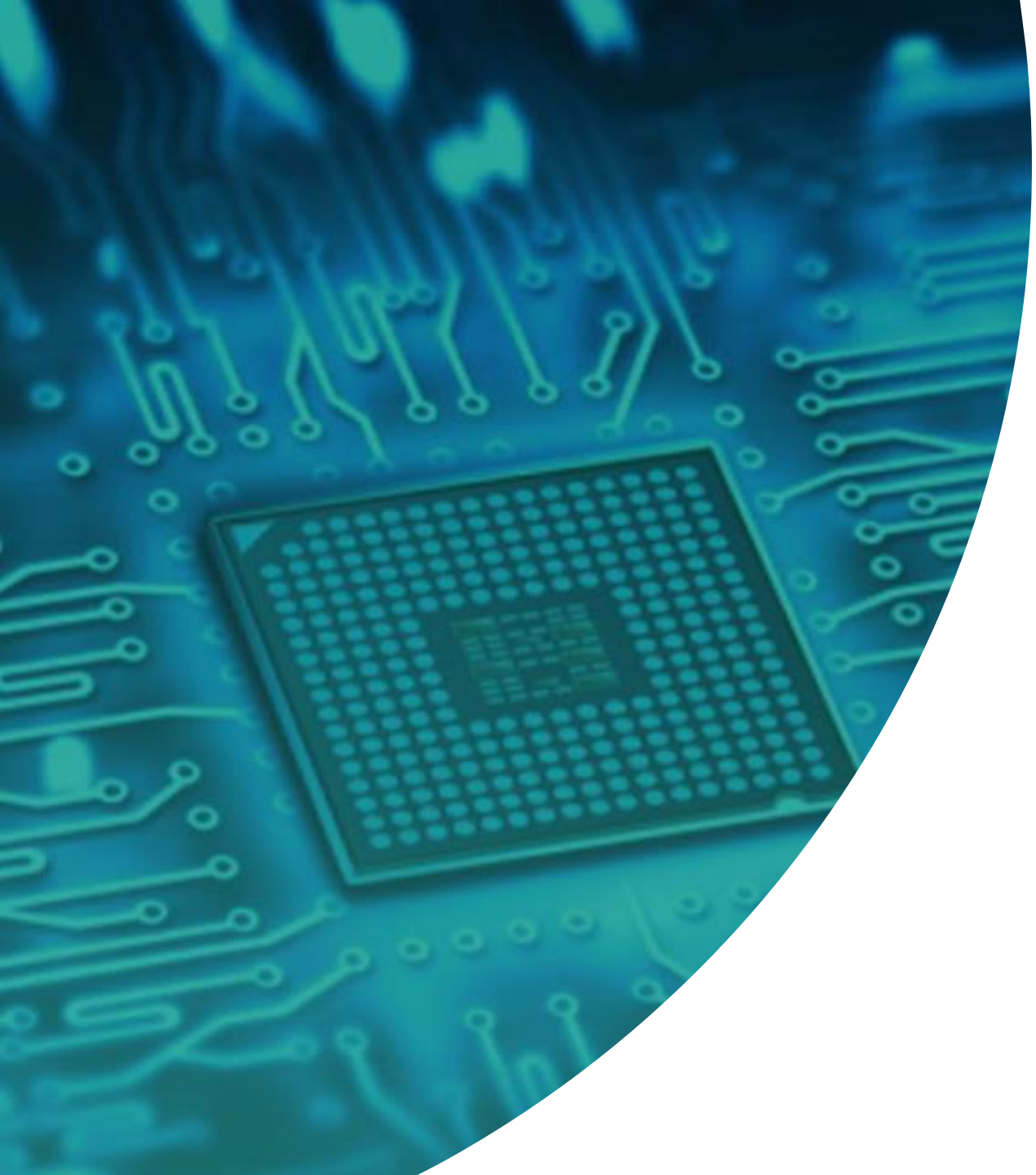


SILBIT

Technological supply chain

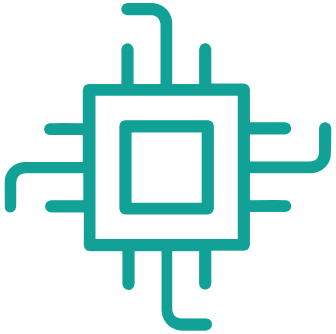
Confidential

Who are we?

Company with 8 years in the market and with more than 16 years of experience in the electronics, metal and plastics industry. We serve national and international markets in mainly industrial branches, specialized consumer and automotive products. We focus on offering a complete solution for the integration of our customer's products, providing not only the electronic assembly service, but also the manufacture of special product elements, and their complete integration, with a value-added service focused on functional tests of each product in the production line.

