

iSYNC

Accurate Time Stamping of IMU, GNSS Receiver, Cameras, Laserscanner, Odometer

The iSYNC is a highly precise synchronization hardware, which allows an accurate acquisition and time stamping of the Data-Valid-Information (DVI) obtained from external surveying devices like IMU (inertial measuring unit), laser scanner, camera and odometer and the integrated GNSS engine (PPS) and to provide all these generated time stamp information on an Ethernet interface to the user's local computer. The iSYNC can also be used to trigger external sensor devices.

- < 2 µsec synchronization accuracy for main I/Os
- data interfaces for IMU, GNSS engine, laser scanner, cameras and wheel sensor
- Low power consumption, low weight, small size, ruggedized setup
- Used for precise surveying applications

The iSYNC is available with and without integrated high performance GNSS receiver.

The iSYNC Module is designed for mobile mapping applications as well as for fix installations within surveying vehicles on the road, on the rail, in the air and in maritime applications.

The iSYNC comes within a robust enclosure and LEMO connectors. The usage of iSYNC is not restricted by any export control or ITAR regulations. An OEM version is available for customized integration.



Technical Data iSYNC:

2 x SYNC_IN:	Level: LVTTTL or RS422	Latency: < 2 µs	Data Rate:	max. 100 Hz
1 x SYNC_IN:	Level: LVTTTL or RS422	Latency: < 2 µs	Data Rate:	max. 400 Hz
1 x SYNC_IN (PPS):	Level: LVTTTL or RS422	Latency: < 2 µs	Data Rate:	1 Hz
2 x EXT_IN:	Level: TTL	Latency: < 15 µs	Trigger Rate:	max. 400 Hz
4 x SYNC_OUT:	Level: LVTTTL or TTL	Latency: < 2 µs	Trigger Out Rate:	max. 400 Hz
2 x EXT_OUT:	Level: TTL	Latency: < 15 µs	Data Rate:	max. 400 Hz
Ethernet Output:	IMU data, time stamps for all received input channel data			
Integrated GNSS Engine:	OEM628 L1L2 GPS+GLONASS+Beidou / RTK/TerraStar correction aiding as option			
Odometer Input:	A/B quadrature signal, RS422 level			
Connector Type:	LEMO for SYNCs and Power, M12 for Ethernet, SMA for GNSS antenna input			
Temp., Shock, Vibration:	-30...+65 °C (operating, case temperature); -40...+85 °C (storage) Shock: 3 g / 20 ms (op.); Vibration 10...2'000 Hz, 2.5 g rms (endurance);			
Environment / MTBF/ MTTR:	IP54 / 50.000 hrs / 10 minutes			
Size, Weight:	approx. 172 x 55 x 137 mm (plus connector), mass approx. 1,500 grams			
Start-up-Time; Power Supply:	< 5 sec; 9 ... 36 V DC, protected against wrong polarity; approx. 6 W			

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