SVV

Our Engineering Capabilities

Supporting the Growth of Innovation and Pioneering the Future of Technology

● **Shenzhen**   ● **Palo Alto**   ● **Berlin**

Engineering Overview?

Our engineering services consist of over 50+ in-house engineers, all of whom have up to 25+ years in engineering and manufacturing.

Our engineering capabilities specialize in product design & development. We evaluate, discuss, and execute a viable solution which optimizes our client's products, and assures a smooth transition from development to manufacturing.

Our extensive network, infrastructure, and expertise allows us to assist our clients with their supply-chain, quality control, and product IP protection. From prototype to production, we handle the entire process.

What Our Engineering Covers:

- Firmware engineering
- Product design (DFM)
- Electrical engineering
- Mechanical engineering
- Molding & tooling
- Low volume manufacturing

- Manufacturing execution system
- Jigs & fixtures
- Validation testing
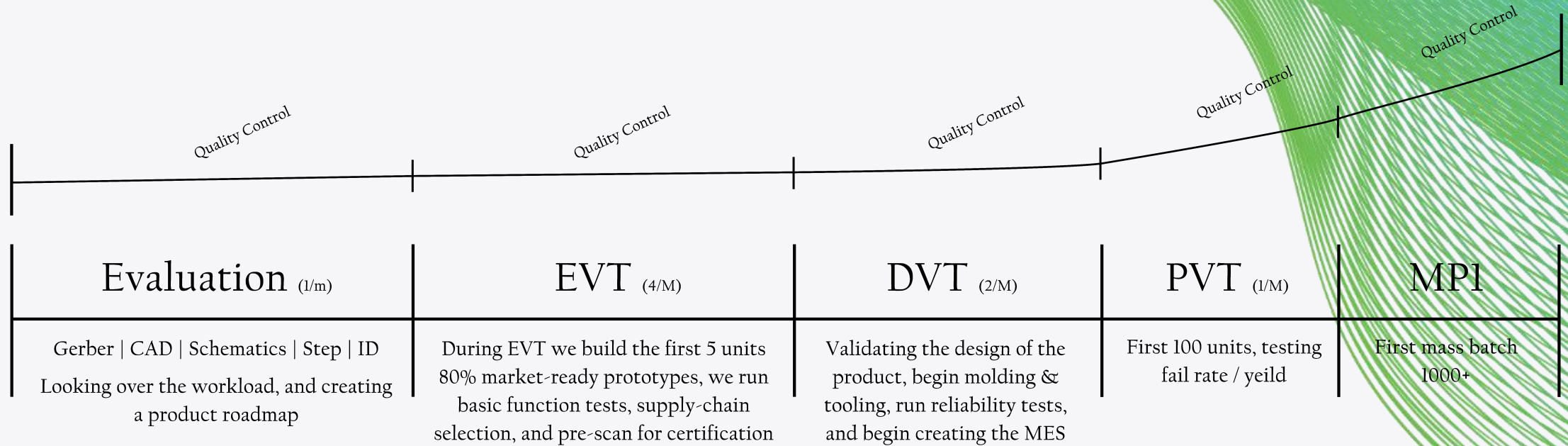- Pre-certification
- Certification application

Time To Get It Made

Our Engineering Focus

Electronics

Mechanical

Firmware

Supply-Chain

SVV

Logistics

Testing

Certification

Pilot-Run

Product Development Lifecycle

Evaluation (1/m)	EVT (4/M)	DVT (2/M)	PVT (1/M)	MPI
Quality Control	Quality Control	Quality Control	Quality Control	Quality Control
Gerber | CAD | Schematics | Step | ID Looking over the workload, and creating a product roadmap	During EVT we build the first 5 units 80% market-ready prototypes, we run basic function tests, supply-chain selection, and pre-scan for certification	Validating the design of the product, begin molding & tooling, run reliability tests, and begin creating the MES	First 100 units, testing fail rate / yeild	First mass batch 1000+

