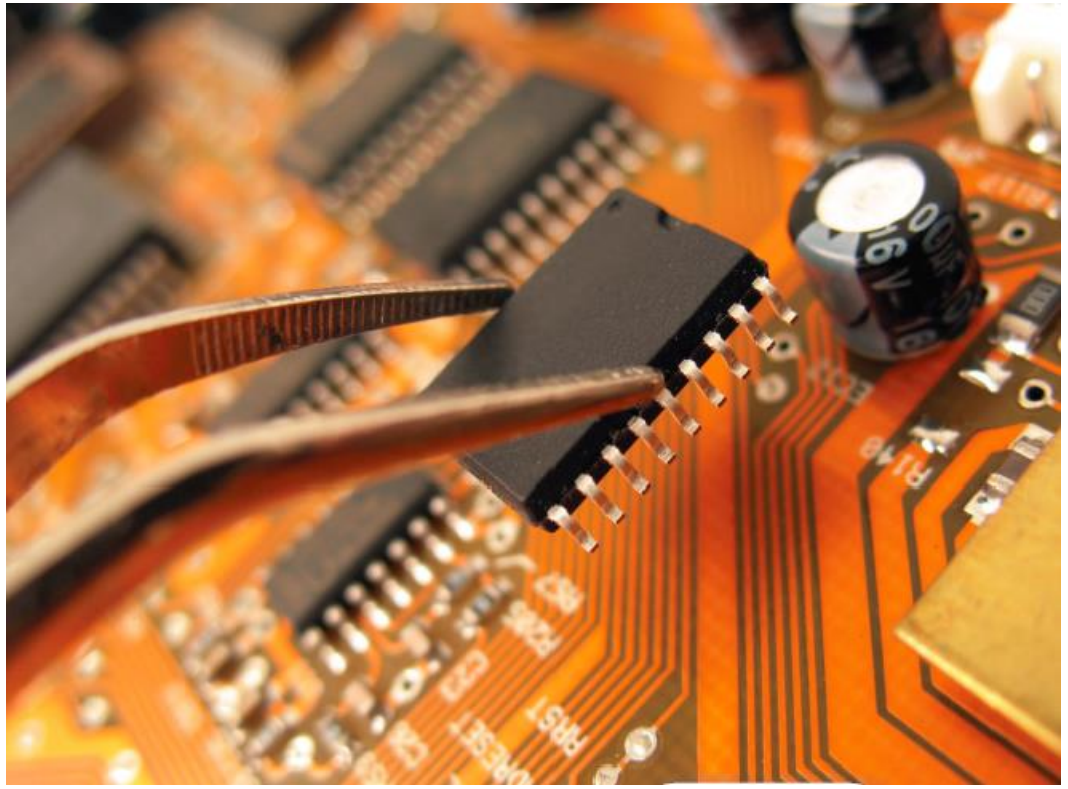
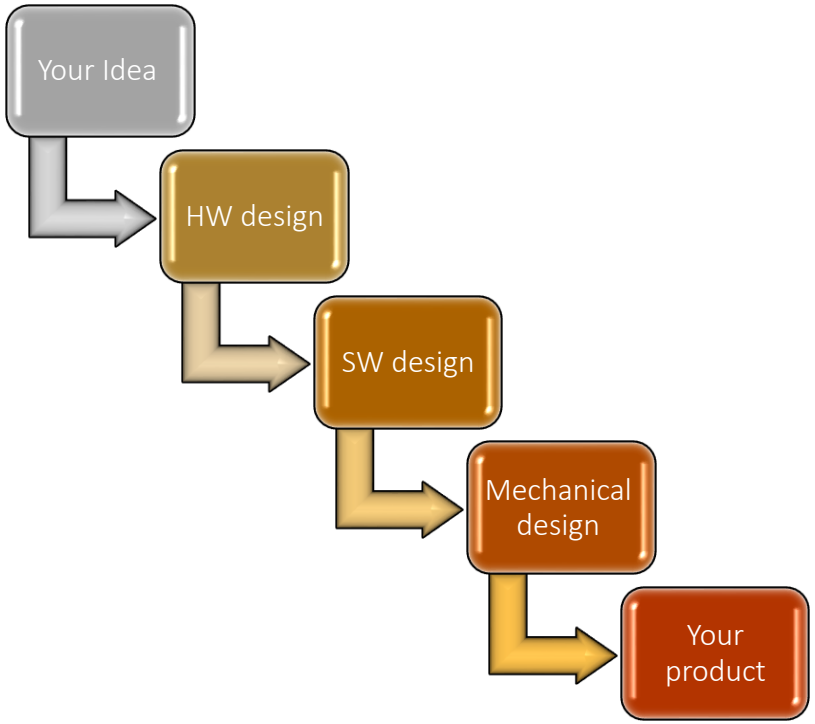
8TEC Eng. & Dev. ltd

We are your technological partner
& dedicated for your successes!



