

# itbrainpower.net xyz-mIoT v2.09 brief technical specifications

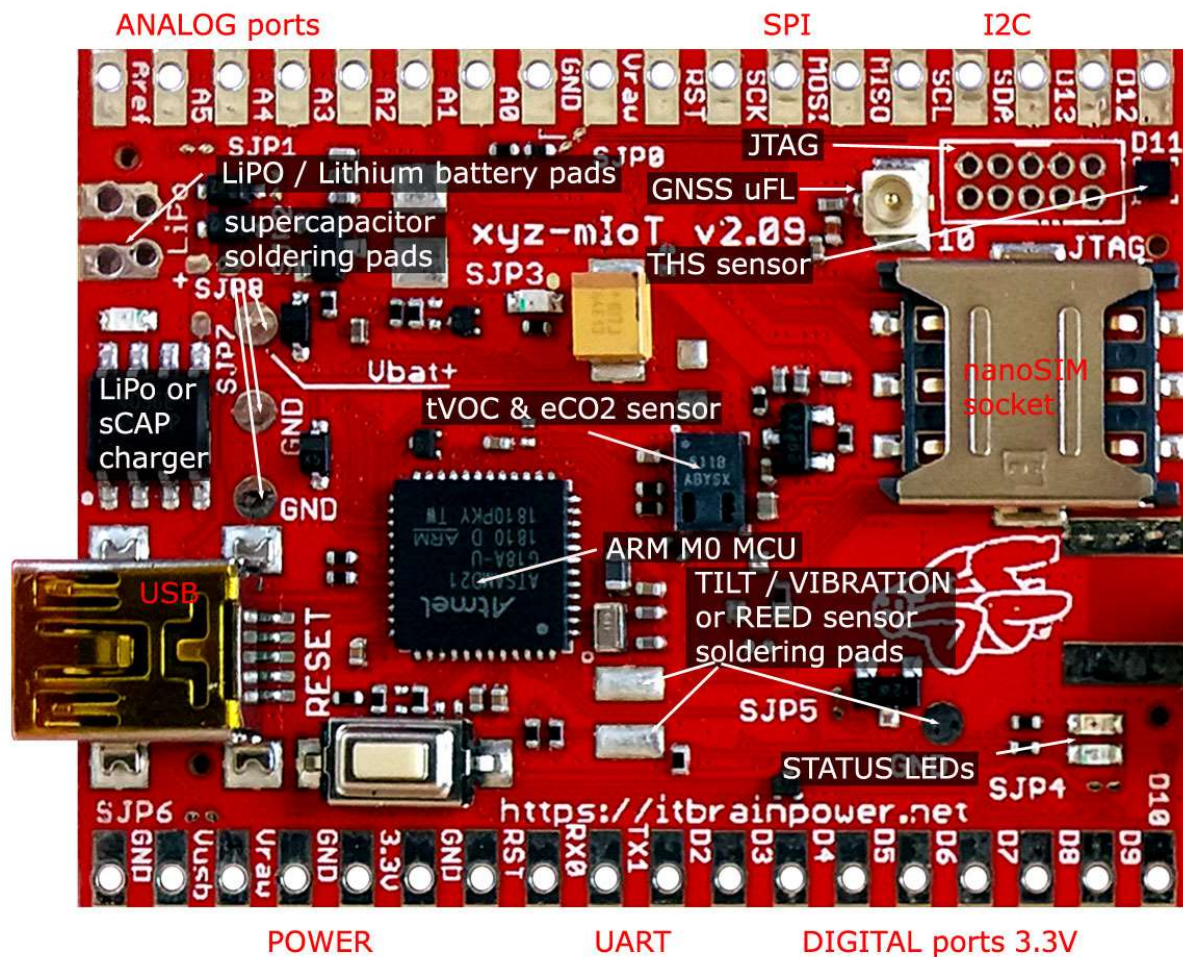
<b>Microcontroller</b>	SAMD21 Cortex-M0+ 32bit low power ARM MCU
Dimensions/weight	35x45mm / around 7g
Power Supply (USB/VIN/Vcc)	5V/5-7V/3.6-4.2V
Supported LiPo Battery (integrated charger)	LiPo 1cell - 3.7V
Interfacing Voltage	3.3V
Digital I/O Pins	13
PWM Pins	12
UART (hardware)	1
SPI(hardware)	1
I2C (hardware)	1
Analog Input Pins	5 (ADC 8/10/12 bit)
External Interrupts	8
DC Current per I/O Pin	7 mA
Flash Memory / SRAM	256 KB / 32KB
Clock Speed	32.768 kHz (RTC), 48 MHz
<b>On board Sensors (mix and match):</b>	
DHT sensor (optional)	HDC2010 (Temperature $\pm 0.2^{\circ}\text{C}$ typ. / Humidity $\pm 2\%$ )
tVOC & eCO2 sensor (optional)	CCS811 (CO2 400-8192ppm / tVOC 0-1187ppb)
HALL or IR sensor (optional)	DRV5032 or KP-2012P3C (IR 940 nM)
second IR sensor (optional)	KP-2012P3C (IR 940 nM)
TILT or REED sensor (optional)	SW200D( $\pm 15$ degree) / REED
<b>LPWR LTE / 3G / GSM options:</b>	
2G modem	M95FA (quad band GSM, ww* coverage)
3G modem	UG96 (3G ww* + GSM900 + GSM 1800)
<u>LTE CAT M1</u> modem	BG96 (LTE CAT M1 + NB IoT + GSM ww*)
<u>LTE NB IoT</u> modem	BC95G (NB IoT ww*)
<i>Industrial Embedded SIM</i> (optional)	VQFN-8 5.00*6.00 mm (Eg: SLM76CF3201P)

\* ww - worldwide

## **GPS options (only for LTE CAT M1 variant):**

GNSS [GPS + GLONASS]	Yes, having *AAPM
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\* AAPM – active antenna power management



## xyz-mIoT v2.09 IoT sensor platform – PN coding

Module based PN schema, UFL connector (choose your modem option):

- xyz-mIoT v2.09, equipped with BG96 [CAT M1 + NB IoT + GSM + GPS] - PN: XYZMIOT209#BG96-UFL-xxxxxxx
- xyz-mIoT v2.09, equipped with BC95G [NB IoT only] - PN: XYZMIOT209#BC95G-UFL-xxxxxxx
- xyz-mIoT v2.09, equipped with M95FA [GSM only] - PN: XYZMIOT209#M95FA-UFL-xxxxxxx
- xyz-mIoT v2.09, equipped with UG95E [3G + GSM] - PN: XYZMIOT209#UG95E-UFL-xxxxxxx
- xyz-mIoT v2.09, no modem - PN: XYZMIOT209#NOMODEM-000-xxxxxxx

In previous PN, replace “xxxxxxx” suffix with sensor code (chosed the board sensors flavor):

- HDC2010 + DRV5032 – xxxxxxx: 1100000
- HDC2010 + DRV5032 + SW200D – xxxxxxx: 1110000
- HDC2010 + DRV5032 + SW200D + CCS811 – xxxxxxx: 1110100
- no sensor – xxxxxxx: 0000000

For SMA version, replace the “UFL” particle with “SMA”.