SHENZHEN VALLEY ENGINEERING'S PROCESS
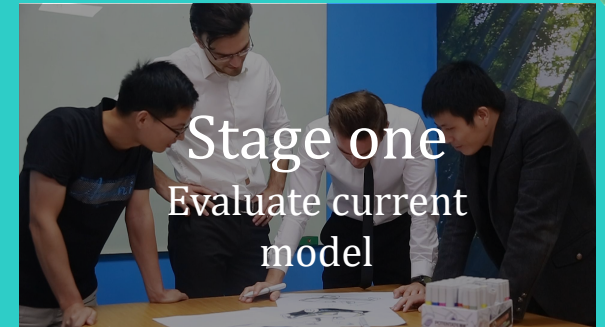
AVG: 8 MONTHS

Time To Get It Made

Evaluation Stage

Our evaluation stage brings together a team of 7+ engineers to review your product's files and develop a roadmap. Companies can use our engineering at any stage in their development process.

Within this phase we're breaking down what you have done so far, what needs to be done, and solve any obstacles which may occur throughout your product's development.

You can come to us with either a prototype or design files. Either way, we will evaluate and create the necessary files needed throughout your product's development.

- We do a complete breakdown disgnostic on current product's architecture

- Evaluate key issues and begin solving them
- Verify the key components needed throughout development

- Once our team are in agreement, we finalize the workscope and begin executing

Stage one
Evaluate current model

Stage two
Highlight key problems & solve them

Stage Three
Execution

Time To Get It Made

Engineering Validation Testing (EVT) Stage

CNC (Fabrication)

Our facility consists of CNC and 3D printing machines. For fast prototyping and production

Once we finish evaluating your product, we begin R&D. This is called 'The EVT' stage which consists of:

ID design, mechanical design, electrical design, and FW design based on the DFM (design for manufacturing) standard.
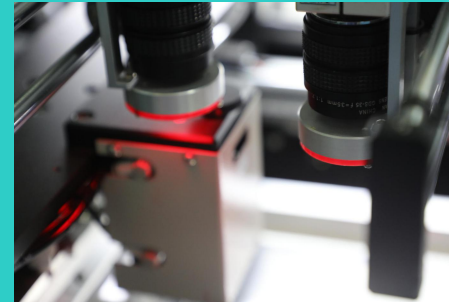
We achieve 80%+ functionality of your product at this stage.

This stage is to verify the product's solution and main functions. Here you can begin shipping units to early backers, for market-testing or research.

SMT (Assembly)

Our in-house SMT line is equipped with machine vision technology, ensuring high-quality PCBA production

EMC (Testing)

Our anechoic chamber is one of the pre-certification tests we perform on our client's products

Time To Get It Made

Design Validation Testing (DVT) Stage

At this stage we will optimize your product's design to ensure it's operating at a 100% funcionality.

DVT will also include:

- Official certification application
- NPI preparation & SOP (standard work of procedure)
- Jigs & Fixture preperation
- Create an MES for your product

What is an MES?

A manufacturing execution system (MES) is an information system that connects, monitors and controls complex manufacturing systems and data flows on the factory floor. The main goal of an MES is to ensure effective execution of the manufacturing operations and improve production output for your product.

Time To Get It Made

Design Validation Testing (DVT)