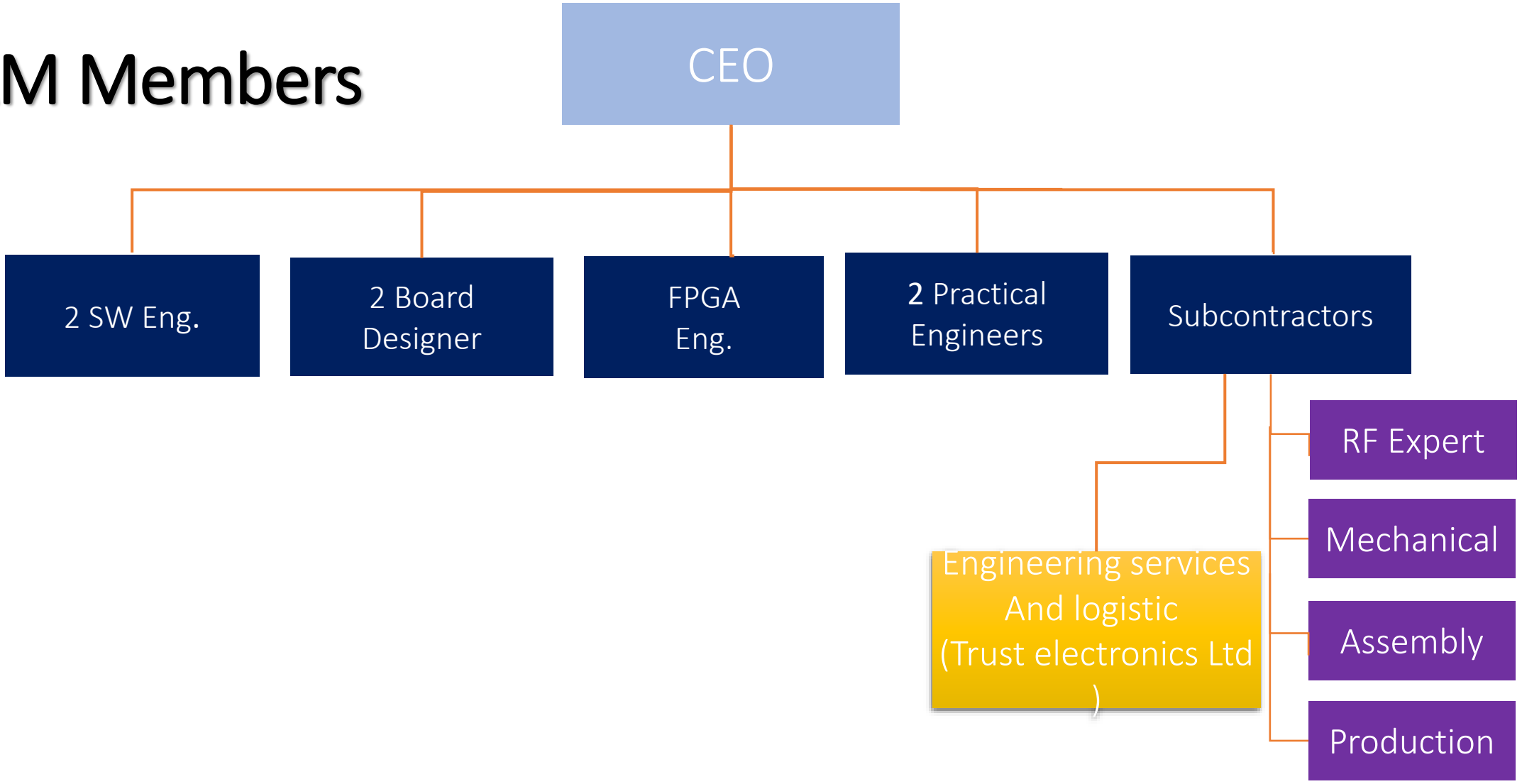
WHO WE ARE:



8TEC established in 2012.
our main goal is to provide our costumers End-To-End R&D SERVICES and support solutions, from idea to production.

