

**2023**  
**LOCOSYS**  
**COMPANY PROFILE**

**LOCOSYS**

*GNSS Wireless & Communication*

# CONTENTS



- LOCOSYS Introduction
- Product
- Global News
- Quality Policy
- Partner & Customers



# LOCOSYS INTRODUCTION

# LOCOSYS Introduction

**LOCOSYS Technology Inc.** established in 2005, a company that provide on Global Navigation Satellite System (GNSS).

We have through own (International Automotive Task Force, IATF) IATF16949 : 2016 / ISO 9001 : 2015 certified production lines in Taiwan.

**LOCOSYS** is  $\alpha$ -level qualified module designer and supplier in the international market to provide our customers a complete OEM and ODM services

## Values & Belief



# Company Milestone



Completed 3 Turn-key (GPS+G-Sensor+Ecompass) solutions for hand-held device use



Completed external Allystar, ublox and SiRF receivers and GPS module



Launch BeiDou GNSS module and cooperate with **China** Automobile Group. Ex. BAW, SAIC, FAW, Geely, DFAC and BYD

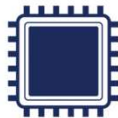
2006

LOCOSYS funded in New Taipei City, Obtained ISO 9001 certification



2008

Completed core module design, worldwide TMC total solution & a terminal product



2009

2010

2013

Extend production line in new factory site & Launch GPS/GLONASS/Galileo/QZSS and Timing solution



2014

# Company Milestone



Become 2017 best partner of “ADR” in China automotive industry and provides solutions and services to various market with follow (AEC-Q100/PPAP)



Launch “SUB-METER (L1+L5) Solutions



RTK+Timing & RTK+DR+IMU release and target 5G lot and V2X market

2015

2015 LOCOSYS cooperate with Automobile Group in the world including the CMC and Luxgen the top of manufacturer in Taiwan. We also cooperate with Automotive equipment manufacturer like VIA



2017

2018

Launch “Untethered Dead Reckoning” Solutions GNSS + Dead Reckoning module has been used in AVN or T-box total solutions