Molding & Tooling

We begin working on your molds and tools. We outsource this work to our 3rd party partners or we'll work with a vendor of your choosing.
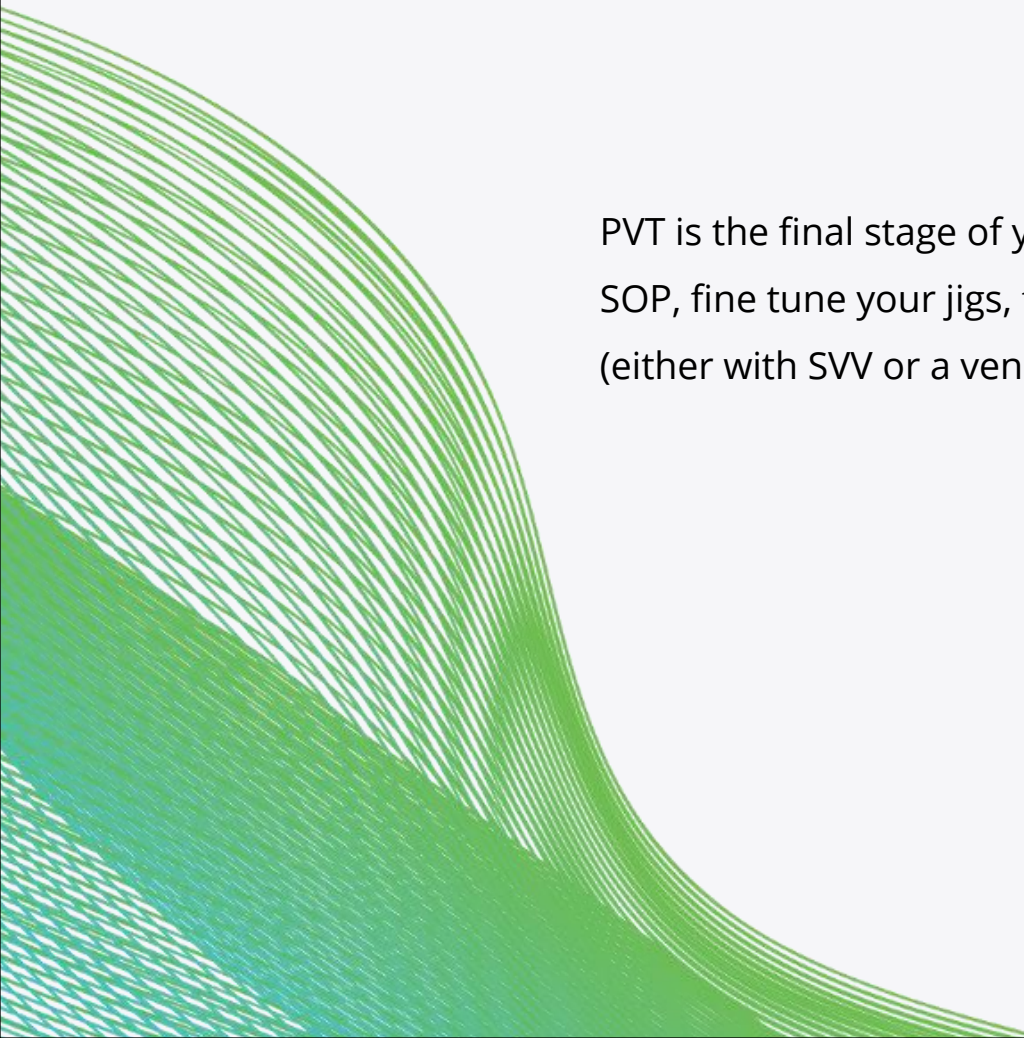
Reliability Testing

Further tests are required to ensure safety and quality. These tests will include:

- Water resistance (IPX6)
- Dust resistance (IP5X/IP6X)
- Drop testing (1.4M)
- Salt mist testing

- EMC/RF testing
- Humidity testing
- Thermal shock testing
- Flame/Glow wire testing

Time To Get It Made

Product Validation Testing (PVT) Stage

PVT is the final stage of your product's development process. At this stage we finalize your SOP, fine tune your jigs, fixtures, and tooling, and run a pilot-run on the manufacturing lines (either with SVV or a vendor of your choosing).

Certification

Throughout development we will be constantly pre-scanning your product to ensure it has more chance to pass its certification. Although we only pre-scan, we also help you receive your certification.

We would've determined what certification you need to apply for at the evaluation stage (slide 5). If you are unsure of the requirements, our team will do the research on your behalf and ensure your product is in-line with any regulations you need.

We are also ISO 13485 certified. This allows us to work on medical products, and assist companies to pass their FDA/FCC approval faster.

