

## Bill of materials

**Table 1. X-STM32MP-GNSS1 bill of materials**

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	1	B1	S8421-45R	Battery Holder (Open) Coin, 20.0mm 1 Cell SMD (SMT) Tab	Harwin Inc.	S8421-45R
2	15	C1 C2 C3 C4 C5 C6 C7 C10 C18 C19 C20 C21 C22 C23 C26	100nF	CAP CER 0.1UF 16V X7R 0603	KEMET	C0603C104K4RACTU
3	2	C8 C9	100nF	CAP CER 0.1UF 16V X7R 0603	KEMET	C0603C104K4RACTU
4	2	C11 C16	1uF	CAPACITOR CERAMIC SMD 0402	Murata Electronics	GRM155R61C105KA12D
5	1	C12	1nF	Automotive Grade Surface mount 0402 capacitor ceramic 1nF, 10% 50V X7R	Murata	GCM155R71H102KA37
6	3	C13 C14 C15	120pF	Automotive Grade Surface mount 0402 capacitor ceramic 120pF, 5% 50V C0G	Murata	GCM1555C1H121JA16
7	2	C17 C24	10uF	CAP CER 10UF 16V X5R 0603	Murata Electronics	ZRB18AR61C106ME01L
8	1	C25	220nF	CAP CER 0.22UF 16V X7R 0603	Walsin Technology Corporation	0603B224K160CT
9	1	CN2	Header 20X2_female	Double Row_Vertical_10 0" _Extended Tail Connector	Samtec	SSQ-120-03-T-D
10	1	CN3	SMA_HRZ	50 Ohm SMA Jack, Edge Mount	Samtec	SMA-J-P-H-ST-EM1
11	1	CN4	U.FL-R-SMT-1(10)	CONN U.FL RCPT STR 50 OHM SMD	Hirose Electric Co Ltd	U.FL-R-SMT-1(10)
12	1	D1	STPS0530Z, SOD-123	Surface mount SCHOTTKY RECTIFIERS	STMicroelectronics	STPS0530Z
13	1	D2	ESDARF02-1BU2CK, ST0201	TVS DIODE 3.6VWM 12VC 0201	STMicroelectronics	ESDARF02-1BU2CK
14	1	D3	LED GREEN	LED GREEN CLEAR 0603 SMD	Würth Elektronik	150060GS75000
15	1	D4	LED RED	LED RED CLEAR 0603 SMD	Würth Elektronik	150060RS75000

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
16	1	D5	LED YELLOW	LED YELLOW CLEAR 0603 SMD	Würth Elektronik	150060YS75000
17	1	J1	3-pin Male Header	CONN HEADER .100 STR 3POS	Samtec Inc.	TSW-103-07-F-S
18	2	J6 J7	HEADER1X3	CONN HEADER .100 STR 3POS	Samtec Inc.	TSW-103-07-F-S
19	1	J8	con4-strip-male	CONN HEADER .100 STR 4POS	Samtec Inc.	TSW-104-07-F-S
20	2	JR1 JR2	SHUNT 2.54 mm.	Shunt Samtec 2pins pitch 2.54mm - Black coloured	TE Connectivity /AMP	1-382811-6
21	1	L1	100nH	100nH - Surface mount inductor - +/-5% - 0402	Murata	LQG15HNR10J02
22	1	L2	5n6	Surface mount wire wound inductor.	Coilcraft	0402CS-5N6XJLU
23	1	Q1	2STR1160, SOT-23	TRANS NPN 60V 1A SOT-23	STMicroelectronic s	<a href="#">2STR1160</a>
24	6	R1 R2 R38 R39 R40 R51	1K	RES SMD 1K OHM 1% 1/10W 0603	Vishay Dale	CRCW06031K00FKEA
25	2	R3 R4	3.9K	RES SMD 3.9K OHM 1% 1/10W 0603	Yageo	RT0603FRE073K9L
26	3	R5 R6 R7	22K	RES SMD 22K OHM 5% 1/10W 0603	Vishay Dale	CRCW060322K0JNEA
27	2	R8 R9	1.5k	RES SMD 1.5K OHM 1% 1/10W 0603	Yageo	RC0603FR-071K5P
28	22	R10 R11 R12 R13 R14 R15 R16 R17 R18 R19 R20 R21 R22 R23 R25 R26 R27 R29 R35 R37 R43 R44	0	RES SMD 0 OHM JUMPER 1/10W 0603	TE Connectivity Passive Product	CRG0603ZR
29	1	R24	10k	RES SMD 10K OHM 5% 1/10W 0603	Yageo	RC0603JR-0710KP
30	3	R28 R42 R48	4.7K	RES SMD 4.7K OHM 1% 1/10W 0603	Yageo	RC0603FR-074K7P
31	1	R30	100	CHIP RESISTOR SMD 1% 1/16W 0402	VISHAY	CRCW0402100RFKED
32	1	R31	330	RES SMD 330 OHM 1% 1/10W 0402	Panasonic Electronic Components	ERJ-2RKF3300X
33	2	R32 R33	0	RES SMD 0 OHM JUMPER 1/10W 0402	VISHAY	MCS04020Z0000ZE000