8TEC offers a comprehensive R&D services from system design, hardware development, software design and complete turnkey services.

TEAM Members



Our clients:

intel
elisra
Elbit Systems of America
Comm-IT
tytocare
health is in your hands
BiTEL Technologies Ltd.
ANTECO Security Systems
ELPD SMART-TECH LTD.
Wekah Sun
edete
Precision Technologies for Agriculture
te
METEOR aerospace

ISO 9001:2015 CERTIFICATION

IQC
Institute of Quality & Control

CERTIFICATE

NO. I22254

This is to certify that
the Quality Management System of

8tech Engineering And Development Ltd

43 Derech Haatsma'ut St. Yehud, Israel

Was audited by IQC and found to be
in compliance with the requirements of the standard:

ISO 9001:2015

This certificate is valid for
the following scope of activities:

Providing research, development, and electronic manufacturing services to industry.

This certificate is valid until:	02.03.2024
Certification cycle will end on:	02.03.2024
Date of first approval:	02.03.2021

This certificate is subject to the continuing satisfactory operation
of the Management System and periodic auditing by IQC

04.03.2021
Issue date

Nir Halpern, CEO

IAF MGMT. SYS. RvA C 560

Institute of Quality & Control Ltd.
6 Ravnitzky St., Petah Tikva 4900617, Israel
Tel: 03-9313555, Fax: 03-9044406
E-Mail. info@iqc.co.il, www.iqc.co.il

IQC
המכון לבקרה ואיכות

תעודה

מס' I22254

הנני מאשר בזאת כי
מערכת ניהול האיכות של

8טק הנדסה ופיתוח בע"מ

דרך העצמאות 43, יהוד

נסקרה ונבחנה ע"י המכון לבקרה ואיכות,
ונמצאה מתאימה לדרישות התקן:

ISO 9001:2015

האישור תקף לפעולות הבאות:

מתן שירותי מחקר, פיתוח וייצור אלקטרוני לתעשייה

אישור זה בתוקף עד:	02.03.2024
מחזור הסמכה יסתיים בתאריך:	02.03.2024
תאריך האישור הראשון:	02.03.2021

האישור מותנה בהמשך יישום מערכת ניהול,
בכפוף לביצוע מבדקי מעקב ע"י המכון לבקרה ואיכות