Intellectual Property Protection

As an extra layer of intellectual property protection (IPP), we keep your product's development and testing in-house, eliminating the need to share sensitive data with 3rd parties.
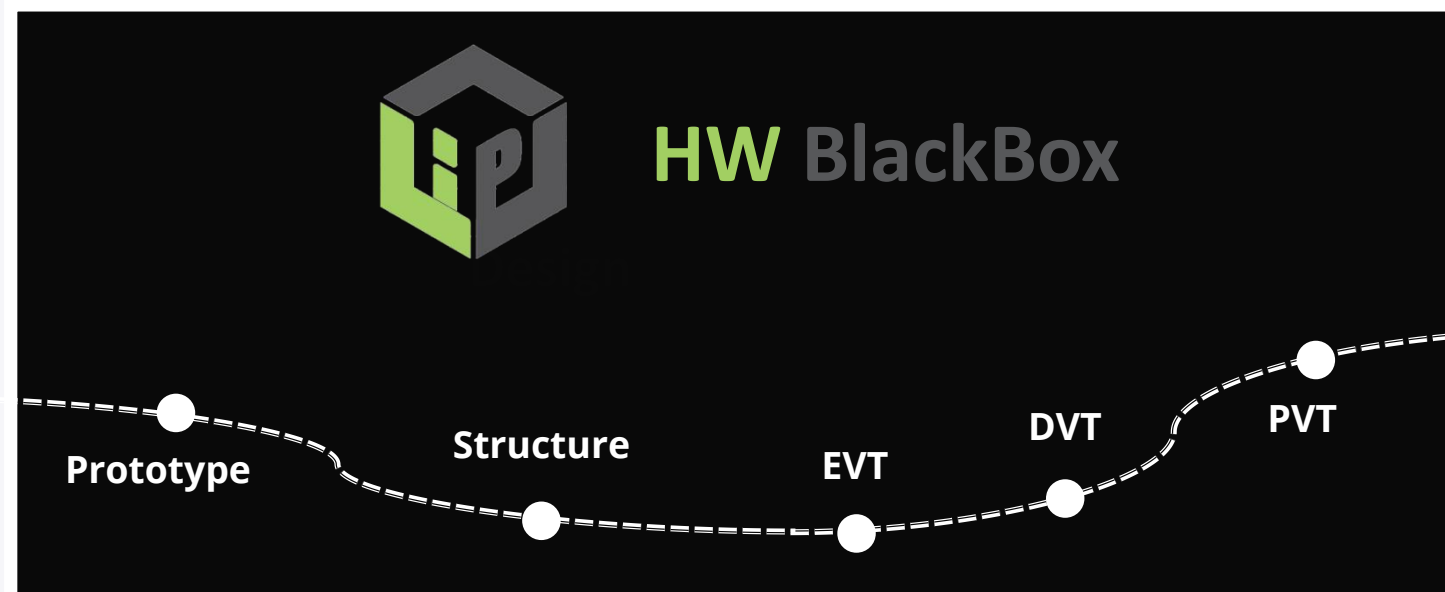
WATERBIT

An Irrigation Device

Waterbit: Your

Irrigation Practices

We've developed an Irrigation Assessment that takes into consideration the crops you grow, your farm's terrain and soil types, your current water and energy usage, and your growing practices to develop a detailed Irrigation Assessment report.

Stage: Market

Duration: 11 Months

Provided: EVT, DVT

Market: America/Australia

ROBOSENCE

Autonomous Driving, Li-Dar Technology

RoboSense (Suteng Innovation Technology Co., Ltd.) is a world leading LiDAR environment perception solution provider.
Founded in 2014, RoboSense is headquartered in Shenzhen and has set up branch offices in Beijing, Shanghai, Germany, and the United States.

Stage: Market
Duration: Ongoing
Provided: Assmebly, ME
Market: China

SUTRO

A Watering Detection Solution

Sutro: Love Your Pool Again

Finding traditional pool products bland and uninspired—think clunky chlorine floaters and boxed equipment sets—Sutro partnered with Enlisted to create a beautiful, intuitive smart pool monitor and brand experience worthy of the home.