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
34	2	R34 R47	0	RES SMD 0 OHM JUMPER 1/10W 0603	TE Connectivity Passive Product	CRG0603ZR
35	1	R36	100K	RES SMD 100K OHM 5% 1/16W 0402	Yageo	AC0402JR-07100KL
36	1	R41	1K	RES SMD 1K OHM 1% 1/10W 0603	Vishay Dale	CRCW06031K00FKEA
37	1	R45	75	RES 75 OHM 1% 1/10W 0603	Yageo	RC0603FR-0775RL
38	1	R46	22K	RES SMD 22K OHM 5% 1/10W 0603	Vishay Dale	CRCW060322K0JNEA
39	2	R49 R50	300	RES 300 OHM 1% 1/10W 0603	Stackpole Electronics Inc.	RMCF0603FT300R
40	3	SB1 SB2 SB3	Open	RES 0 OHM JUMPER 1/10W 0603	Rohm Semiconductor	SFR03EZPJ000
41	1	SW1	Tact SW	Tactile Switches SW TACT SPST 0.05A 12VDC	Apem	MJTP1106SATR
42	2	SW2 SW3	Tact SW	SWITCH TACTILE SPST-NO 0.05A 24V	TE Connectivity ALCOSWITCH Switches	1437566-3
43	3	TP1 TP2 TP3	TEST POINT	PC TEST POINT NATURAL	Harwin Inc.	S1751-46R
44	5	TP4 TP5 TP6 TP7 TP8	TEST POINT	PC TEST POINT NATURAL	Keystone Electronics	5000
45	1	U1	M24C32-RMN6TP, SO8	32 Kbit serial I2C bus EEPROM	STMicroelectronics	<a href="#">M24C32-RMN6TP</a>
46	1	U2	TESEO-LIV3FL, RF MODULE	Tiny GNSS low power module	STMicroelectronics	<a href="#">Teseo-LIV3FL</a>
47	1	U3	BGA824N6	Low Noise Amplifier for GPS, GLONASS, Galileo and Compass	infineon	BGA824N6
48	1	U4	TPS22943	Low-input voltage current-limited load switches. Active Hight.	Texas Instruments	TPS22943DCKR
49	1	U5	ISM330DHCXTR, VFLGA2.5X3X.86 14L P.5 L.475X.25	INEMO INERTIAL MODULE: 3D digital accelerometer and 3D digital gyroscope	STMicroelectronics	<a href="#">ISM330DHCXTR</a>
50	1	U6	ILPS22QS, HLGA 2X2X.8 10L EXP. SILIC .91SQ	CONSUMER MEMS	STMicroelectronics	<a href="#">ILPS22QS</a>
51	1	U7	IIS2MDCTR, LGA2X2X0.7 12 LEADS	High accuracy, ultra-low-power ,3-axis digital output magnetometer	STMicroelectronics	<a href="#">IIS2MDCTR</a>

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
52	1	Z1	B39162B4327P810	FILTER SAW 5SMD	Qualcomm (RF360 - A Qualcomm & TDK Joint Venture)	B39162B4327P810

Table 2. Misc

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	4	Nut		M3x0.5 Hex Nut 0.217" (5.50mm) Nylon	Würth Elektronik	709940300
2	4	Spacer		Hex Standoff Threaded M3x0.5 Nylon 0.472" (12.00mm) Natural	Essentra	36M30MF012
3	1	Antenna		Antenna 27dB Gain 1615MHz	INPAQ	B3G02G-S3-XX-A

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