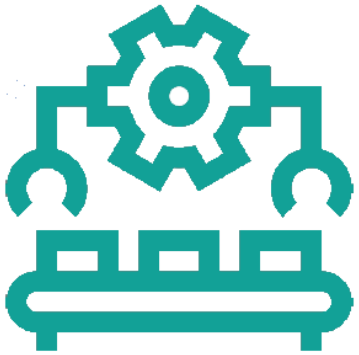
Confidential

Integration areas



Hardware & Firmware

Testing and product integration



Manufacturing and Assembly

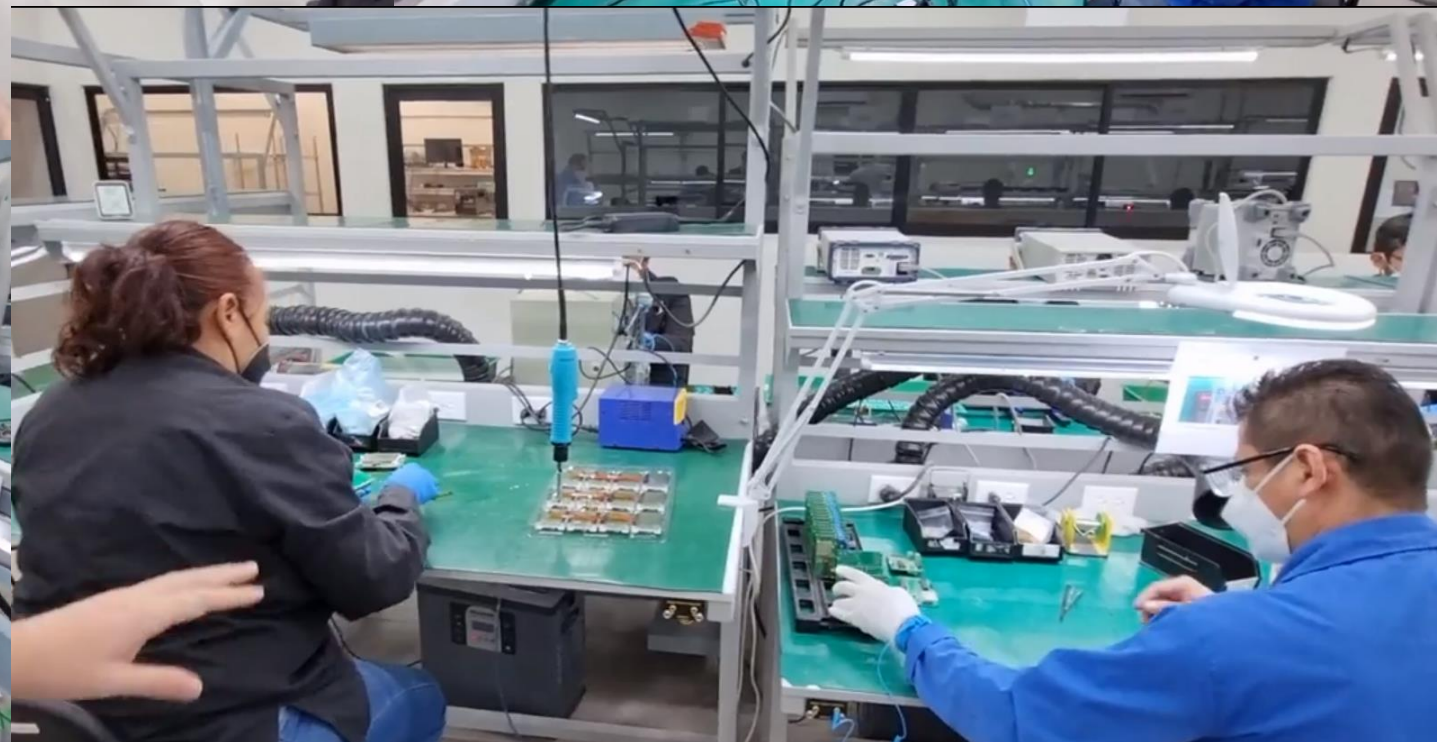
Product integration

Confidential

Technological manufacturing

Services

- Electronic manufacturing: PCB, Electronic Assembly and Component Supply, Firmware load to microcontrollers.
- Development and manufacture of Fixtures for electrical and functional tests in the production line.
- Mechanical product assembly (Integration with housings, screws, harnesses, labeling and installation of front panels, special elements).
- Design and manufacture of harnesses.
- Development of injection molds and plastic injection.
- Conformal coating and Pottings.
- Design and manufacture of specialized pieces to measure: Graphic panels, 3M adhesives, Gorilla Glass crystals, custom lithium batteries, small format LCD screens, among others.
- Advice on the design process for manufacturing (DFM).
- Technological development (Hardware, Firmware and Mechanical Design).



PCB Assembly (PCBA) – High Volume Line

Lines for high volume projects

- ✓ SMT - Panasonic 52500 cph; and automatic THD assembly
- ✓ IATF 16949, ISO9001, ISO14000, CTPAT, OEA and other approvals for High Volume Line

Latest Technology for SMT, clean room ISO 7.

SMT #1		
Category	Brand	Model
Magazine Loader	Ki-Heung	DL-900S
PWB Cleaner	Unitech	UC-2508V
Printer	Panasonic	SPG
Shuttle conveyor	Ki-Heung	DSC-686S
Chip Shooter	Panasonic	NPM-W2
AOI	Kohyoung	ZENIT LITE
Inspection Conveyor	Ki-Heung	DIC-900S
Oven	TAMURA	TNV-M6110CR-X
Cooling Conveyor	Ki-Heung	DHCC-533S
NG Buffer Conveyor	Ki-Heung	DMB-1235S
Magazine Unloader	Ki-Heung	DUP-900S

SMT #2		
Category	Brand	Model
Magazine Loader	Nagoaka	NLV2210S
Flip Conveyor	Asys	WS-01
Glue Dispenser	JUKI	KD-2077
SPI/AOI	Sony	SI-C1500
Shuttle Conveyor	Crown Simplimatic	8010
Chip Shooter	SONY	SIG-200
IC Mounter	JUKI	KE-2060
Inspection Conveyor	Nagaoka	NBC-250E-600
Oven	HELLER	SS1812-II
Buffer Conveyor	Nagaoka	NS0010TP2ER
NG Conveyor	Nagaoka	NTR-250A
Magazine Unloader	Nagaoka	NU0010E

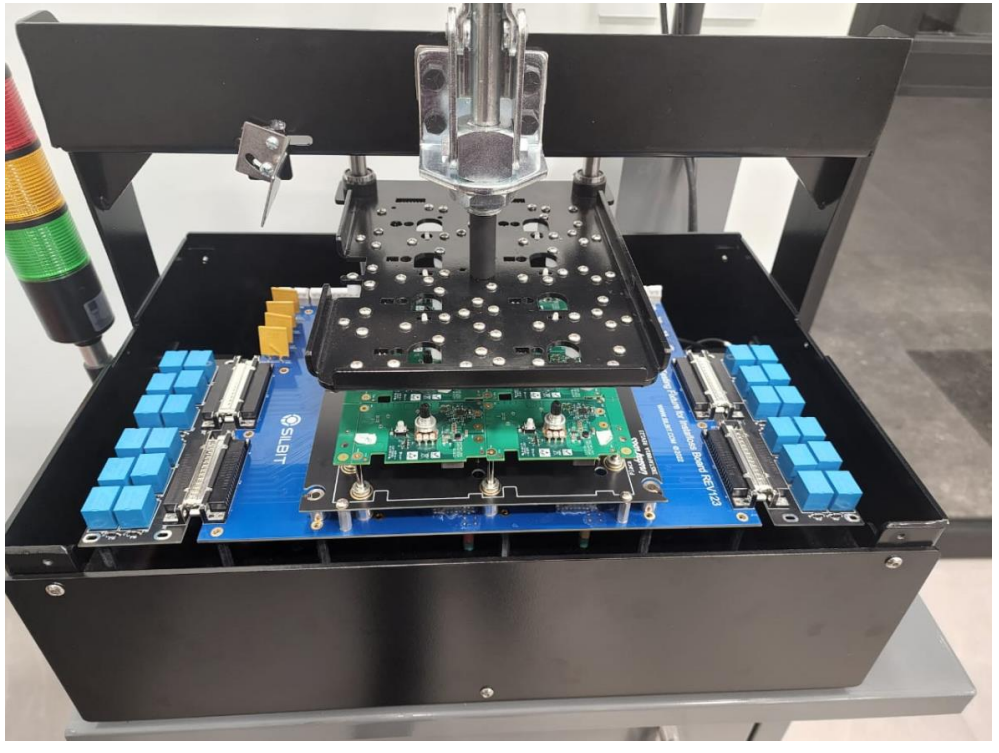
SMT #3		
Category	Brand	Model
Magazine Loader	Eunil	ELD-400
Conveyor	Lynx	NTM510ICL-05-I
Printer	JUKI	GKG-GL
Conveyor	Universal	48688101
Chip Shooter	JUKI	RX6
IC Mounter	JUKI	FX1
Inspection Conveyor	Simplimatic	8010
AOI	OMROM	VT-WIN II
NG Conveyor	YJ Link	ANRC100L
Oven	JUKI	RS-1000II
Conveyor	Universal	48688101
AOI	Sony	SI-C1500
Unloader	Nutek	NTM110P

