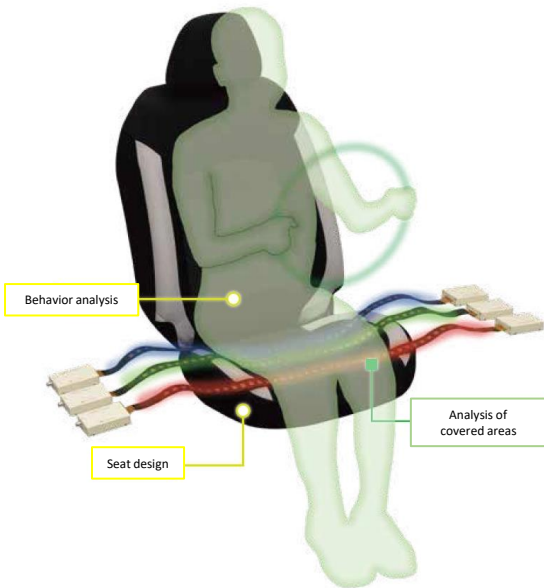


SEAT TRACER

Geometry Sensing System



3D Measurement of Boundary Surfaces

Features

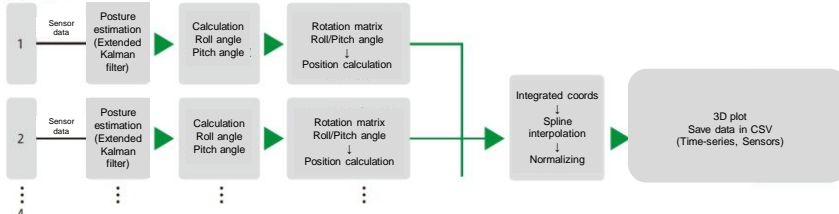
- ◇ 3D analysis of deformation in blind spots.
- ◇ Flexible printed circuit boards ensure the flexibility of the device.
- ◇ IMU chips placed by 20mm detects acceleration and angular velocity to compute the geometry.
- ◇ Up to 8 lines (seating/backrest) can be arranged for simultaneous measurement.



! Analysis

The inertial (acceleration, angle) sensors estimate posture and calculate roll and pitch angles to obtain the coordinates.

Line No.

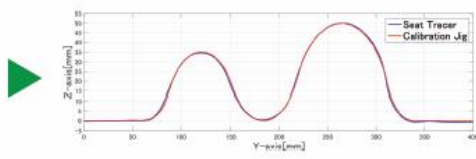


ST-2040A-1

Amplifiers on both sides for cross direction measurement against a seat

ST-2040B-1

Amplifiers on one side for longitudinal direction measurement against a seat



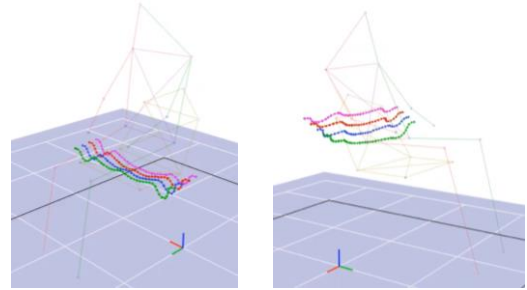
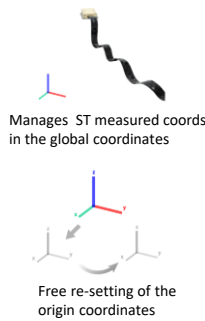
MSE
≤0.5mm

*Accuracy in a static state on a specified jig in outgoing inspection.
*MSE: Mean Square Error

Option

Application for Data Correction

Measured coordinates are integrated to simultaneously measured optical motion capture coordinates. This allows data management in global coordinates. Measuring and correcting the two positions at both ends reduces errors and improves dynamic tracking performance. A fixed-point correction version is also available.



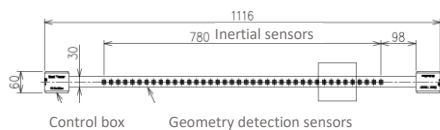
*Contact us for compatible motion capture systems

Specifications

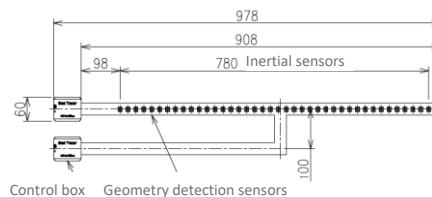
System			
Product name		Seat Tracer	
Sampling frequency		1KHz (100Hz recommended)	
Measuring method		Manual (software), External trigger (contact IN/Out)	
Package A		ST2040A-1 for Seating (3), ST2040B-1 for Backrest (1), Slider (8), Slider base (2), USB cable (8), USB Hub, Software(Measurement & Analysis), Storage case	
Package B		ST2040A-1 for Seating (4), Slider (8), Slider base (2), USB cable (8), USB Hub, Software(Measurement & Analysis), Storage case	
Sensing			
Model		ST2040A-1: Seating (two controllers)	ST2040B-1: Backrest (one controller)
Flexible circuit board	External dimensions	ST2040A-1 : 976mm	ST2040B-1 : 908mm
	Measuring distance	780mm	
	Integrated sensors	Inertial sensors (3-axis acceleration, 3-axis angular velocity)	
	Measuring range	Acceleration sensor: 2,4,8,16G Angular velocity sensor: ±2000deg/s	
	Resolution	16-bit	
	Number of sensors	40	
Controller (Control box)	External dimensions	60(W)×70(L)×19(H) mm	
	Power supply	USB	
	Current consumption	≤250mA	
	Operating temperature	0 to 50°C, ≤85RH (No condensing)	

Dimensions

ST-2040A-1



ST-2040B-1



< Note >

- This product has flexible structure using a flexible circuit board.
- The sensors may cause failure as consumed as a result of trade-off between durability and flexibility.
- Calibration certificate cannot be issued since 3D shapes are calculated from measured data. Only an inspection report is issued using a specific shaped sample.

