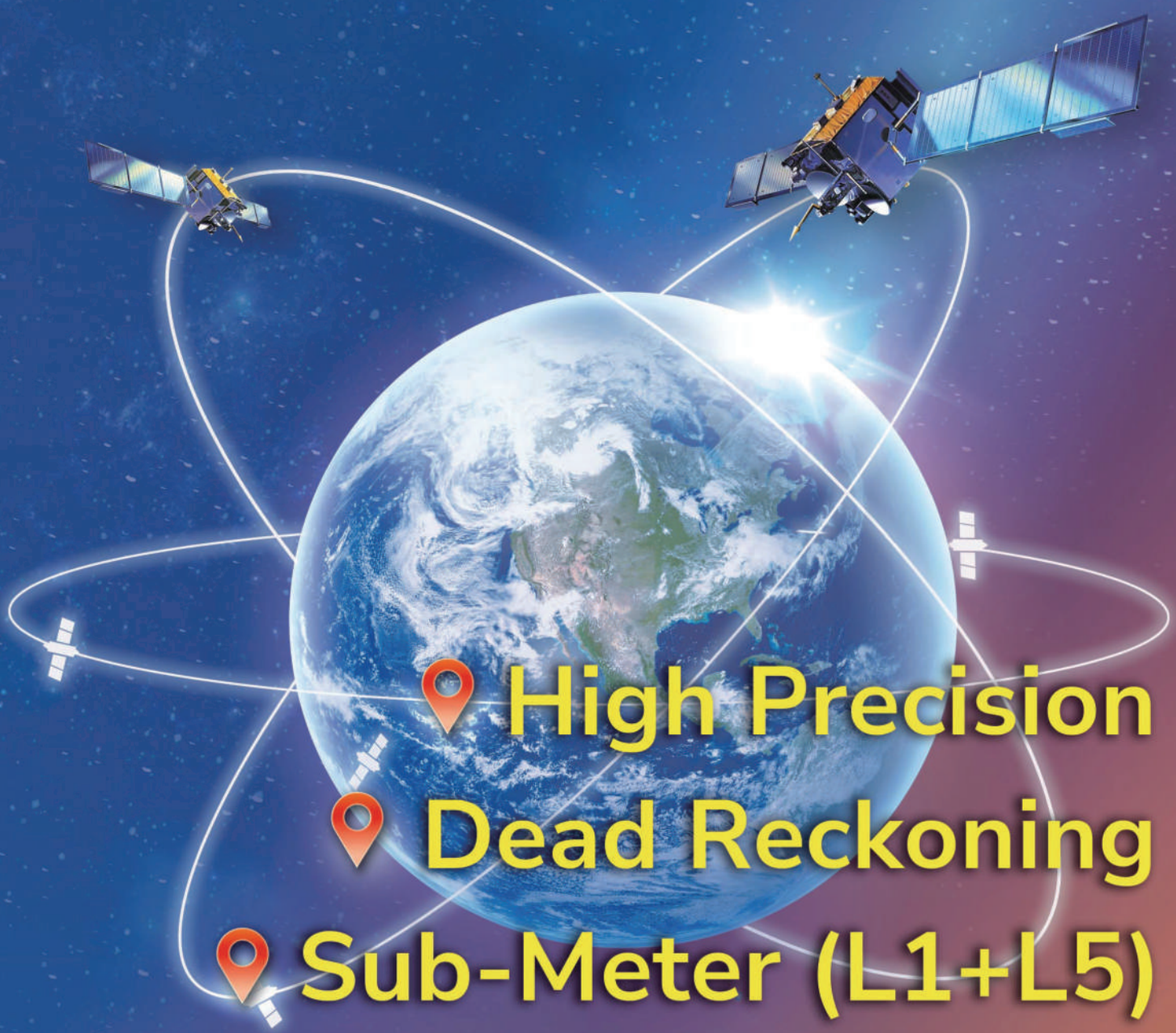
LOCOSYS

GNSS Wireless & Communication

LOCOSYS

GNSS / RTK Product Catalog



- High Precision
- Dead Reckoning
- Sub-Meter (L1+L5)

LOCOSYS Introduction

LOCOSYS Technology is a global leading company of satellite positioning module, we dedicate ourselves in the global market for more than 20 years, and now LOCOSYS has become No.1 leading company of GNSS/RTK solutions in Taiwan, and top 5 in the world. We provide high quality and reliable GNSS wireless solutions to fulfill customers' needs, with our own designing and manufacturing capability, LOCOSYS keep providing α-level Global Navigation Satellite System (GNSS) high-precision positioning/orientation solutions to our global customers.