Stage: Market
Duration: 11 Months
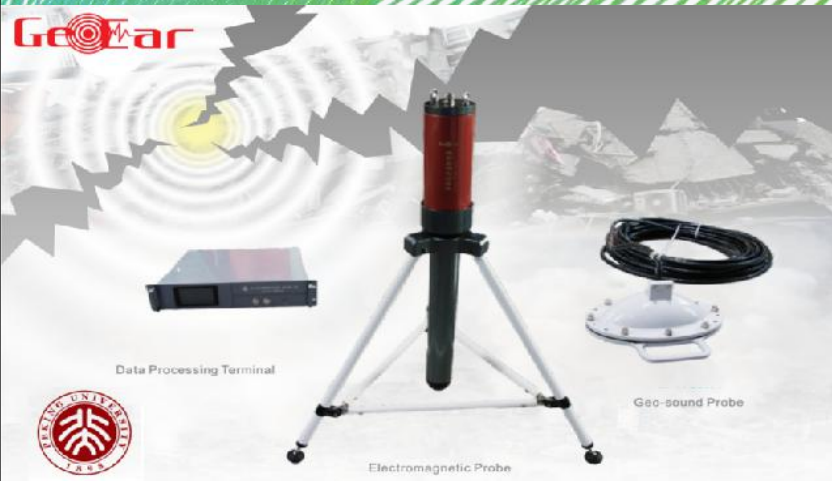Provided: EVT, DVT, PVT, MP1, MP
Market: America
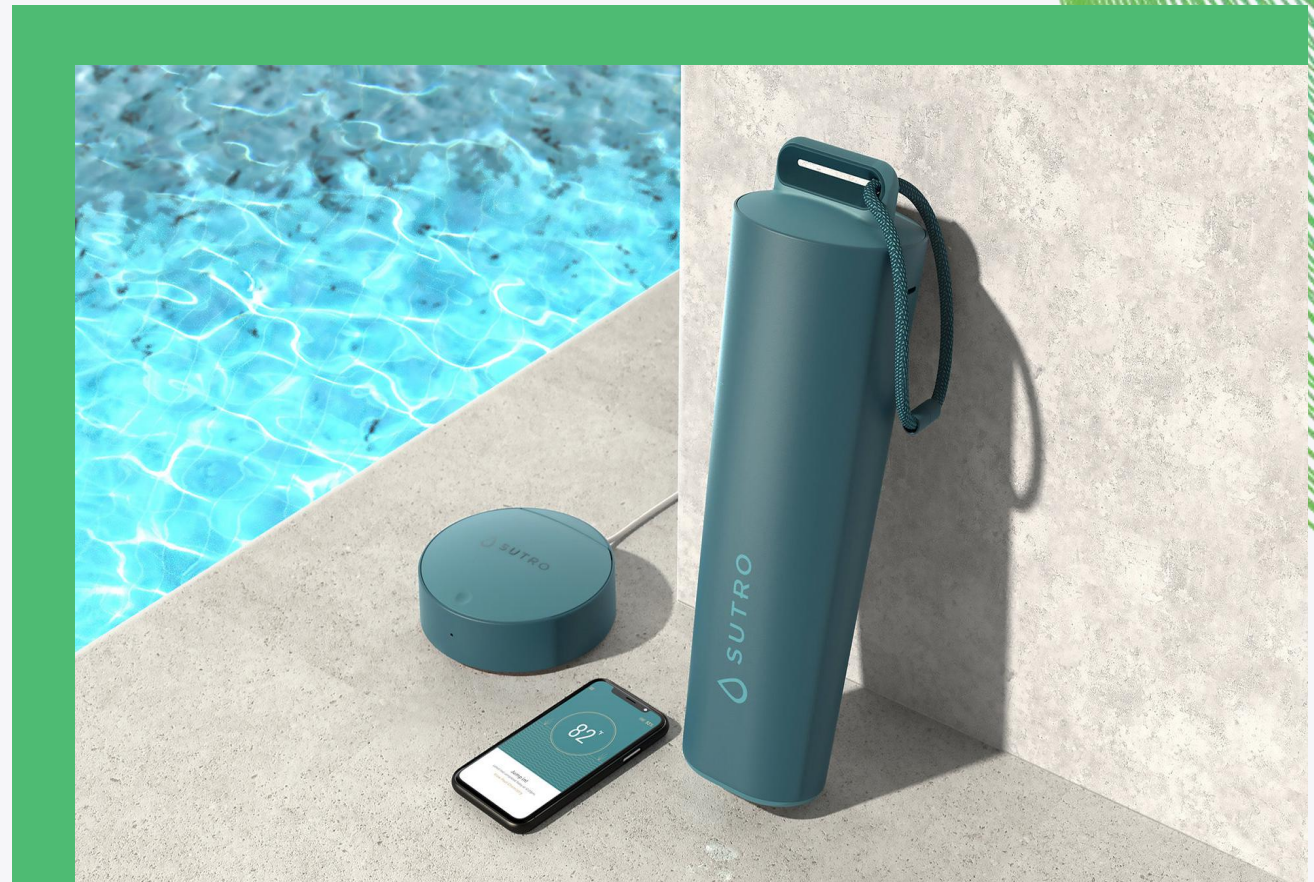
Time To Get It Made