***The design and specifications are subject to change without prior notice.**

Tec Gihan Co., Ltd.

1-22 Nishinohata, Okubo-cho, Uji-city, Kyoto 611-0033 Japan

Tel: +81-774-48-2334

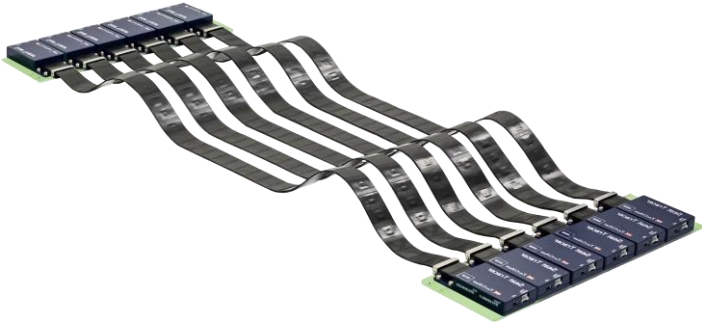
E-mail: eigyo@tecgihan.co.jp

URL: <http://www.tecgihan.co.jp/>



SEAT TRACER Package C

Geometry Sensing System



Easy Handling 3D Tape-shaped Sensing System !

Features

- ◇ Renewed Seat Tracer for easy handling
- ◇ Control boxes are arranged at 50mm pitch to combine 6 lines, enabling higher density measurement.
- ◇ Expanded up to 8 lines as an option, the combination with the backrest (one-end controller) model also possible.
- ◇ Pre-arranged sensor lines greatly saves time for setup.

Setup

Quick setup. Always ready to use!

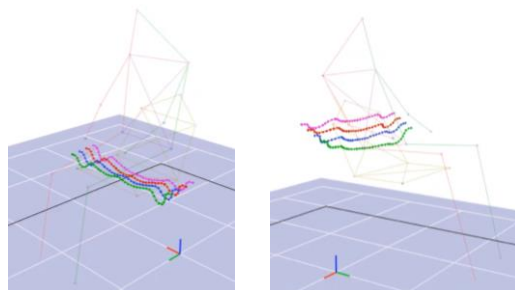
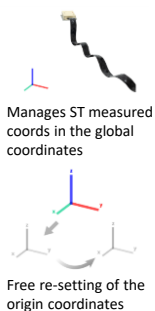


The amplifiers do not need to be removed from the frames.

Option

Application for Data Correction

Measured coordinates are integrated to simultaneously measured optical motion capture coordinates. This allows data management in global coordinates. Measuring and correcting the two positions at both ends reduces errors and improves dynamic tracking performance. A fixed-point correction version is also available.

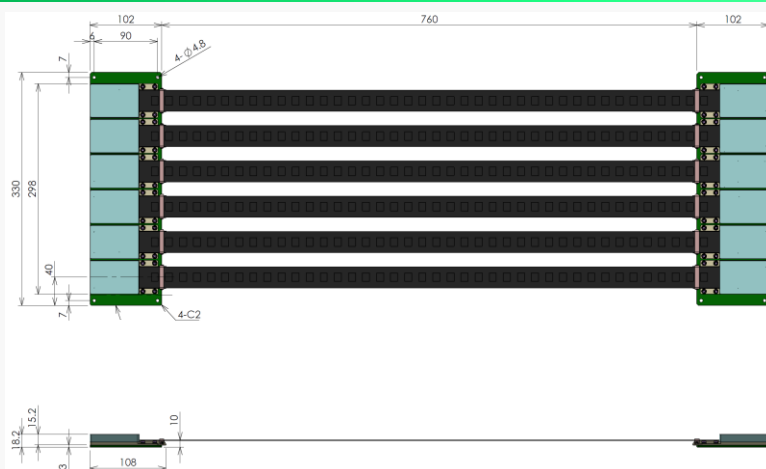


*Contact us for compatible motion capture systems

Specifications

System	
Product name	Seat Tracer Package C
Sampling frequency	1KHz (100Hz recommended)
Measuring methods	Manual (software), External trigger (contact IN/Out)
Components	ST2040C-1 (6) *Placed in the frame USB cable (12), USB Hub, Software(Measurement & Analysis), Storage case
Sensing	
Model	ST2040C-1
External dimensions	964 x 48 x 15 mm
Measuring distance	780mm
Integrated sensors	Inertial sensors (3-axis acceleration, 3-axis angular velocity)
Measuring range	Acceleration sensor: 2, 4, 8, 16G Angular velocity sensor: ±2000deg/s
Resolution	16-bit
Number of sensors	40
Sensor pitch	20mm
Power supply	USB
Current consumption	≤250mA
Operating temperature	0 to 50°C, ≤85RH (No condensing)

Dimensions



< Note >

- This product has flexible structure using a flexible circuit board.
- The sensors may cause failure as consumed as a result of trade-off between durability and flexibility.
- Calibration certificate cannot be issued since 3D shapes are calculated from measured data. Only an inspection report is issued using a specific shaped sample.

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