MOBILTECH LINE-UP

	SC-100	SC-200	SC-300	SC-400
				
Size	88 x 89 x 23.6mm	120 x 84 x 40mm	164 x 256 x 95mm	64 x 44 x 18mm
Weight	< 200g	< 330g	< 330g	< 90g
Power	DC 12V 0.3W (max)	DC 12V 10w (max)	DC 12V 10w (max)	USB-C or DC 12V 0.3W (max)
Temperature	-20°C ~ 70°C	-10°C ~ 60°C	-10°C ~ 70°C	-20°C ~ 70°C
Trigger-Out	-	O	optional	O
GPS-In	O	-	O	O
PPS-Out	O	-	-	O
NMEA-Out	-	-	-	O
PTP	-	-	O	-
Event-In	-	-	-	optional
Standalone	O	O	O	optional

Applications

- Synchronize all LiDARs & High-level sensor fusion is possible
- Autonomous driving sensor logging system
- Sensor synchronization with drones
- Accurate time synchronization without GPS sensors
- Accurate data acquisition is possible even in a data acquisition environment where physical shock factors exist
- Multiple lidars can be synchronized indoors.

SC-100

Mobiltech PPS Synchronization Board



The Mobiltech SC-100 products create virtual PPS to maintain synchronization indoors.

It is a simple standalone product that can be easily connected and used.

Key Features

- Operating System: standalone
- Input: PPS, NMEA
- Input NMEA: GPRMC
- Output NMEA: GPRMC
- GPS valid
  Output: PPS, NMEA
- GPS invalid
  Output: PPS
- Number of lidars: 6ea

Applications

- Autonomous driving sensor logging system
- Sensor synchronization with drones
- Accurate time synchronization without GPS sensors
- Accurate data acquisition is possible even in a data acquisition environment where physical shock factors exist
- Multiple lidars can be synchronized indoors.

Technical Specifications

- Produce PPS indoors and synchronize the lidar.
- Continuing synchronization in the GPS invalid status.

Physical Characteristics

Dimensions (L x W x H)	88 x 89 x 23.6 mm
Weight	< 200g
Power Connector	DC Jack 5.5/2/1mm
Power Supply	DC 12V / 300mW (max)
Temperature	-20°C ~ 70°C

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SC-200

Mobiltech Trigger Board



The Mobiltech SC-200 product is a device that reads azimuth values from a single lidar in real time and generates a trigger at the predicted angle.

It is a simple standalone product that can be easily connected and used.

Key Features

- Operating System: standalone
- Output: Trigger x 5ea
  voltage selector: 3.3V or 5V
- Input: RJ45
- Supported devices
  Velodyne: HDL-32e, VLP-16, VLP-32c, VLS-128
  Hesai: XT-16, XT-32, XT-32M2X, Pandar-40, Pandar-64, Pandar-128, ,Pandar-QT
  Ouster: OS2-32, OS2-64, OS2-128

Applications

- Autonomous driving sensor logging system
- Sensor synchronization with drones
- Accurate data acquisition is possible even in a data acquisition environment where physical shock factors exist
- High-level sensor fusion is possible as sensors log data based on accurate azimuth

Technical Specifications

- A device that reads lidar packets and synchronizes the camera to a physical location.
- You can accurately capture dynamic objects by triggering them at a physical location (azimuth).

Physical Characteristics

Dimensions (L x W x H)	120 x 84 x 40 mm
Weight	< 330g
Power Supply	DC 12V / 10w (max)
Temperature	-10°C ~ 60°C
Ethernet Ports	4 x RJ45

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SC-300 v2

Mobiltech PTP Synchronization Board



The Mobiltech SC-300 V2 Grandmaster clock is a time synchronization solution designed for network systems that require precise GPS time synchronization.

The SC-300 V2 enables accurate time synchronization by adjusting devices based on Precision Time Protocol (PTP).

Key Features

- PTP Grandmaster Clock
- PTP Profiles: IEEE 1588, IEEE 802.1AS
- VLAN support
- Real Time Clock (RTC)
- PTP Hardware clock (PHC)
- Timestamp Accuracy < 1μs
- Inputs: PPS, NMEA
- Protocols: IEEE-1588, IPv4, SSH

Applications

- Autonomous driving sensor logging system
- Mobile mapping systems
- Sensor synchronization with drones
- GPS-based Time Synchronization
- Real-Time Synchronization for Robotics and Automation
- High-Level sensor fusion for accurate data integration

Usages and Benefits

- Compatible with any devices using IEEE-1588 or IEEE-802.1AS PTP protocol
- Phase lock between multiple LiDARs with customizable sync angle criteria
- Synchronization with GigE vision cameras supporting IEEE 1588 PTP
- Enables accurate multi-sensor fusion with precise time synchronization
- Precise & Autonomous frame matching across multiple sensors

Physical Characteristics

Dimensions (L x W x H)	164 x 256 x 95 mm
Weight	< 330g
Power Connector	DC Jack 5.5/2/1mm
Power Supply	DC 12V / 10w (max)
Temperature	-10°C ~ 70°C
Ethernet Ports	1 x RJ45
Synchronization	PTP (IEEE 1588v2, IEEE 802.1AS)

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SC-400

Mobiltech PPS Synchronization & Trigger Board



The Mobiltech SC-400 creates a virtual GPS signal in environments where there is no GPS signal.
And it can receive GPS pulse per second (PPS) and National Marine Electronics Association (NMEA).
The SC-400 allows for GPS synchronization in indoor and outdoor environments.

Key Features

- Operating System: Linux
- Inputs: PPS, NMEA, Event x 3ea
- Input NMEA: GPRMC, GPGGA
- Output: PPS, NMEA, Trigger x 3ea
- Output NMEA: GPRMC
- Timestamp
  LocalTime Mode : Up to 1µs
  GPSTime Mode : Up to 15ns
- Trigger mode
  PPS Divide: 5,10,15,20,25,30,35,40hz
  Azimuth Read: 1 ~ 20 hz
- Number of lidars: 3ea

Applications

- Autonomous driving sensor logging system
- Sensor synchronization with drones
- Accurate time synchronization with GPS or without GPS sensors
- Accurate data acquisition is possible even in a data acquisition environment where physical shock factors exist
- High-level sensor fusion is possible as sensors log data based on accurate time

Technical Specifications

- Synchronization may be maintained by generating a virtual PPS/GPRMC in the absence of a GPS signal.
- The phase lock can be kept indoors.
- The precision time protocol (PTP) can be applied in parallel with the Mobiltech SC-300.

Physical Characteristics

Dimensions (L x W x H)	64 x 44 x 18 mm
Weight	< 90g
Power Supply	USB-C 5V or External 12 V (DC) 300mW (max)
Temperature	0°C ~ 70°C

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