LOCOSYS in-house proprietary RTK solution (HW/SW) based on multi-band GNSS, is able to achieve centimeter level accuracy with hight update rate certified by official Standard Instrument Control Library (SICL). With small form factor and low power consumption, it can be embedded to any platform, aiming for Mass Market RTK both in receiver (Rover) and reference (Base Station), to make RTK positioning become universal.

Quality is our No.1 priority, with **AEC-Q100/AEC-Q104** and **IATF 16949:2016/ISO 9001:2015**, we ensure the quality and sustainability of our products to meets customers' standards. Not only providing high quality product, **LOCOSYS also cares about our environment. As an international company with business all over the world, reducing carbon emissions will also be our goals to focus from 2023.** And with more than 20+ agent bases in worldwide. Not only can provide completed product information quickly but also give localized support and services efficiently.

CONTENT

01 Module Solution

GPS Module

	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1010-2RE	■				■		ROM	2.5m	3.3V	UART	10.1 x 9.7 x 2.0
MC-1612-2RE	■				■		ROM	2.5m	3.3V	UART	16.0 x 12.2 x 2.2
MC-1010	■				■		Flash	2.5m	3.3V	UART	10.1 x 9.7 x 2.0
MC-1612	■				■		Flash	2.5m	3.3V	UART	16.0 x 12.2 x 2.2


MC-1010-2RE


MC-1010


MC-1612-2RE


MC-1612

GNSS Module

	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1010-G/-B	■	■	■	■	■		Flash	2.5m	3.3V	UART	10.1 x 9.7 x 2.0
MC-1612-G/-B	■	■	■	■	■		Flash	2.5m	3.3V	UART	16.0 x 12.2 x 2.2
MC-1010-G2	■	■	■	■	■		Flash	2.5m	3.3V	UART	10.1 x 9.7 x 2.2


MC-1010-G


MC-1010-B


MC-1612-G


MC-1612-B


MC-1010-G2

L1 GNSS Module

	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1010-18Q	■	■	■	■	■		Flash	1.5m	1.8V	UART/(I²C)	10.1 x 9.7 x 2.2
MC-1010-52Q	■	■	■	■	■		Flash	1.5m	3.3V	UART/(I²C)	10.1 x 9.7 x 2.2
MC-1612-52Q	■	■	■	■	■		Flash	1.5m	3.3V	UART/(I²C)	16.0 x 12.2 x 2.4


MC-1010-18Q


MC-1010-52Q


MC-1612-52Q

L1 + L5 GNSS Module

	GP	GL	BD	GA	QZSS	IRNSS	L5 Signal	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1010-V2a	■	■	■	■	■		GPS	Flash	1.5m	1.8V	UART/(I²C)	10.1 x 9.7 x 2.2
MC-1010-V3a	■	■	■	■	■	■	IRNSS	Flash	1.5m	1.8V	UART/(I²C)	10.1 x 9.7 x 2.2
MC-1010-V2b	■	■	■	■	■		GPS	Flash	1.5m	3.3V	UART	10.1 x 9.7 x 2.2
MC-1010-V3b	■	■	■	■	■	■	IRNSS	Flash	1.5m	3.3V	UART	10.1 x 9.7 x 2.2
MC-1612-V2b	■	■	■	■	■		GPS	Flash	1.5m	3.3V	UART	16.0 x 12.2 x 2.4
MC-1612-V3b	■	■	■	■	■	■	IRNSS	Flash	1.5m	3.3V	UART	16.0 x 12.2 x 2.4