Others		
Category	Brand	Model
Ultrasonic Cleaning Machine	SAWA CLEAN	SC-AH100E-LV
Solder Mixer	THINKY MIXER	SR-500
X-Ray	i-bit	FX-300tRX

Others		
Category	Brand	Model
AXIAL	Panasonic	AVK2
RADIAL	Panasonic	RH2
Wave Solder	JUKI	WS-450
Laser Printing	KEYENCE	MD-X1000

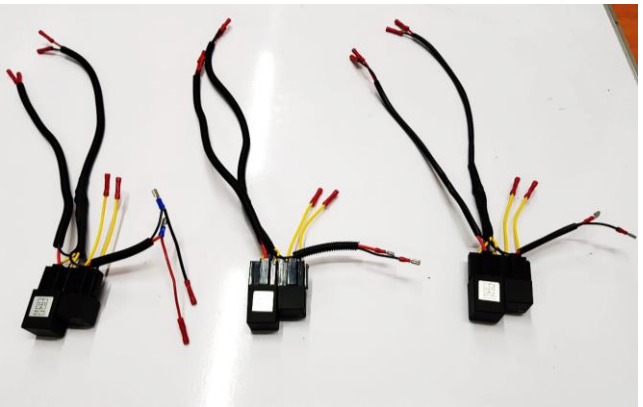
Functional tests - Fixtures

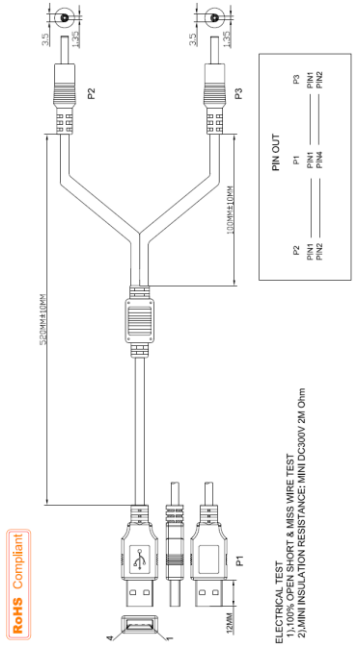
We have experience developing “fixtures” to perform functional tests on electronic boards, which allows validating manufacturing and ensuring that all production batches work correctly. These fixtures are designed with different levels of complexity depending on the desired automation according to the volume of manufacturing required.



Harness

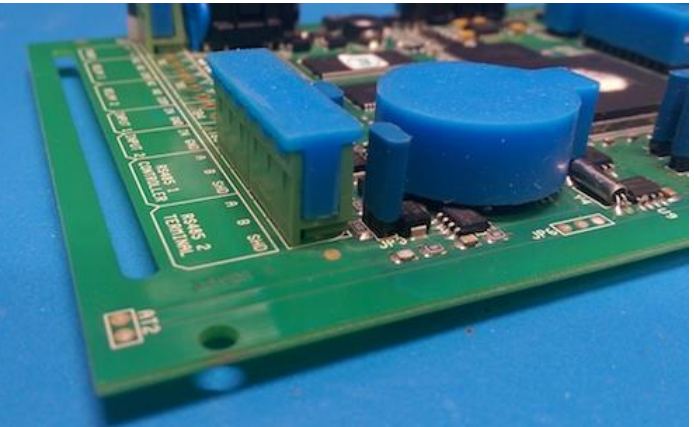
- ✓ Automotive
- ✓ Harnesses with Waterproof Connectors (IP65 - IP68)
- ✓ Harnesses with standardized connectors: USB, HDMI, VGA, Jack, RJ11, RJ45, Flat Cable, XH, Automotive Terminals, among others
- ✓ Harnesses with special connectors
- ✓ RF cables
- ✓ Custom molded cables

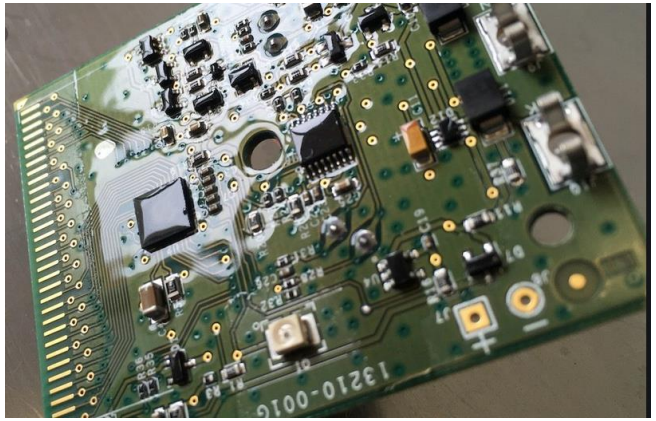




Conformal Coating and Potting

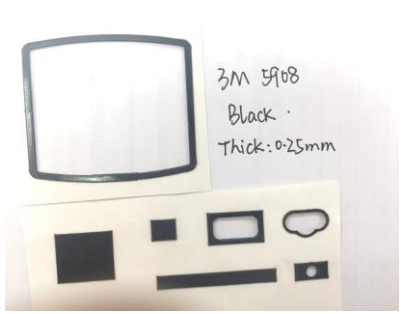
- ✓ Conformal Coating Acrylic type
- ✓ Selective application through templates
- ✓ Emptying of epoxy resin with the possibility of giving a specific color
- ✓ Mechanical plate design