04.03.2021
תאריך אישור

ניר הלפרן, מנכ"ל

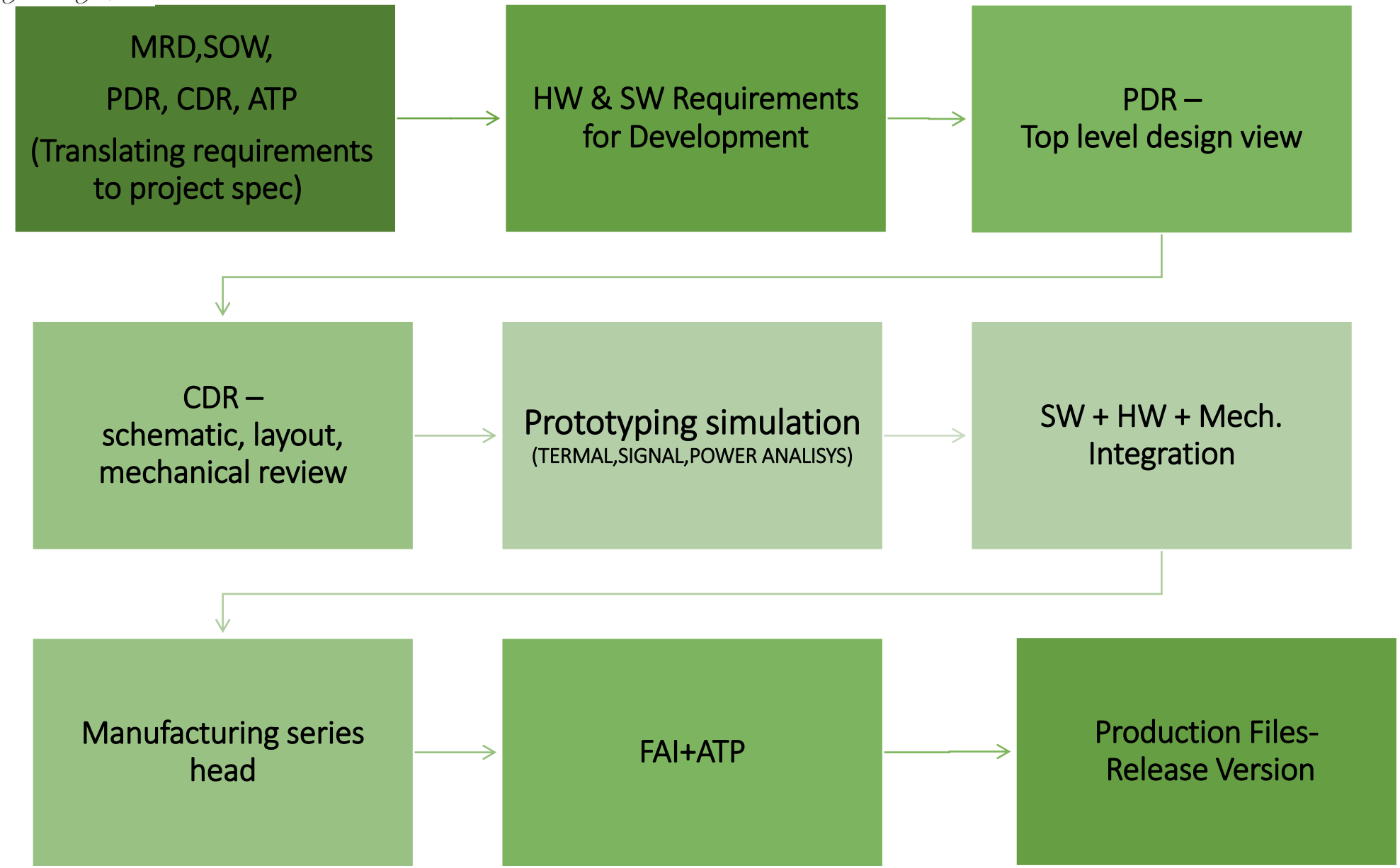
IAF MGMT. SYS. RvA C 560

מכון לבקרה ואיכות אייי, קיו, סי, בע"מ
רח' רבניצקי 6, פתח תקווה 4900617
טל': 03-9313555, פקס: 03-9044406
E-Mail info@iqc.co.il, www.iqc.co.il

STEC
HW&SW Development

MAGMA
Engineering Ltd.

PROJECT FLOW



8TEC HW&SW Development

ISO 9001:2015 IQC

MAGMA Engineering Ltd.

Web & App Software Service

.NET, C#, Dot Net, VB

Browser Extensions: Addons, Browser Plugin

Data Harvesting, Data Scraping

React Native

Django

AngularJS, Angular 2+

iOS - iPhone, iPad, iPod - iPhone, iPhone app development

DB - MySQL

.NET Core and .NET Framework

ASP.NET AND ASP.NET MVC

C, C++

PHP

ANDROID APP DEVELOPMENT

JAVA

HTML5, CSS3, JAVASCRIPT

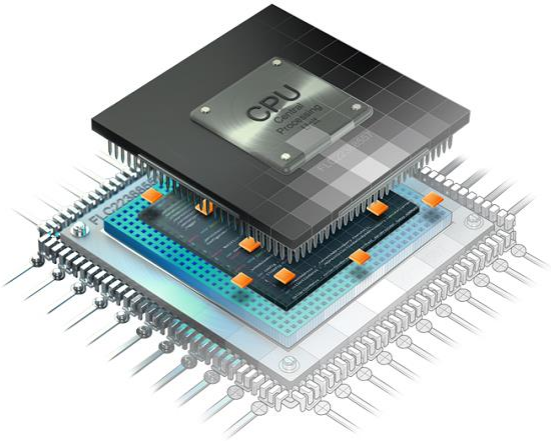
ASTERISK

TELEPHONY AND SOFTSWITCH (PBXS AND MORE)