MC-1010-V2a


MC-1010-V3a


MC-1010-V2b


MC-1010-V3b


MC-1612-V2b


MC-1612-V3b

※ ■ GPS ■ GLONASS ■ BEIDOU ■ GALILEO ■ QZSS ■ IRNSS

02 Smart Antenna Solution

GPS Smart Antenna	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LS2003C-2RE	■				■		ROM	2.5m	3.3V	UART	15.5 x 15.5 x 6.6
LS2003D-2RE	■				■		ROM	2.5m	3.3V	UART	21.0 x 17.0 x 7.2
LS2003E-2RE	■				■		ROM	2.5m	3.3V	UART	22.0 x 22.0 x 8.4
LS2003C	■				■		Flash	2.5m	3.3V	UART	15.5 x 15.5 x 6.6
LS2003D	■				■		Flash	2.5m	3.3V	UART	21.0 x 17.0 x 7.2
LS2003E	■				■		Flash	2.5m	3.3V	UART	22.0 x 22.0 x 8.4
LS20030-2RE	■				■		ROM	2.5m	3.3V	USB	30.0 x 30.0 x 8.0
LS20031-2RE	■				■		ROM	2.5m	3.3V	TTL	30.0 x 30.0 x 8.0
LS20032-2RE	■				■		ROM	2.5m	3.3V	RS232	30.0 x 30.0 x 8.0
LS20030U	■				■		Flash	2.5m	3.3V	UART	15.5 x 15.5 x 6.6
LS20031U	■				■		Flash	2.5m	3.3V	UART	21.0 x 17.0 x 7.2
LS20032U	■				■		Flash	2.5m	3.3V	UART	22.0 x 22.0 x 8.4

LS2003C-2RE
LS2003C
LS20030U

LS2003D-2RE
LS2003D
LS20031U

LS2003E-2RE
LS2003E
LS20032U

LS2003x-2RE

GNSS Smart Antenna	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LS2003J-G	■	■		■	■		Flash	2.5m	3.3V	UART	16.0 x 12.8 x 2.8
LS2003C-G	■	■		■	■		Flash	2.5m	3.3V	UART	15.5 x 15.5 x 6.0
LS2003D-G	■	■		■	■		Flash	2.5m	3.3V	UART	15.5 x 15.5 x 6.0
LS2003E-G	■	■		■	■		Flash	2.5m	3.3V	UART	22.0 x 22.0 x 8.4
LS20030U-G	■	■		■	■		Flash	2.5m	3.3V	USB	30.0 x 30.0 x 8.0
LS20031U-G	■	■		■	■		Flash	2.5m	3.3V	TTL	30.0 x 30.0 x 8.0
LS20032U-G	■	■		■	■		Flash	2.5m	3.3V	RS232	30.0 x 30.0 x 8.0
LS20030U-B	■		■	■	■		Flash	2.5m	3.3V	USB	30.0 x 30.0 x 8.0
LS20031U-B	■		■	■	■		Flash	2.5m	3.3V	TTL	30.0 x 30.0 x 8.0
LS20032U-B	■		■	■	■		Flash	2.5m	3.3V	RS232	30.0 x 30.0 x 8.0

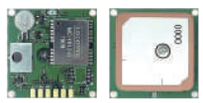
LS2003J-G

LS2003C-G

LS2003D-G

LS2003E-G

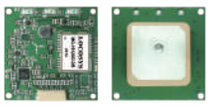
LS2003xU-G



LS2003xU-B

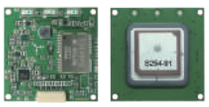
※ GPS GLONASS BEIDOU GALILEO QZSS IRNSS

L1 Smart Antenna	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LC20030-52Q	■	■	■	■	■		Flash	1.5m	3.3V	USB	38.0 x 38.0 x 7.9
LC20031-52Q	■	■	■	■	■		Flash	1.5m	3.3V	TTL	38.0 x 38.0 x 7.9
LC20032-52Q	■	■	■	■	■		Flash	1.5m	3.3V	RS232	38.0 x 38.0 x 7.9



LC2003x-52Q

L1 + L5 Smart Antenna	GP	GL	BD	GA	QZSS	IRNSS	L5 Signal	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LC20030-V2	■	■	■	■	■		GPS	Flash	1.5m	3.3V	USB	38.0 x 38.0 x 7.9
LC20031-V2	■	■	■	■	■		GPS	Flash	1.5m	3.3V	TTL	38.0 x 38.0 x 7.9
LC20032-V2	■	■	■	■	■		GPS	Flash	1.5m	3.3V	RS232	38.0 x 38.0 x 7.9
LC20030-V3	■	■	■	■	■	■	IRNSS	Flash	2.5m	3.3V	USB	38.0 x 38.0 x 7.9
LC20031-V3	■	■	■	■	■	■	IRNSS	Flash	2.5m	3.3V	TTL	38.0 x 38.0 x 7.9
LC20032-V3	■	■	■	■	■	■	IRNSS	Flash	2.5m	3.3V	RS232	38.0 x 38.0 x 7.9
LS2003H-V2	■	■	■	■	■		GPS	Flash	1.5m	3.3V	UART/USB	14.0 x 9.6 x 2.0
LS2003H-V3	■	■	■	■	■	■	IRNSS	Flash	1.5m	3.3V	UART/USB	14.0 x 9.6 x 2.0