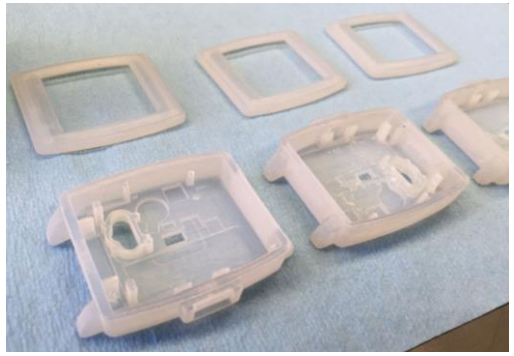


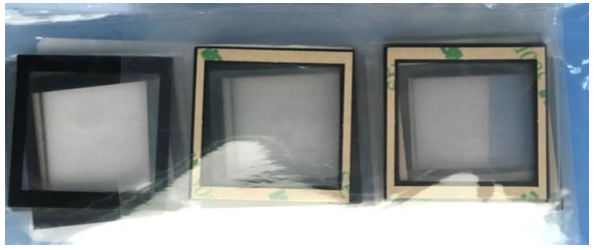


Specialized Design and Manufacturing

- ✓ Custom silicone keyboard with conductive terminations.
- ✓ Custom 3M double-sided adhesives.
- ✓ Product front panels with corporate identity.
- ✓ Custom Gorilla Glass crystals.
- ✓ Integration of lithium battery packs and special manufacturing according to requirements.
- ✓ Waterproof acoustic membranes.
- ✓ High resolution 3D printing for mechanical and dimensional validation prior to injection mold.
- ✓ Custom monochrome and color LCD screens with custom glass.

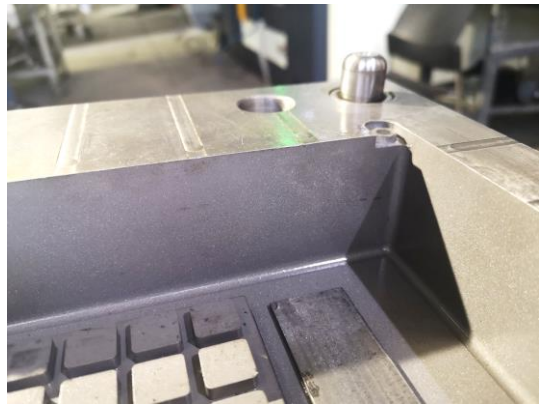


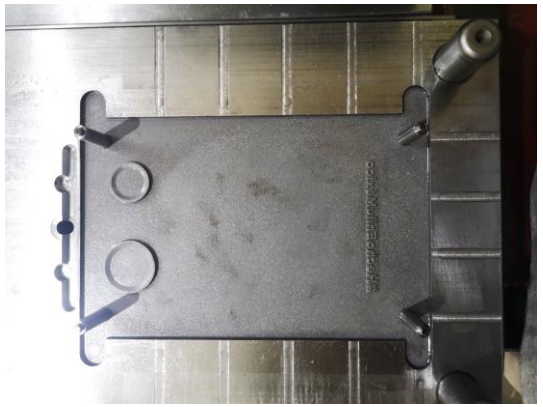


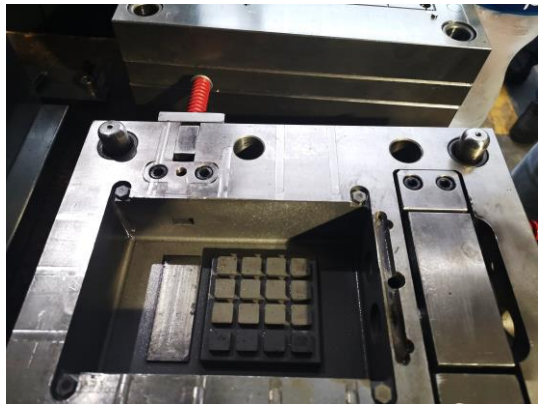


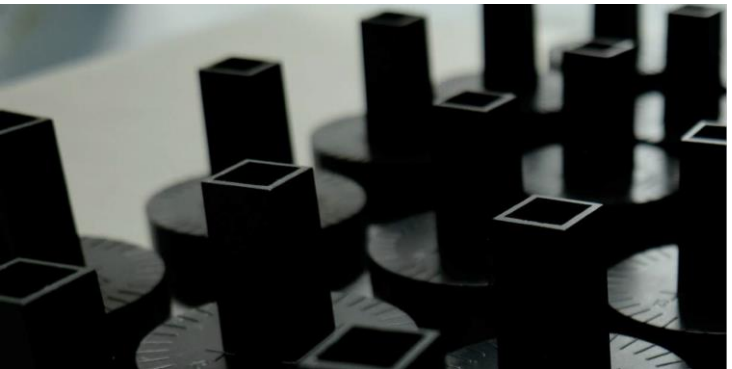
Plastic Injection

- ✓ Various materials available: ABS, Polycarbonate, Nylon, PPL, among others. Available with UV loads for resistance to sunlight.
- ✓ Molds of 300,000 - 1,000,000 injections depending on the need of the project.
- ✓ One or multiple cavities depending on the volume of production required.
- ✓ Mechanical part design and simulation (Solid Works)
- ✓ DFM - Exit angles, traps, sliding carriages, inserts, release and injection points, etc.