App Store

Google play

Embedded Software Services



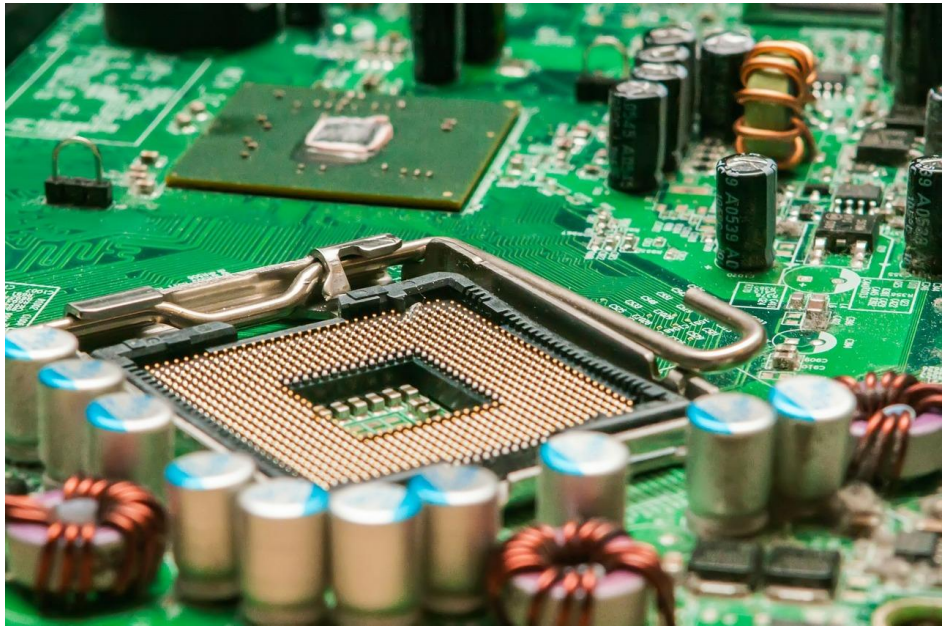
- assembler, C/C++/C#.
- DSP, .NET.
- Linux.
- Freertos.
- Bluetooth \ WIFI topologies.
- Proprietary RF protocols.
- Camera protocols.

STEC
HW&SW Development

ISO 9001:2015 IQC

MAGMA Engineering Ltd.

Board Design Services



- Digital Design
- Mixed Signal Design
- Embedded Processor Based Design
- Small Footprint Design
- High Power and Battery-Operated Design
- RF and Wireless Design

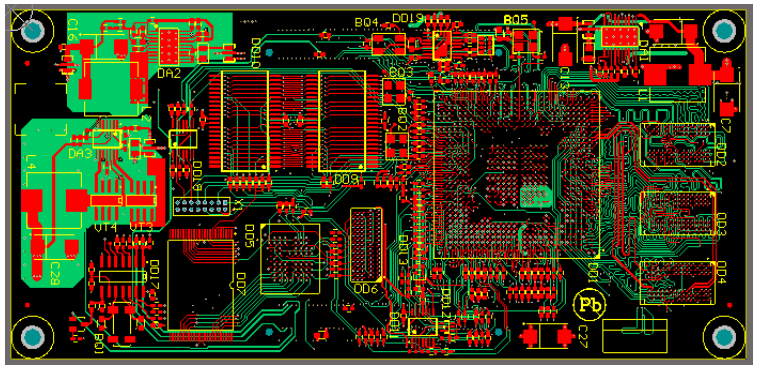
8TEC
HW&SW Development

ISO 9001:2015 IQC

MAGMA Engineering Ltd.

PCB Layout Services

- Library Management
- PCB Layout Design
- Signal & Power Integrity
- Thermal Analysis
- DFx (Design for Testing /Manufacture /Assembly)
- Manufacturing Support



FPGA SERVICES

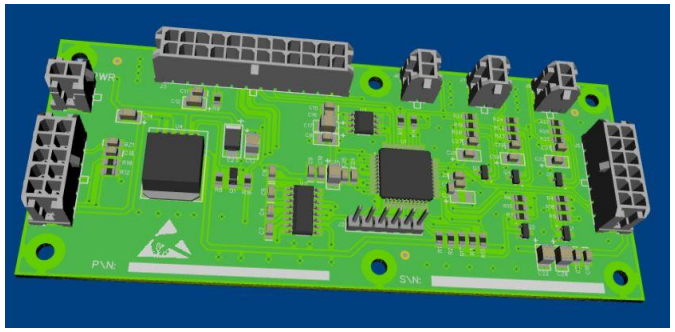
- FPGA Design Planning and implementing highly advanced designs & algorithms.
- Wide versatile engineering domains including DSP, Communication & RF.
- High speed serial communication protocols (integrated FPGA Transceivers).
- Analog Front-End – A2D/D2A. DDC/DUC, digital filters.
- Peripheral hardware control.