LC2003x-V2

LC2003x-V3

LS2003H-V2

LS2003H-V3

03 Mouse Receiver

GPS Mouse Receiver	GP	GL	BD	GA	QZSS	IRNSS	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LS23030-2RE	■				■		2.5m	5V	USB	USB	49.0 x 41.0 x 14.1
LS23032-2RE	■				■		2.5m	5V	RS232	PS2	49.0 x 41.0 x 14.1
LS23036-2RE	■				■		2.5m	5V	RS232	RJ11	49.0 x 41.0 x 14.1
LS23030	■				■		2.5m	5V	USB	USB	49.0 x 41.0 x 14.1
LS23032	■				■		2.5m	5V	RS232	PS2	49.0 x 41.0 x 14.1
LS23036	■				■		2.5m	5V	RS232	RJ11	49.0 x 41.0 x 14.1

LS2303x-2RE

LS2303x

※ GPS GLONASS BEIDOU GALILEO QZSS IRNSS

GNSS Mouse Receiver	GP	GL	BD	GA	QZSS	IRNSS	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LS23030-G	■	■		■	■		2.5m	5V	USB	USB	49.0 x 41.0 x 14.1
LS23032-G	■	■		■	■		2.5m	5V	RS232	PS2	49.0 x 41.0 x 14.1
LS23036-G	■	■		■	■		2.5m	5V	RS232	RJ11	49.0 x 41.0 x 14.1

L1 + L5 UDR Mouse Receiver	GP	GL	BD	GA	QZSS	IRNSS	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LU23030-35AD	■	■	■	■	■		1.5m	5V	USB	USB	52.0 x 57.0 x 17.0
LU23032-35AD	■	■	■	■	■		1.5m	5V	RS232	PS2	52.0 x 57.0 x 17.0
LU23036-35AD	■	■	■	■	■		1.5m	5V	RS232	RJ11	52.0 x 57.0 x 17.0

L1 Mouse Receiver	GP	GL	BD	GA	QZSS	IRNSS	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LU23030-52Q	■	■	■	■	■		1.5m	5V	USB	USB	52.0 x 57.0 x 17.0
LU23032-52Q	■	■	■	■	■		1.5m	5V	RS232	PS2	52.0 x 57.0 x 17.0
LU23036-52Q	■	■	■	■	■		1.5m	5V	RS232	RJ11	52.0 x 57.0 x 17.0

L1 + L5 Mouse Receiver	GP	GL	BD	GA	QZSS	IRNSS	L5 Signal	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LU23030-V2	■	■	■	■	■		GPS	1.5m	5V	USB	USB	52.0 x 57.0 x 17.0
LU23032-V2	■	■	■	■	■		GPS	1.5m	5V	RS232	PS2	52.0 x 57.0 x 17.0
LU23036-V2	■	■	■	■	■		GPS	1.5m	5V	RS232	RJ11	52.0 x 57.0 x 17.0
LU23030-V3	■	■	■	■	■	■	IRNSS	2.5m	5V	USB	USB	52.0 x 57.0 x 17.0
LU23032-V3	■	■	■	■	■	■	IRNSS	2.5m	5V	RS232	PS2	52.0 x 57.0 x 17.0
LU23036-V3	■	■	■	■	■	■	IRNSS	2.5m	5V	RS232	RJ11	52.0 x 57.0 x 17.0

LS2303x-G

LU2303x-35AD
LU2303x-52Q
LU2303x-V2
LU2303x-V3

04 Timing Module

Timing Module	GP	GL	BD	GA	QZSS	IRNSS	Memory	Timing Accuracy	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1722-T	■	■	■	■	■		Flash	2ns	1.5m	3.3V	UART	22.4 x 17.2 x 2.5
ST-1612-T	■	■		■	■		Flash	5ns	2.5m	3.3V	UART	16.0 x 12.2 x 2.2
ST-1612i-GT	■	■		■			Flash	3.9ns	1.8m	3.3V	UART	16.0 x 12.2 x 2.4
ST-1612i-BT	■		■	■	■		Flash	3.9ns	1.8m	3.3V	UART	16.0 x 12.2 x 2.4