Portfolio (i)

Earthquake Pre-alert system

Hazardous Gas Detection

Lidar for autonomous driving

3D Filming

Automatic Knee Replacement Robot

Soil Data

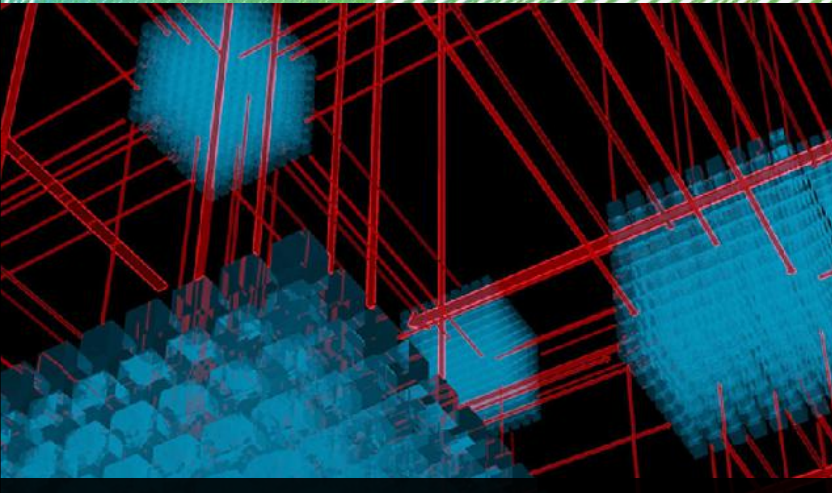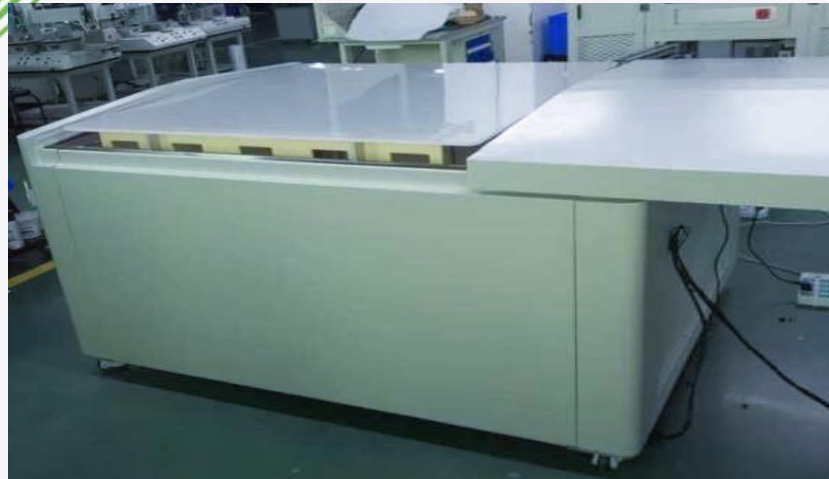Software Defined Visual Network

Drone docking station

Sweat sensor

Industrial Drone

Kids Coding Robot

Portable Drug Detection

SVV

Time To Get It Made

Website: https://SVV.IO

Email: SVV@SVV.IO

Phone: (+86) 137 2340 4102