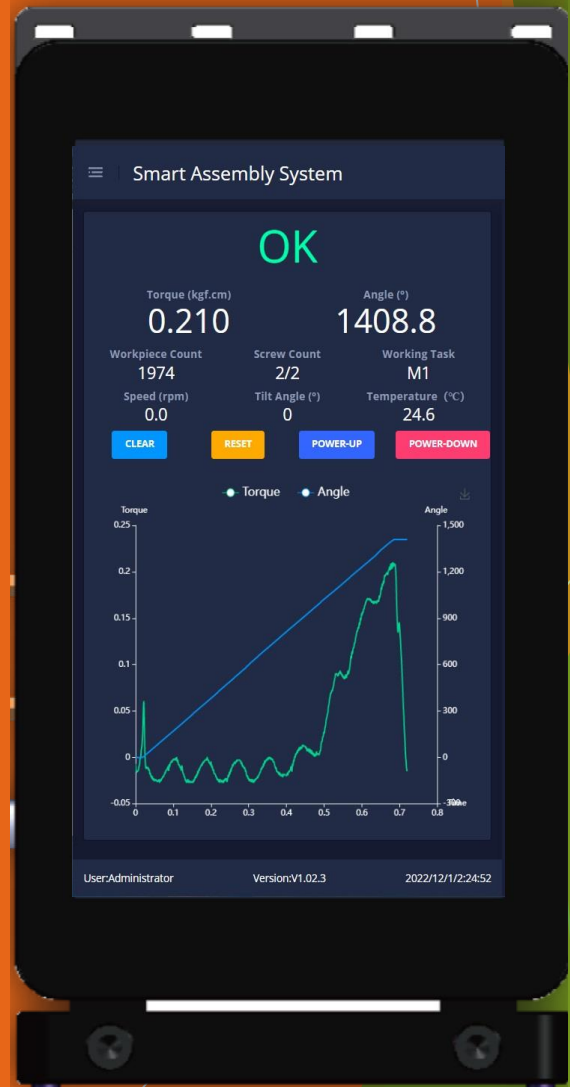


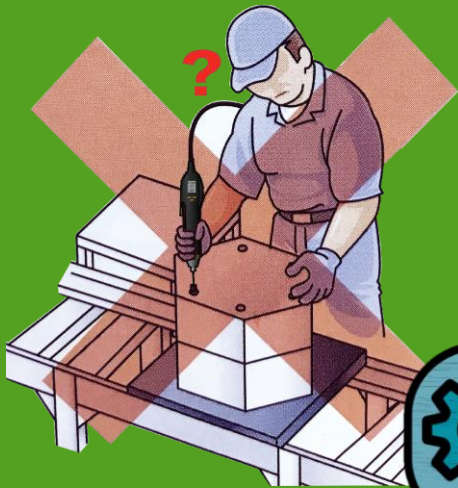
# Smart Pseudo Servo Drivers

## ALS-S Series 0.15-25 kgf·cm



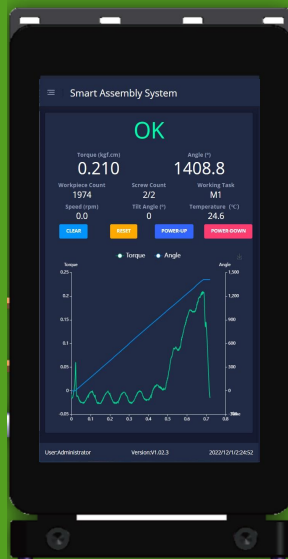
# What Is AIS

- ✓ Advanced technology assembly tool that bridges the gap between humanity and machines
- ✓ To solve the industry quality-cost balance issue
- ✓ To simplify the set-up processes of an electronic device to shorten the learning curve
- ✓ To provide production data
- ✓ To increase productivity



# What AIS Does

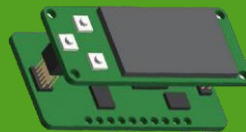
- ✓ >95% tightening torque accuracy/repeatability w/  $CMK > 1.67$
- ✓ Target torque, speed, angle, and time judgment criteria setting
- ✓ Fastening either by hand or remote (signal)
- ✓ Up to 8 steps per tightening task, up to 16 tightening tasks per tightening job, and up to 8 jobs programmability
- ✓ Communication via I/O, RS-232/485, Wi-Fi, and Ethernet
- ✓ Modbus & Open Protocol
- ✓ Cross-platform Software, no installation necessary



# How It's Done

## 1<sup>st</sup> in Industry Unique Features

- ❖ The highest tightening torque in the market within a such compact size body (25kgf·cm/Ø29.9x216 mm)
- ❖ Single housing accommodating on-tool LCD\*, gyro sensor\*, illuminating LED\*, off-set (z-axis\*), and multi-layer reduction gears for various tightening conditions (\*options)
- ❖ 5-pin Connector eliminating complicated power/signal & EMI and associated cost issue
- ❖ Cross-platform user interface, no need to install software on a different platform
- ❖ Firmware ungradable & easy set-up



## Other Features

- ❖ Fully certified by various standards
- ❖ High energy density motor and high-efficiency electronic control
- ❖ Highly stackable electronic circuit boards capable of handling high-power torque load & high-efficiency speed reduction
- ❖ Standard 1/4" pull-out bit socket replaceable with  $\phi 4$  or  $\phi 5$  bit sockets
- ❖ Standard hand-held but also embedded with left threads for fixture mounting (automated tightening)