2020

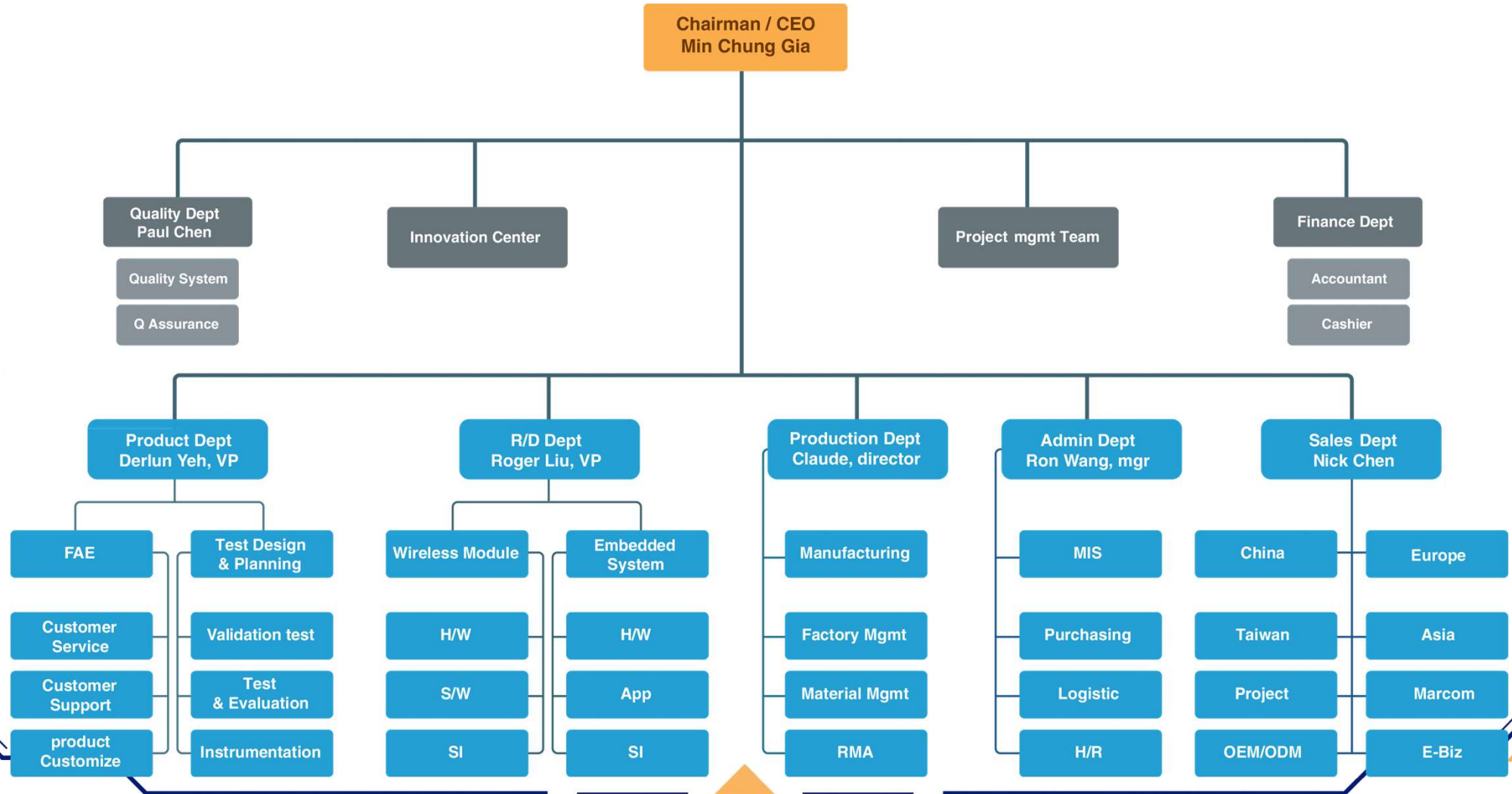
2021

The smallest L1+L5 RTK module launch



2022

# Organization



# Products Milestone

## Supplier



### Module Type



Dimension (mm)  
10\*10/ 15\*13/ 16\*12/  
16\*13/ 17\*22/ 20\*24

### Smart Antenna Type



Type -T Type  
Mini-L Type  
Slim -type  
Turn-key

### Mouse Receiver



LS23030~6

2006~2012

## Supplier



### Module Type



GNSS/ RTK L1+L2  
Dimension (mm)  
10\*10/ 15\*13/  
16\*12/ 16\*13/ 17\*22

### GNSS+ADR/UDR

\*ST-1612i-DGX  
\*MC-1612-DG

### Smart Antenna Type



LS2003C/-G  
LS2003E/-G  
LS2003D/-G

### Mouse Receiver



LS23030~6-G

2013~2018

## Supplier



### Module Type



L1+L5 GNSS / RTK  
Dimension (mm)  
10\*10/ 16\*12/ 17\*22

### RTK +DR

\*RTK-1612AD-DR  
\*MC-1612AD-DR

### L1+L5 RTK Heading Solution

\*RTK-4057-MHPD  
\*RTK-DAUL

### L1+L5 RTK device for UAV



\*HAWK-series

2018~2022

## Supplier



### PCI-E M.2 Card/ USB dongle Solution



M.2-V2b  
M.2-15R  
M.2-35AD  
M.2-R35AD



UB-V2b  
UB-15R  
UB-35AD  
UB-R35AD

### RTK Level High Position Antenna



RTK Short Antenna



L1+L5 Patch Antenna



RTK Survey Antenna

2023 to future plan



# **GNSS/RTK POSITION MODULE**

# L1 FOR ALL GNSS SOLUTION

Multi-constellation GNSS module & ultra low power



## MC-1010-18Q

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1 ✓	L2	L5	Max. Velocity	< 500 m/
Channels	47			Acquisition Time	< 15s
Sensitivity	Tracking : -165dBm (with external LNA) Cold start : -149dBm (with external LNA)				
Update rate	1Hz default		Max. Altitude	< 18,000 m	
Position Accuracy	1.5m (CEP)		Supply Current	1.8v	
Dimension	10.1 x 9.7 x 2.2 mm		Operating Temp	-40°C~+85°C	

# L1 FOR ALL GNSS SOLUTION

Multi-constellation GNSS module & ultra low power



## MC-1612-52Q

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1 ✓	L2	L5	Max. Velocity	< 500 m/
Channels	47			Acquisition Time	< 15s
Sensitivity	Tracking : -165dBm (with external LNA) Cold start : -149dBm (with external LNA)				
Update rate	1Hz default, up to 10Hz			Max. Altitude	< 18,000 m
Position Accuracy	1.5m (CEP)			Supply Current	3.3v
Dimension	16 x 12.2 x 2.4 mm			Operating / Storage Temp	-40°C~+85°C

