chipset.

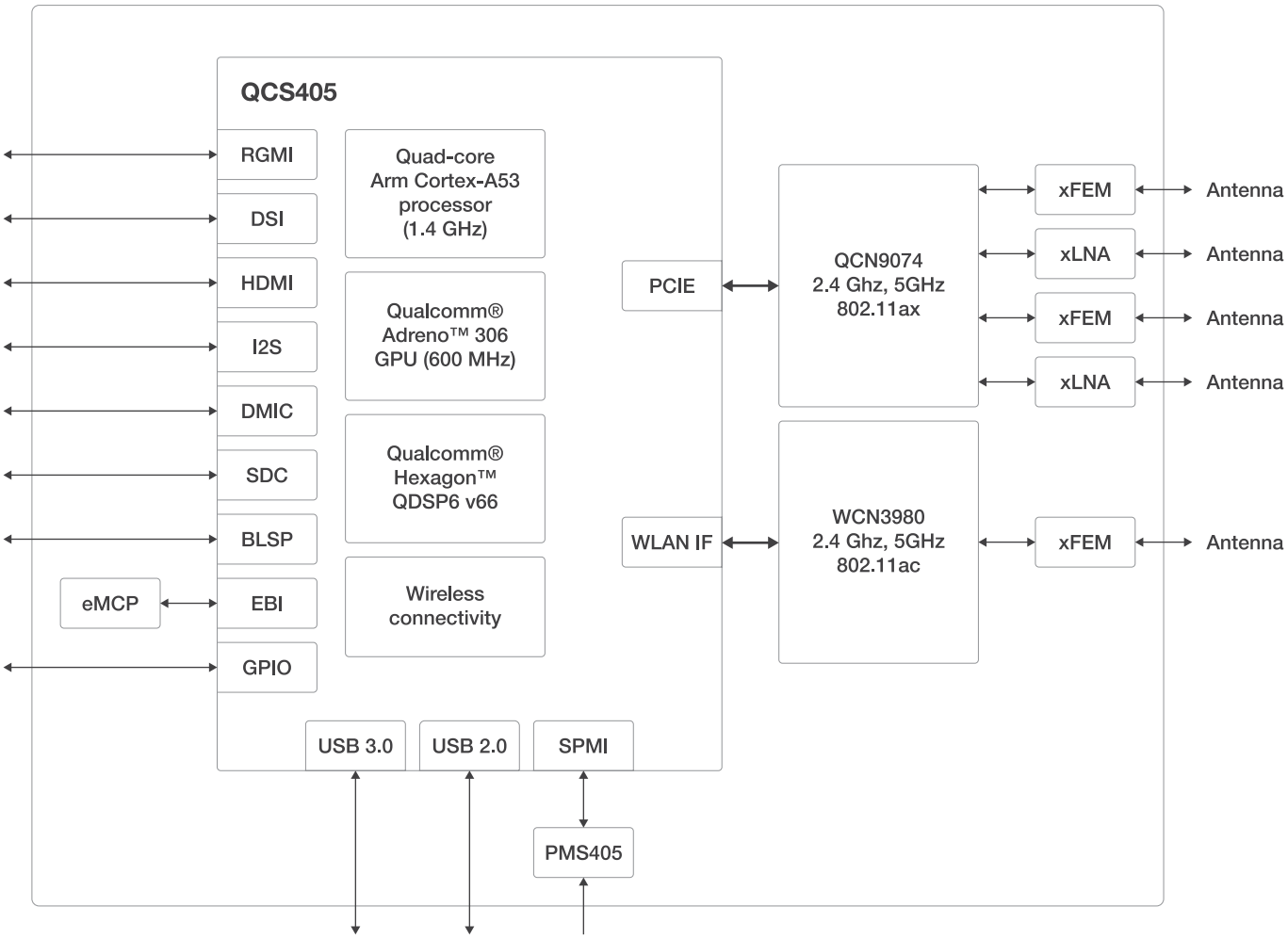
With an additional WiFi 6 radio, AI and DSP features integrated into the QCS405, TobuFi ensures reliable data transmission and efficient processing that are ideal for robotics and drone applications.



Quick specs

- Processor based on Qualcomm QCS405 SoC;
- Radio 1 based on Qualcomm QCN9074 Wi-Fi 6 (802.11a/g/n/ac/ax) 2.4 GHz and 5 GHz with 2x4;
- Extended radio frequency ranges 2312-3000 MHz and 4900-5925MHz;
- Support for narrow bandwidth 5/10MHz with standard 20/40/80/160 MHz in full extended range;
- Optimized for reliable long-range communication (10+ km wireless links);
- Reduced channel steps 1MHz for 2.4GHz and 5GHz;
- Non-standard center frequency channels for interference mitigation;
- Radio 2 based on Qualcomm WCN9380 Wi-Fi 5 (802.11a/g/n/ac) 2.4 GHz and 5 GHz with 1x1 MU-MIMO 20/40/80 Bluetooth 5.0 +LE & FM;
- Radio 1 | 2.4 GHz up to 28dBm; 5 GHz 27dBm RF output power per chain;
- Radio 2 | 2.4 GHz up to 22dBm; 5 GHz 20dBm RF output power per chain;
- Memory eMCP: LPDDR3 1GB + eMMC 8GB;
- LGA; size – 36.6 by 76.6 mm;
- Software platform: OpenEmbedded / Yocto;
- Available interfaces: USB 3.0; USB 2.0; RGMI; DSI, HDMI; I2S; DMIC; SDC; UART; SPI; I2C; GPIO.

BLOCK DIAGRAM



Feature	Description
CPU	Qualcomm QCS405 Arm Cortex A53 quad-core; 1.4GHz; 64-bit
Memory	LPDDR3 1GB + eMMC 8GB
Graphics	Qualcomm® Adreno™ 306 graphics processing unit (GPU) with 64-bit addressing; 600MHz
DSP	Qualcomm® Hexagon™ QDSP6 v66 with Low Power Island and Voice accelerators
Audio	Serial low-power interchip media bus (SLIMbus); MI2S
Display	General display interfaces: One 4-lane MIPI DSI ports, DSI support up to 720P, HDMIv1.4a support up to 1080p 30fps, RGB support, SPI
WIFI	Qualcomm QCN9074 Wi-Fi 6 (802.11a/g/n/ac/ax) 2.4 GHz and 5 GHz with 2x4 (2 transmit chains and 4 receive chains) MU-MIMO 20/40/80/160 MHz. 1 2.4 GHz up to 28dBm; 5 GHz 27dBm RF output power per chain Qualcomm WCN9380 Wi-Fi 5 (802.11a/g/n/ac) 2.4 GHz and 5 GHz with 1x1 MU-MIMO 20/40/80 2.4 GHz up to 22dBm; 5 GHz 20dBm RF output power per chain
Bluetooth	Bluetooth 5.0 and FM RDS/RBDS
USB	USB 2.0, USB 3.0
Ethernet	RGMI
SD	One 8-bit (SDC1, 1.8 V) and one 4-bit (SDC2, 1.8/2.95 V)
Other interfaces	I2S; DMIC; SDC; UART; SPI; I2C; GPIO
Size	36.6 x 76.6 mm
Module type	LGA