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Plastic Injection – High Volume Line

Lines for high volume projects

✓ **29 plastic injection machines from 40 to 350 tons**

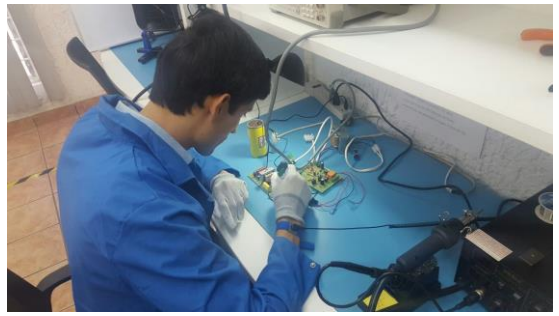
Qty	Brand	Model	Tons	COO	Clearence Between Tie Bars (mm)	Mold Height (mm)
2	Sumitomo	SD-40ER	40	Japan	270 x 270	160 - 205
1	NISSEN	PS60E9A	60	Japan	325 x 325	170 - 410
1	Sumitomo	SG 75 SYCAP MII	75	Japan	360 x 360	160 - 410
2	Sumitomo	SG 150 SYCAP MII	150	Japan	510 x 510	200 - 500
7	Sumitomo	SE 180 S	180	Japan	510 x 510	200 - 500
8	Sumitomo	SG 180 MS	180	Japan	510 x 510	200 - 500
5	Sumitomo	SG 220 SYCAP MII	220	Japan	560 x 560	230 - 580
1	Sumitomo	SG 220 U SYCAP MII	260	Japan	560x 560	230 - 580
2	Sumitomo	SE350HD	350	USA	760 x 710	400 - 670

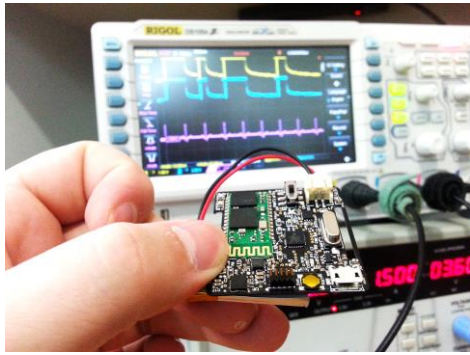
Confidential

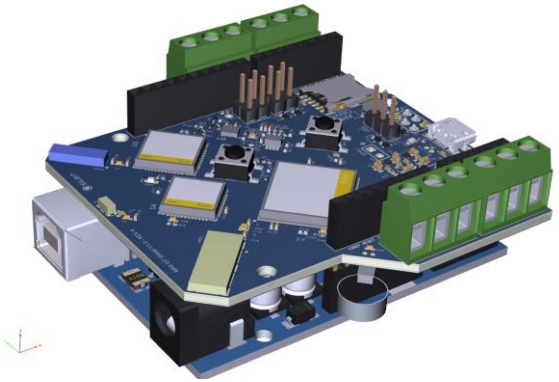
Technological development

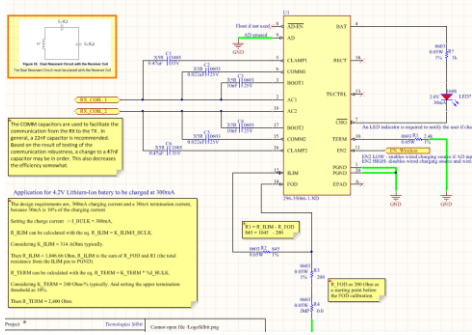
DFM and Technological Development

- Design for manufacturing (DFM), test points, thermal balance.
- Deep knowledge in the process of assembly and electronic manufacturing. Fixtures design for electrical and functional tests.
- Design of analog and digital mixed systems schematics
- Microcontrollers, sensor implementation, RF connectivity (BT, GSM, GPS, WiFi, RF), SoC and specialized integrated, opamps, etc.
- Multilayer PCB design, controlled impedance, complex Rigid-Flex systems.
- 3D and mechanical integration, multidisciplinary collaboration.
- Antenna tuning
- Embedded Software Development.
- Architecture design, device driver implementation (eg ADC, TIMERS, UART, SPI, RS485, I2C, etc.), middleware and system application in 8 and 32 bit microcontrollers, with or without operating system; Implementation of protocols for communication with servers (UDP, TCP, SSL, NTP and FTP sockets).
- Delivery of complete solutions to a commercial and manufacturable product with an integral process of development in Hardware, Firmware, Low level Software and Mechanical Design.









Project Portfolio

Medium and Low volume manufacture portfolio (Less than 20k pcs. per month)

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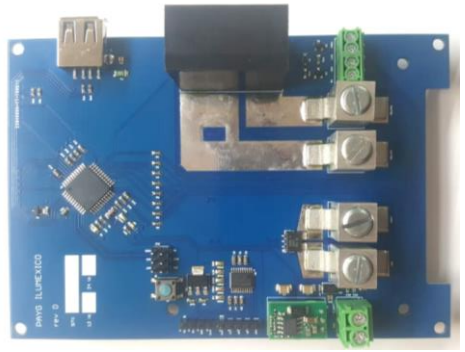
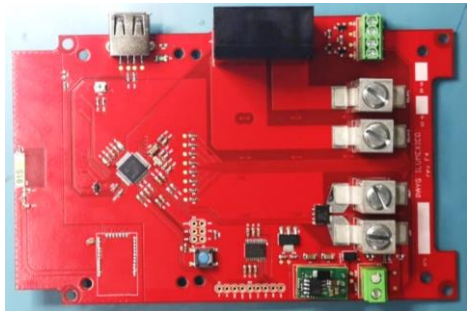
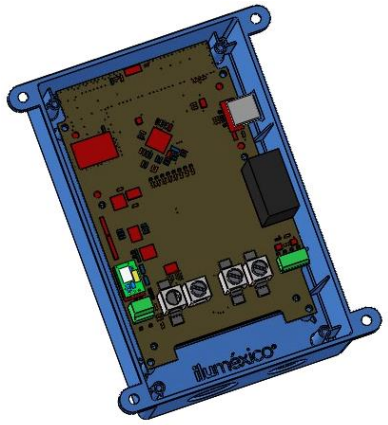
Prepaid device for solar systems

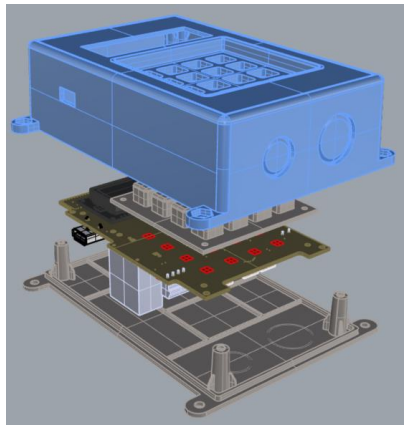
This device is a specialized battery charger using solar panels with a prepaid system for electricity supply. It is a standalone system with a patent for power supply through prepaid cards. This system charges a battery and supplies electricity according to the needs of the user and the available balance.