MC-1722-T

ST-1612-T

ST-1612i-GT

ST-1612i-BT

※ GPS GLONASS BEIDOU GALILEO QZSS IRNSS

05 Mini PCI-E / M.2 Card

GPS Mini PCI-e Card	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LS26030-2RE	■				■		ROM	2.5m	3.3V	USB	50.8 x 28.5 x 3.2
LS26031-2RE	■				■		ROM	2.5m	3.3V	USB	26.65 x 28.5 x 3.2
LS26030	■				■		Flash	2.5m	3.3V	USB	50.8 x 28.5 x 3.2
LS26031	■				■		Flash	2.5m	3.3V	USB	26.65 x 28.5 x 3.2

GNSS Mini PCI-e Card	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
LS26030-G/-B	■	■	■	■	■		Flash	2.5m	3.3V	USB	50.8 x 28.5 x 3.2
LS26031-G/-B	■	■	■	■	■		Flash	2.5m	3.3V	USB	26.65 x 28.5 x 3.2
LS26030-15R	■	■	■	■	■		Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB	50.8 x 28.5 x 3.2
LS26031-15R	■	■	■	■	■		Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB	26.65 x 28.5 x 3.2

M.2 Card	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
M.2-V2b	■	■	■	■	■		Flash	1.5m	3.3V	M.2/USB	41.9 x 22.0 x 4.1
M.2-15R	■	■	■	■	■		Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	M.2/USB	41.9 x 22.0 x 4.1
M.2-35AD	■	■	■	■	■		Flash	1.5m	3.3V	M.2/USB	41.9 x 22.0 x 4.1
M.2-R35AD	■	■	■	■	■		Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	M.2/USB	41.9 x 22.0 x 4.1

LS2603x-15R

M.2-R35AD

06 RTK Solution

RTK Antenna	GP	GL	BD	GA	QZSS	IRNSS	Antenna Type	Interface	Dimension (mm)
LH-105AR-D	■	■	■	■	■		Helix Antenna (L1+L5)	SMA	43.4 (D) x 42.3 (H)
LH-105A2-B	■	■	■	■	■		Helix Antenna (L1+L5)	SMA	27.5 (D) x 59.0 (H)
LP-105AR-C	■	■	■	■	■		Patch Antenna (L1+L5)	SMA	86.8 x 65.0 x 23.0
LS-125-A	■	■	■	■	■		Survey Antenna (L125)	SMA	160.0 (D) x 66.5 (H)

LH-105AR-D

LH-105A2-B

LP-105AR-C

LS-125-A

※ ■ GPS ■ GLONASS ■ BEIDOU ■ GALILEO ■ QZSS ■ IRNSS

RTK Module

	GP	GL	BD	GA	QZSS	IRNSS	P / R / Y	DR Function	Heading Accuracy	Position Accuracy	VCC	Interface	Dimension (mm)
RTK-1010-SB	■	■	■	■	■	■				0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	10.1 x 9.7 x 2.2
RTK-1010	■	■	■	■	■					0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	10.1 x 9.7 x 2.2
RTK-1612	■	■	■	■	■		○		< 0.2°	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	16.0 x 12.2 x 2.4
RTK-1612AD-DR	■	■	■	■	■		○	UDR		0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	16.0 x 12.2 x 2.4

RTK-1010-SB

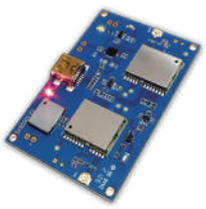
RTK-1010

RTK-1612

RTK-1612AD-DR

RTK Board

	GP	GL	BD	GA	QZSS	IRNSS	MEMS sensor	UBX binary for drone	Heading Accuracy	Position Accuracy	VCC	Interface	Dimension (mm)
RTK-4057-MHPD	■	■	■	■	■				< 0.2°	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB	57.0 x 40.0 x 1.0
RTK-DUAL-A	■	■	■	■	■				< 0.2°	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	50.0 x 42.0 x 21.0
RTK-DUAL-B	■	■	■	■	■		○		< 0.2°	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	50.0 x 42.0 x 21.0
RTK-DUAL-C	■	■	■	■	■			○	< 0.2°	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	UART	50.0 x 42.0 x 21.0