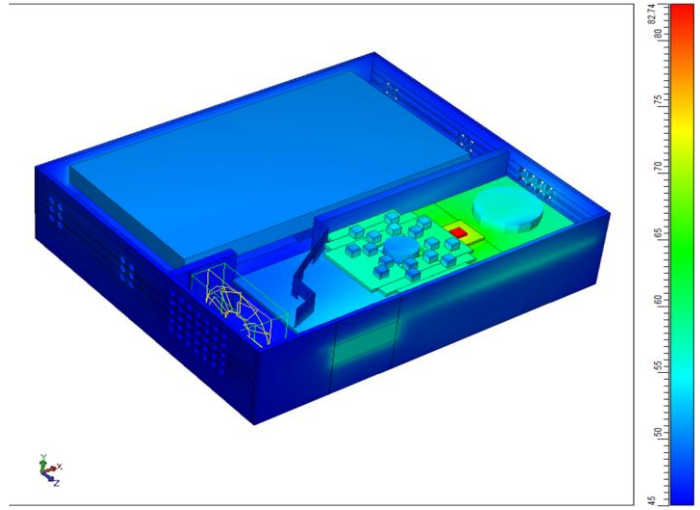
TECHNOLOGIES & TOOLS:

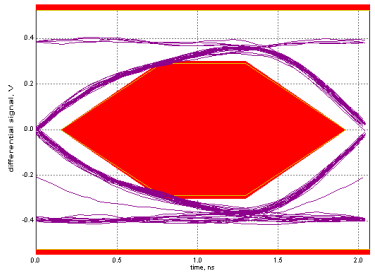
- INTEL ALTERA - ARRIA10 & STRATIX1.
- AMD XILINX - ULTRA SCALE+.
- VERILOG + VHDL CODING.
- MODELSIM \ ACTIVE HDL - FOR SIMULATION.
- MATLAB FOR PRELIMINARY VERIFICATION.

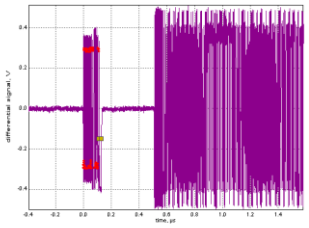
Analysis Services

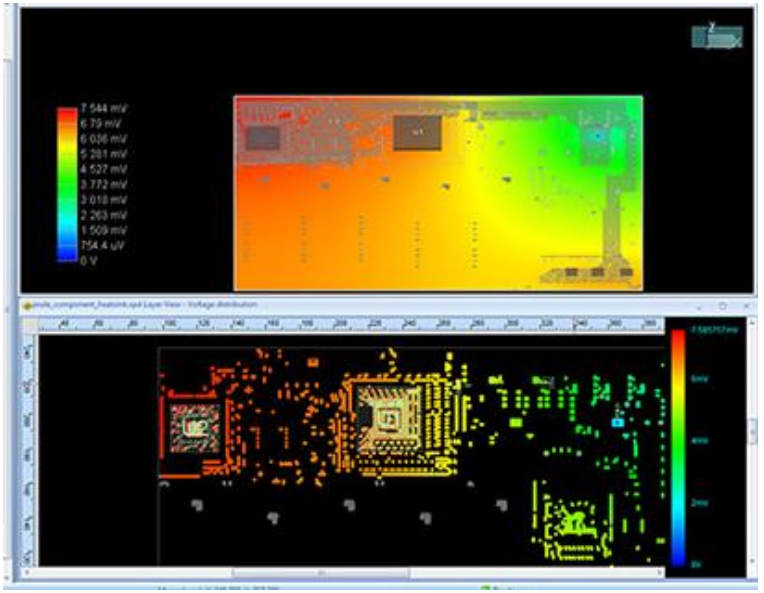
- SIGNAL & POWER INTEGRITY.
- 3D PCB SIMULATION.
- THERMAL ANALYSIS.
- DYNAMIC ANALYSIS.