Offline prepaid device controller for solar systems, with SigFox connectivity

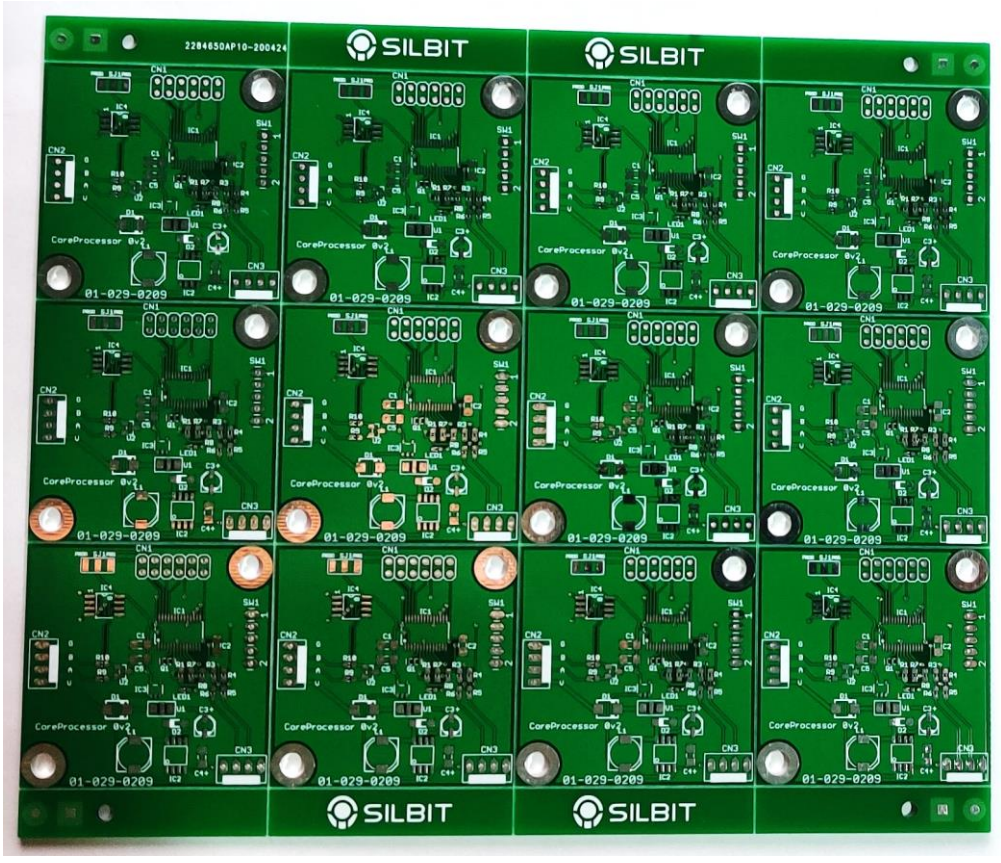




Confidential

Control Systems for Gas and Gasoline stations (Pemex, Shell)

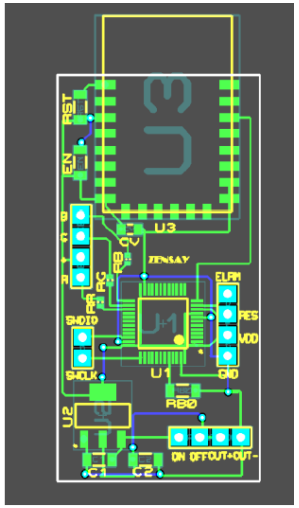
Manufacture of Control systems for gas and gasoline supply stations. Electronic manufacture (PCB, PCBA, Including Front panel and Harness)

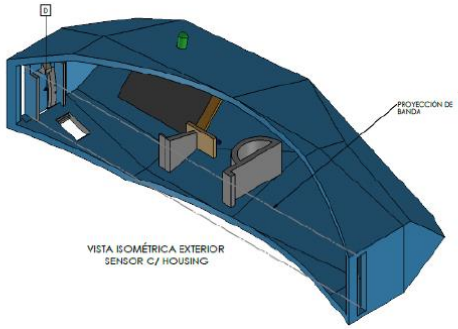


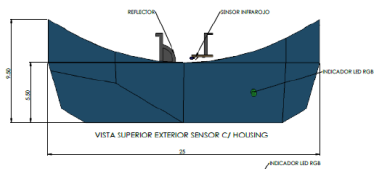
Confidential

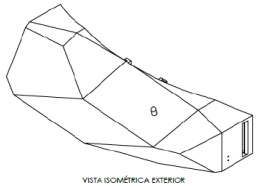
Zensay

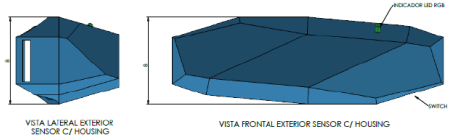
VR System to teach using software and hardware how to breathe and how to meditate. Manufacture of electronics, plastic injection and box build.