# L1+L5 GNSS MODULE

Dual-frequency multi-constellation GNSS positioning module



## MC-1010-V2b/MC-1612-V2b

Satellite System	GPS ✓	GLONASS ✓	BEIDOU ✓	GALILEO ✓	QZSS ✓
Hardware spec					
Frequency	L1 ✓	L2	L5 ✓	Max. Velocity	< 500 m/
Channels	135			Acquisition Time	< 15s
Sensitivity	Tracking : -165dBm (with external LNA) Cold start : -148dBm (with external LNA)				
Update rate	1Hz default, up to 10Hz			Max. Altitude	< 18,000 m
Position Accuracy	<1.5m (CEP)			Power	
Dimension	16 x 12.2 x 2.4 mm			Operating Temp	-40°C~+85°C

\* MC-1612-V3b can receive IRNSS

# L1+L5 RTK MODULE

Dual-frequency multi-constellation GNSS RTK module



## RTK-1612/RTK -1010

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓

### Hardware spec

Frequency	L1 ✓	L2	L5 ✓	Max. Velocity	< 500 m/
Channels	135			Acquisition Time	<28s (typical) < 10s (RTK Convergence)
Sensitivity	Tracking :-165dBm (with external LNA) Cold start : -148dBm (with external LNA)				
Update rate	1Hz default, up to 10Hz			Max. Altitude	< 18,000 m
Position Accuracy	0.01m + 1ppm (Horizontal)			Power	65mA
Dimension	16 x 12.2 x 2.4 mm			Operating / Storage Temp	-40°C~+85°C

# GNSS/RTK DR SOLUTION

# L1+L5 DR MODULE

Dual-frequency Multi-constellation GNSS Untethered dead reckoning module



## MC-1612AD-DR

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1	L2	L5	Max. Velocity	< 500 m/
	✓		✓		
Channels	135			Acquisition Time	1s (typical) 24s (typical)
Sensitivity	Tracking:-165dBm Cold start:-148dBm			UDR mode	CEP ≤ 3%
Update rate	1Hz default, up to 10Hz			Max. Altitude	< 18,000 m
Position Accuracy	1.5m (CEP)			Power	56mA
Dimension	16 x 12.2 x 2.4 mm			Operating Temp	-40°C~+85°C

# RTK+DR MODULES

High-precision Untethered dead reckoning module



## RTK-1612AD-DR

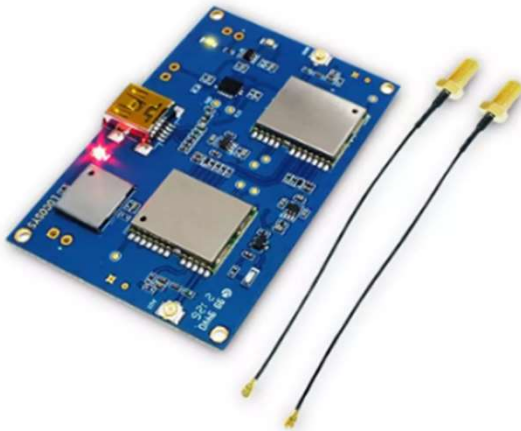
Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1	L2	L5	Max. Velocity	< 500 m/
	✓		✓		
Channels	135			Acquisition Time	1s (typical) 24s (typical)
Sensitivity	Tracking:-165dBm Cold start:-148dBm			UDR mode	CEP ≤ 3%
Update rate	1Hz default, up to 10Hz			Max. Altitude	< 18,000 m
Position Accuracy	0.01m + 1ppm (Horizontal)			Power	56mA
Dimension	16 x 12.2 x 2.4 mm			Operating Temp	-40°C~+85°C



# END PRODUCT & SYSTEM

# L1+L5 RTK BOARD

Dual-Frequency (Position & Orientation) RTK Board



## RTK-4057-MHPD

Satellite	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1	L2	L5	Max. Velocity	< 500 m/
	✓		✓		
Channels	270			Acquisition Time	28s (typical) < 10s (RTK Convergence)
Sensitivity	Tracking :-165dBm (with external LNA) Cold start :-148dBm (with external LNA)				
Update rate	1/5Hz (default)/10Hz (option)			Max. Altitude	< 18,000 m
Position Accuracy	0.01m + 1ppm (Horizontal)			Orientation	< 0.2° RMS.
Dimension	40 x57 x1mm			Operating Temp	-40°C~+85°C