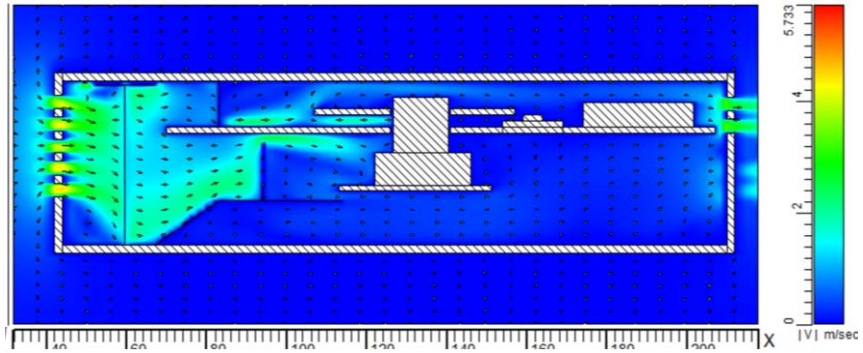






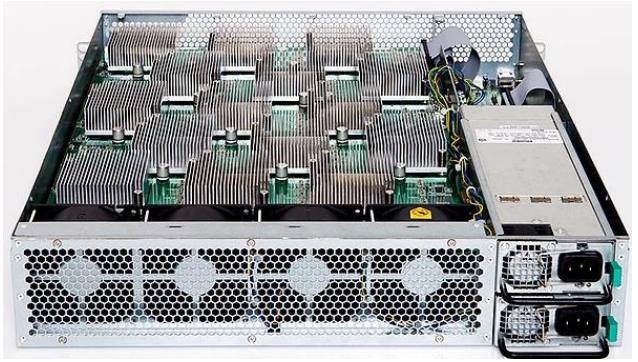






Mechanical & Enclosure Design Services

- Enclosure Design Requirement
- Design Feasibility Study
- 3D CAD Modeling and Design
- Integration of Electronics Design, PCB Layout, and Industrial Design
- Prototype Development
- Manufacturing Support



Technologies & Tools

- HW Design Tools - OrCAD Capture, Altium Designer, Cadence Allegro Tools, Altium PCB Designer, MATLAB, Hyper Lynx, Power DC.
- Mechanical Design Tools - Auto CAD, Solid Works, 3D CAD Software
- Code composer, Kiel, iar, eclipse.
- Wireless and RF connectivity.
- Digital Audio and camera interfaces.
- Telecom interface.