# standard model

AIS-S1.0 / AIS-S5.0 / AIS-S12 / AIS-S25

APM-303A / TSC-1.0

## AIS-S1.0

(0.15-1.0 kgf·cm / 0.13-0.87 lb·in)

## AIS-S5.0

(0.5-5 kgf·cm / 2.6-17.5 lb·in)

## AIS-S12

(2-12 kgf·cm / 2.6-17.5 lb·in)

## AIS-S25

(4-25 kgf·cm / 2.6-17.5 lb·in)

Ø29.9x216 mm up to 1500 RPM



## APM-303A

100-240V/2A

50/60Hz @ 75W

172x84x61 mm

## TSC-1.0

Touch Panel

Digital I/O

RS-232/485

Ethernet

Wi-Fi / Hotspot

221x113x51 mm



# STEP/TASK/JOB

## STEP



- A step is a single action like forward (CW) or reverse (CCW) turn of the driver bit with one or multiple conditions set to stop
- There are 4 conditions that can be set for each step:  
1) Torque 2) Angle 3) Speed 4) Time
- Each or all these 4 conditions can be set as when a step is completed (judgment criteria)



- A tightening task is a sequential combination of steps
- Define up to 8 steps to complete a task
- All defined steps must be executed to complete a task
- When a task is completed, the defined result can be recorded and reported

## JOB



- A job is a sequential combination of task
- Define up to 16 tasks to complete a job
- All designated tasks must be executed to complete a job
- When a job is completed, the result can be recorded and reported; system can program up to 8 jobs

As an example, a workpiece going in and out of the assembly workstation is like a JOB, the fasteners on the workpiece are like TASKS, and how to complete each task takes STEPS to do

# Home Page

Everything you need to know is right here



# Main Menu

All Settings Are Done Through Here

## TASK & JOB

Setting up tightening steps, tasks, and jobs

## SYSTEM

Setting up communications, I/O, target governance

## DATA

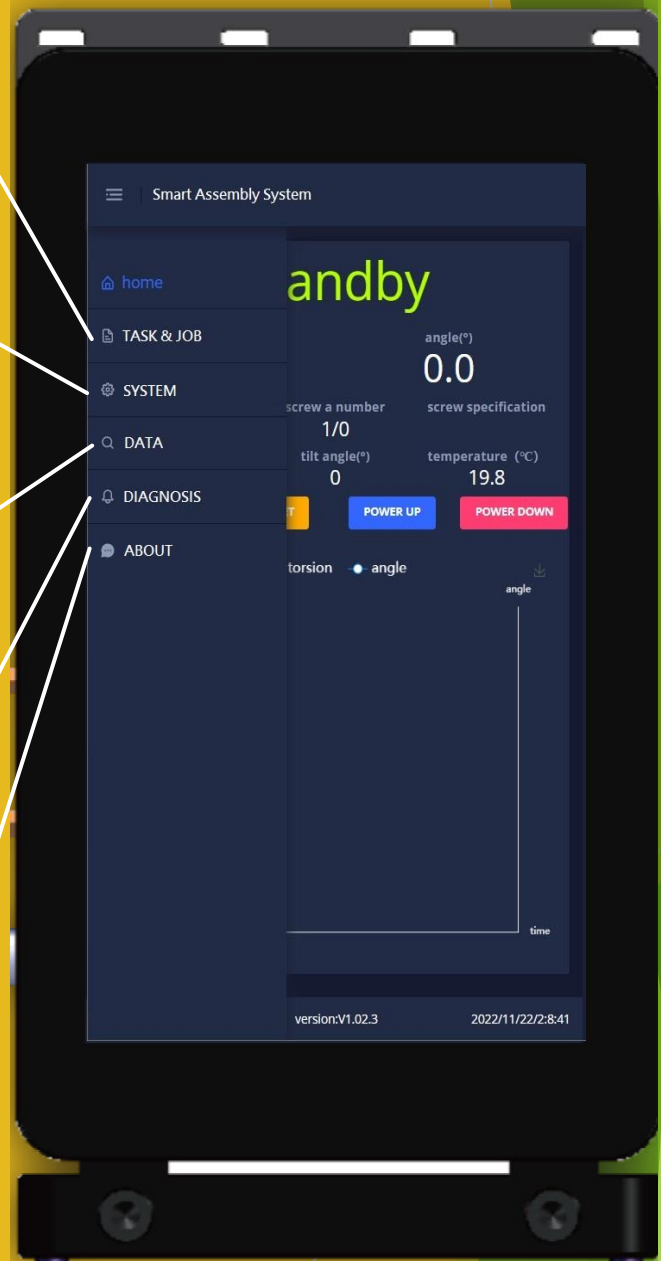
Tightening data retrieval

## DIAGNOSIS

Self-diagnosis tool

## ABOUT

System information and Theme/Language Settings





# After-Sales

## Calibration & Warranty

### Calibration

- ❖ System can be calibrated by torque compensation (offset feature) based on SAS torque tester and joint simulator if necessary
- ❖ Manufacturer's calibration can be done via agent and/or distributor if needed

### Warranty

- ❖ Manufacturer's warranty includes materials and workmanship for one year or 1 million cycles from invoice date with a valid serial number due to manufacturing defect under normal usage