# L1+L5 RTK BOARD

Dual-frequency, Multi-constellation  
RTK Box



## RTK-DUAL-series

Satellite	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1 ✓	L2	L5 ✓	Acquisition Time	<28s (typical) < 10s (RTK Convergence)
Channels	270			Aided heading	Degraded by ≤ 2° (RMS)
Sensitivity	Tracking :-165dBm Cold start :-148dBm			Orientation	< 0.2° RMS.
Update rate	2Hz (default), 5Hz			Operating Temp	-40°C~+85°C
Position Accuracy	1cm + 1ppm (horizontal) CEP			Dimension	50 x 42 x 21 mm

# RTK FOR ANDROID SYSTEM

L1+L5 RTK device for OTG on Android system



## RTK-15D

Satellite	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1	L2	L5	System	Android OS
	✓		✓		
Channels	135			Acquisition Time	<28s (typical) < 10s (RTK Convergence)
Sensitivity	Tracking : -165dBm (with external LNA) Cold start : -148dBm (with external LNA)				
Update rate	1Hz default, up to 10Hz (option)			Connecter	USB TYPE C
Position Accuracy	0.01m + 1ppm CEP (Horizontal)			Power	65mA
Dimension	27.5 x 37.85 x 13 mm			Operating Temp	-40°C~+85°C

# FOR DRONE

Dual-frequency multi-constellation RTK receiver with e-compass



## HAWK R2

Satellite System	GPS ✓	GLONASS ✓	BEIDOU ✓	GALILEO ✓	QZSS ✓
Hardware spec					
Frequency	L1 ✓	L2	L5 ✓	Dimension	46 x 72.5mm
Channels	135			Acquisition Time	<28s (typical) < 10s (RTK Convergence)
Sensitivity	Tracking : -165dBm (with external LNA) Cold start : -148dBm (with external LNA)				
Update rate	5Hz default, up to 10Hz			Power	67mA
PPS	100ms pulse width, 1.8Vdc			Operating Temp	-20°C~+65°C

# RTK SYSTEM

Rugged and industrial grade RTK computer



## RTK-M300

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓
Hardware spec					
Frequency	L1	L2	L5	Certifications	CE/FCC/E13 mark
	✓		✓		
Channels	135			Acquisition Time	<28s (typical) < 10s (RTK Convergence)
Sensitivity	Tracking :-165dBm (with external LNA) Cold start :-148dBm (with external LNA)				
Update rate	1/5Hz (default) ; 10Hz (option)			Operating	MIL-STD-810
Position Accuracy	0.01m + 1ppm (Horizontal)			Power Adapter	AC100-240V
Dimension	180 x 120 x 45 mm			Operating Temp	-40°C~+85°C

# L1+L5 GNSS MOUSE

Dual-frequency multi-constellation GNSS mouse



## LU2303x-Vx

Satellite System	GPS	GLONASS	BEIDOU	GALILEO	QZSS
	✓	✓	✓	✓	✓

### Hardware spec

Frequency	L1 ✓	L2	L5 ✓	Max. Velocity	< 500 m/
Channels	135			Acquisition Time	2s (typical)
Sensitivity	Tracking:-165dBm (with external LNA) Cold start :-148dBm (with external LNA)				
Update rate	1Hz default, up to 10Hz			Protocol	NMEA 0183
Position Accuracy	1.5m (CEP)			Datum	WGS-84
Dimension	75 x 75 x 16.1mm			Operating / Storage Temp	-20°C~+60°C

# ANTENNA ACCESSORIES





**LH-105A2-B**

**Helix Antenna**

**Frequency : L1 + L5**

**Waterproof : IPX7**

**Suitable for handheld,  
UAV**



**LP-105AR-C**

**Patch Antenna**

**Frequency : L1 + L5**

**Waterproof : IPX7**

**Suitable for  
Automotive**



**LS-125-A**

**Survey Antenna**

**Frequency : L1, L2, L5**

**Waterproof : IP67**

**Suitable for  
Automotive and Base  
station**



# QUALITY & NEWS

# Quality Assurance

## Quality Certified



## Certified production line



## Environment Policy







**PARTNER &  
CUSTOMER**

# STRATEGIC PARTNERS



# CUSTOMER

## LOCOSYS



## LOCOSYS



# THANK YOU



LOCOSYS Web :



LOCOSYS Youtube :



CERTIFIED  
QUALITY  
MANAGEMENT  
SYSTEM

CERTIFIED  
IT SERVICE  
MANAGEMENT  
SYSTEM