RTK-4057-MHPD

RTK-DUAL

RTK System

	GP	GL	BD	GA	QZSS	IRNSS	4G LTE	Ethernet	Position Accuracy	VCC	Interface	Dimension (mm)
RTK-M300	■	■	■	■	■		○	○	0.01m+1ppm < 1.5 m CEP (Autonomous)	9-36V	Computer	185.0 x 120.0 x 42.0

RTK USB Dongle

	GP	GL	BD	GA	QZSS	IRNSS	P / R / Y	Operation System request	Position Accuracy	VCC	Interface	Dimension (mm)
RTK-15D	■	■	■	■	■		○	Android	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB TypeC	37.85 x 27.5 x 13.0

RTK Receiver for drone

	GP	GL	BD	GA	QZSS	IRNSS	E-COMPASS	Platform support	Position Accuracy	VCC	Interface	Dimension (mm)
HAWK-R1	■	■	■	■	■			Pixhawk (PX4) Ardupilot	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	TTL	46.0 x 46.0 x 72.5
HAWK-R2	■	■	■	■	■		○	Pixhawk (PX4) Ardupilot	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	TTL	46.0 x 46.0 x 72.5

RTK-M300

RTK-15D

HAWK Series

※ P / R / Y : Pitch / Roll / Yaw

※ GPS GLONASS BEIDOU GALILEO QZSS IRNSS

RTK Receiver for drone	GP	GL	BD	GA	QZSS	IRNSS	E-COMPASS	Position Accuracy	VCC	Interface	Dimension (mm)
LS23231	■	■	■	■	■	□	○	0.01m + 1ppm CEP (Horizontal) 0.015m + 1ppm CEP (Vertical)	5V	TTL	41.2 x 49.2 x 45.0

RTK Receiver for UDR	GP	GL	BD	GA	QZSS	IRNSS	Position Accuracy	VCC	Interface	Connector	Dimension (mm)
LS23236	■	■	■	■	■	□	0.01m + 1ppm CEP (Horizontal) 0.015m + 1ppm CEP (Vertical)	5V	TTL	RJ11	41.2 x 49.2 x 45.0

LS2323x Series

07 USB Dongle

USB Dongle	GP	GL	BD	GA	QZSS	IRNSS	Memory	Position Accuracy	VCC	Interface	Dimension (mm)
UB-52Q	■	■	■	■	■	□	Flash	1.5m	3.3V	USB	85.5 x 32.95 x 19.35
UB-V2b	■	■	■	■	■	□	Flash	1.5m	3.3V	USB	85.5 x 32.95 x 19.35
UB-15R	■	■	■	■	■	□	Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB	85.5 x 32.95 x 19.35
UB-35AD	■	■	■	■	■	□	Flash	1.5m	3.3V	USB	85.5 x 32.95 x 19.35
UB-R35AD	■	■	■	■	■	□	Flash	0.01m+1ppm < 1.5 m CEP (Autonomous)	3.3V	USB	85.5 x 32.95 x 19.35

USB Dongle Series

08 GNSS + Dead Reckoning

GNSS DR Module	GP	GL	BD	GA	QZSS	IRNSS	DR mode	Position Accuracy	VCC	Interface	Dimension (mm)
MC-1612-DG	■	■	□	■	■	□	ADR/UDR	2.5m	3.3V	UART	16.0 x 12.2 x 2.4
MC-1612-DB	■	□	■	■	■	□	ADR/UDR	2.5m	3.3V	UART	16.0 x 12.2 x 2.4
ST-1612i-DGX	■	■	□	■	■	□	ADR	1.8m	3.3V	UART	16.0 x 12.2 x 2.3
MG-1612AD-DR	■	■	■	■	■	□	UDR	1.5m	3.3V	UART	16.0 x 12.2 x 2.4

MG-1612AD-DR

MC-1612-DG

MC-1612-DB

ST-1612i-DGX

※ ■ GPS ■ GLONASS ■ BEIDOU ■ GALILEO ■ QZSS ■ IRNSS

LOCOSYS

GNSS Wireless & Communication

Halogen FREE

REACH COMPLIANT

RoHS

UNITED REGISTRAR OF SYSTEMS URS ISO 9001 CERTIFIED QUALITY MANAGEMENT SYSTEM

CERTIFIED I.T. SERVICE MANAGEMENT SYSTEM URS IATF 16949

47344