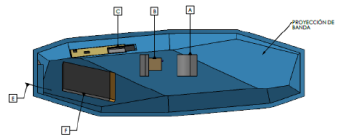


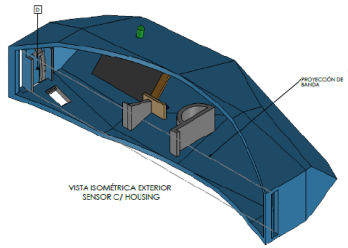








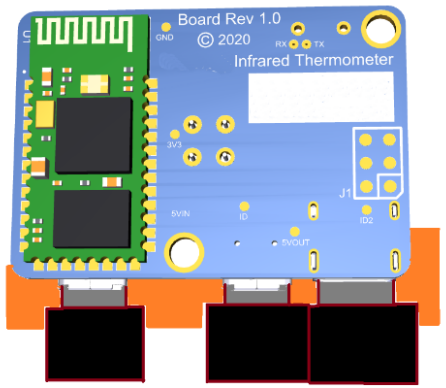


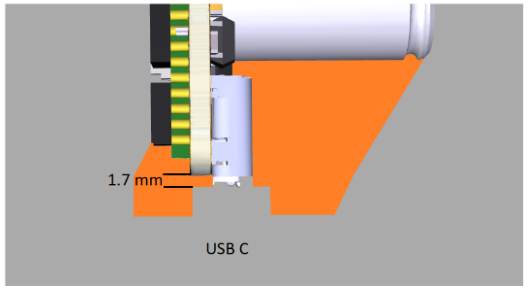


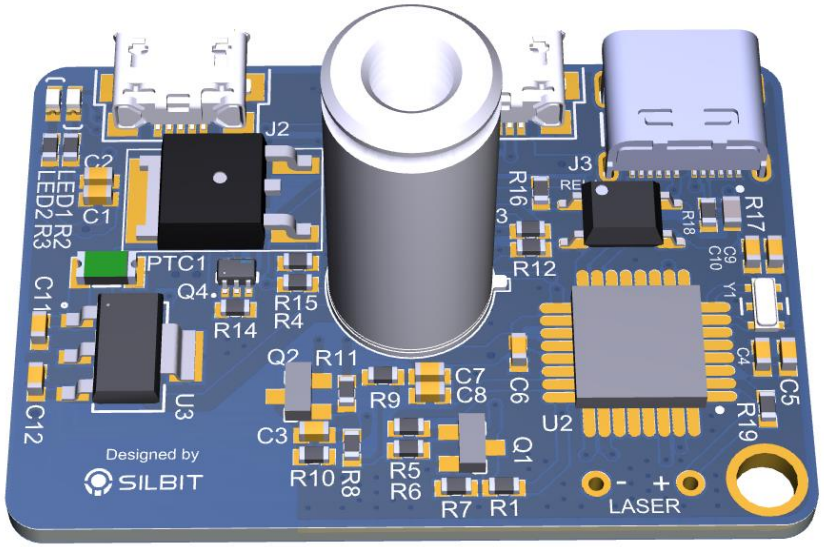
Confidential

Distance Temperature Sensor

Custom IR body temperature measurement device for humans to implement in business against SARS-CoV-2 (Design and PCBA)







Confidential

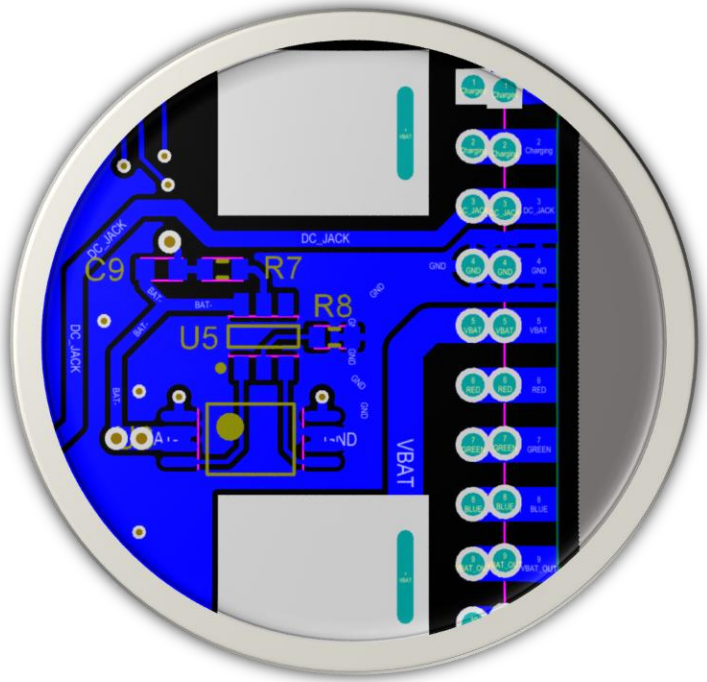
Sunu Band

Using radar and augmented reality, Sunu Band enables low vision and blind people to travel with confidence. Advanced haptic feedback guides your way around any obstacle, and navigation sensors connect you to the world around you. This project is currently sold in more than 80 countries.

Confidential

Measurement System for IoT agribusiness sector

It consists of a device which measures properties of certain elements in the field and the ground. This device can transmit data to the cloud (Internet) in order to detect faults, detect anomalies and generate reports to the user about the state of the elements in the field.



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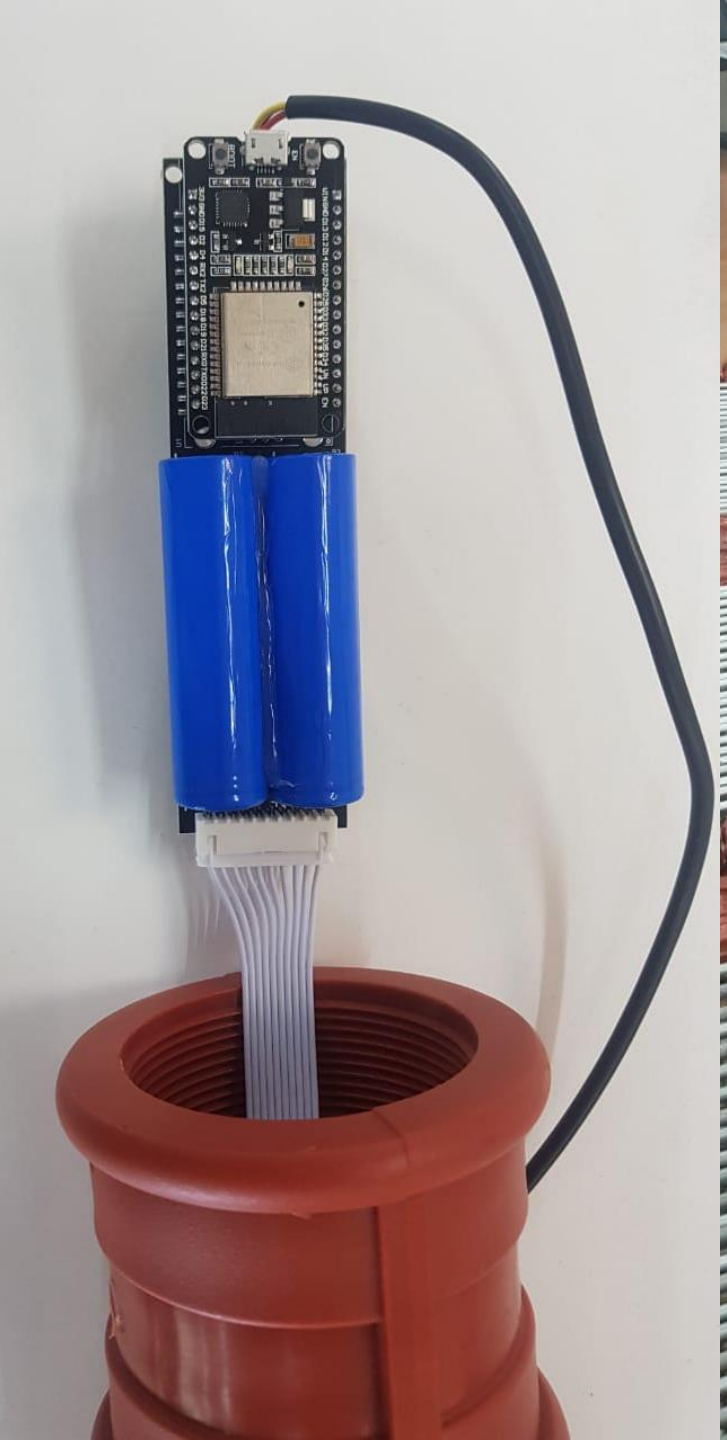
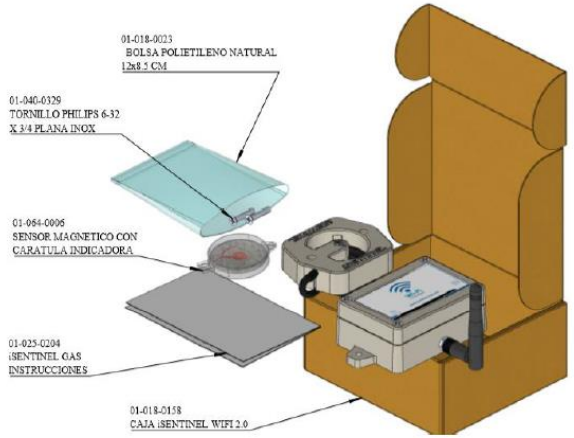
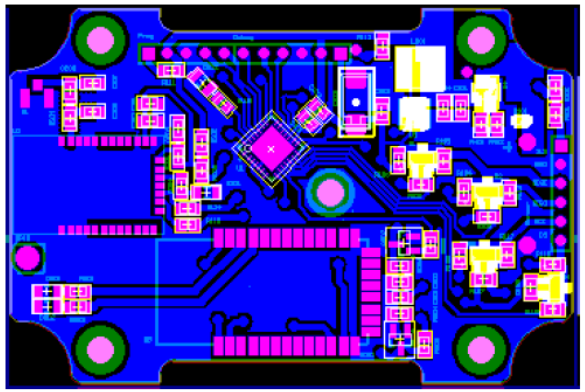


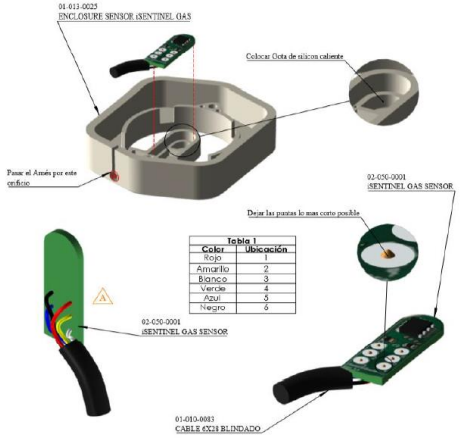
Confidential

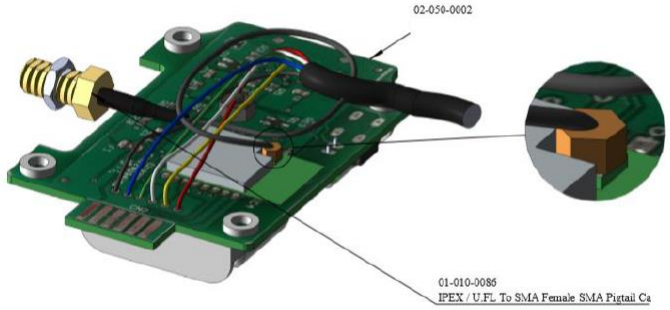
Natural Gas IoT Sensor

Natural gas measurement in stationary tank, send the data over WIFI or Sigfox to a database. Electronic and plastic injection , box build assembly for a final product.









Confidential

High volume manufacturing portfolio (More than 20k pcs. per month)

Confidential

Plastic injection, mechanical parts

URREA

tevelec

nube SMART LIVING

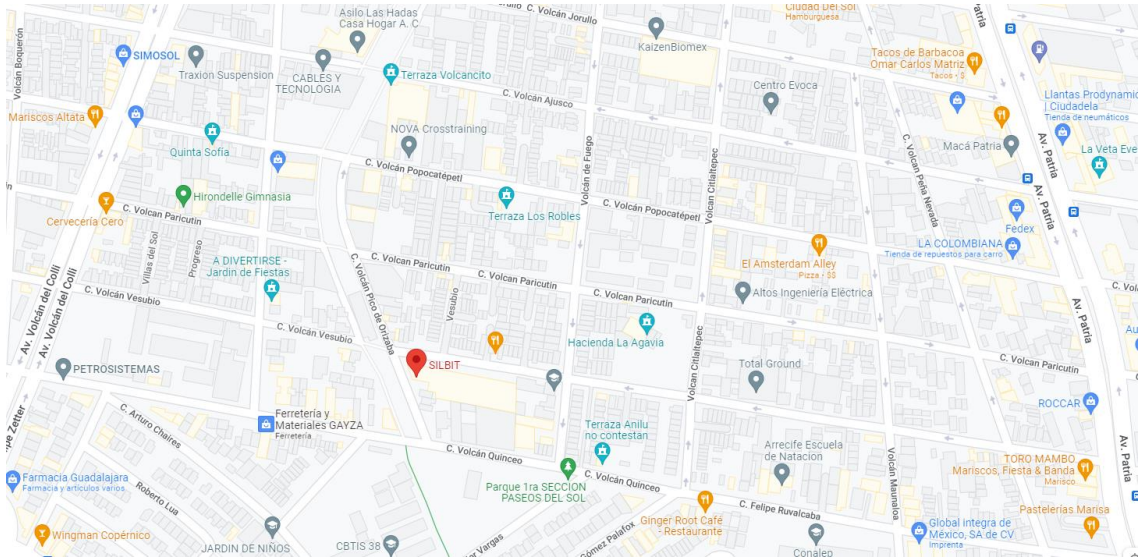
Continental The Future in Motion

ENERI

BILSTEIN®

Confidential

Company Contact



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