AR Embedded Workbench

AUTODESK® AUTOCAD®

SOLIDWORKS

MATLAB

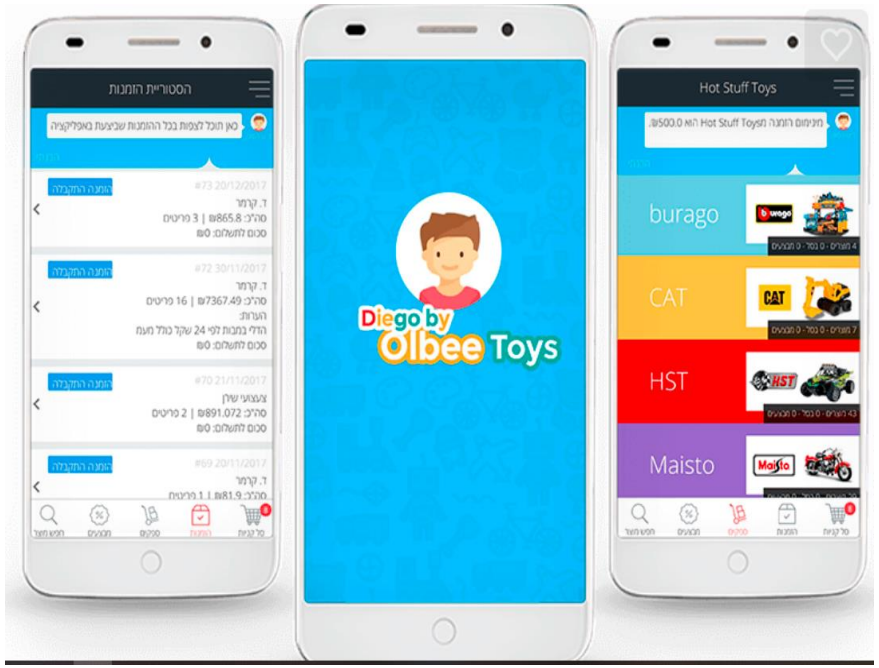
ALTIUM DESIGNER

OrCAD cādence®

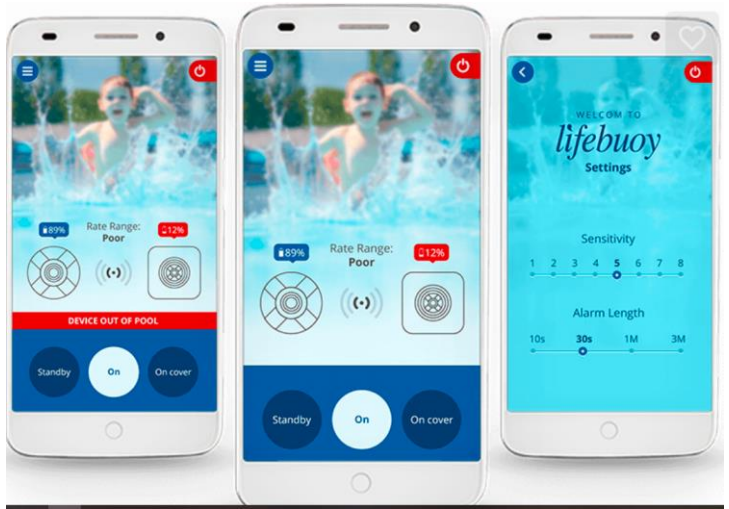
Projects Examples

Mobile App & web

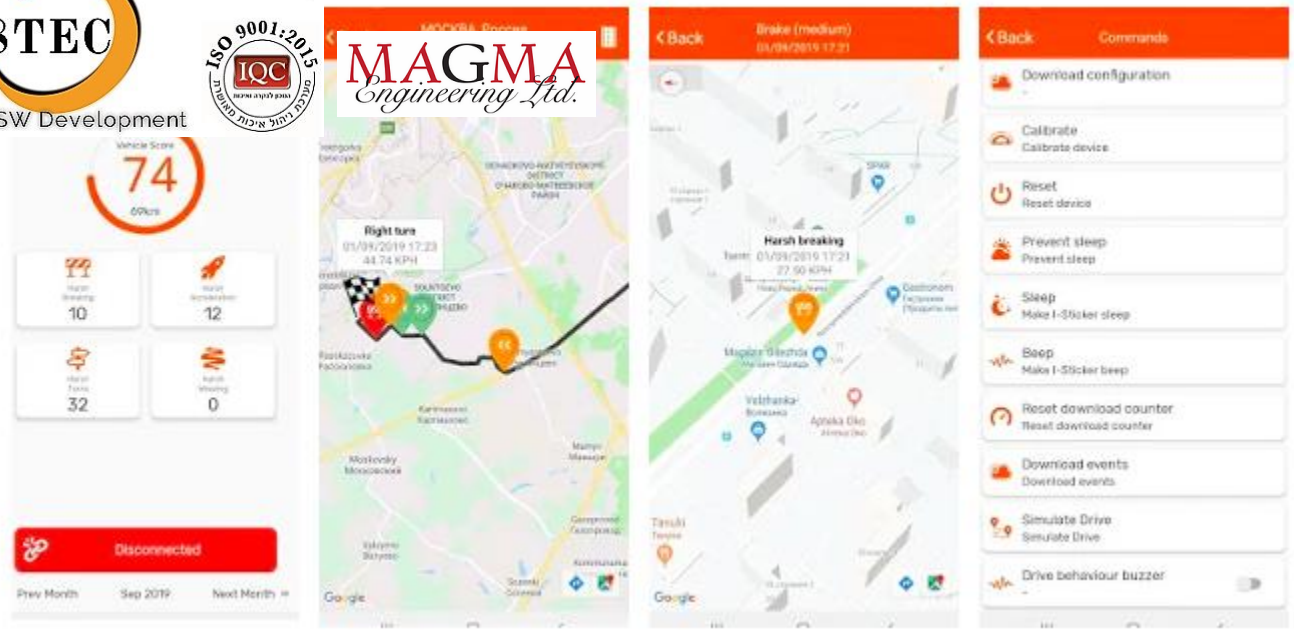
A social and economic content App that displays content that is updated frequently. The app was developed for Android and iOS devices and has a young and innovative design.



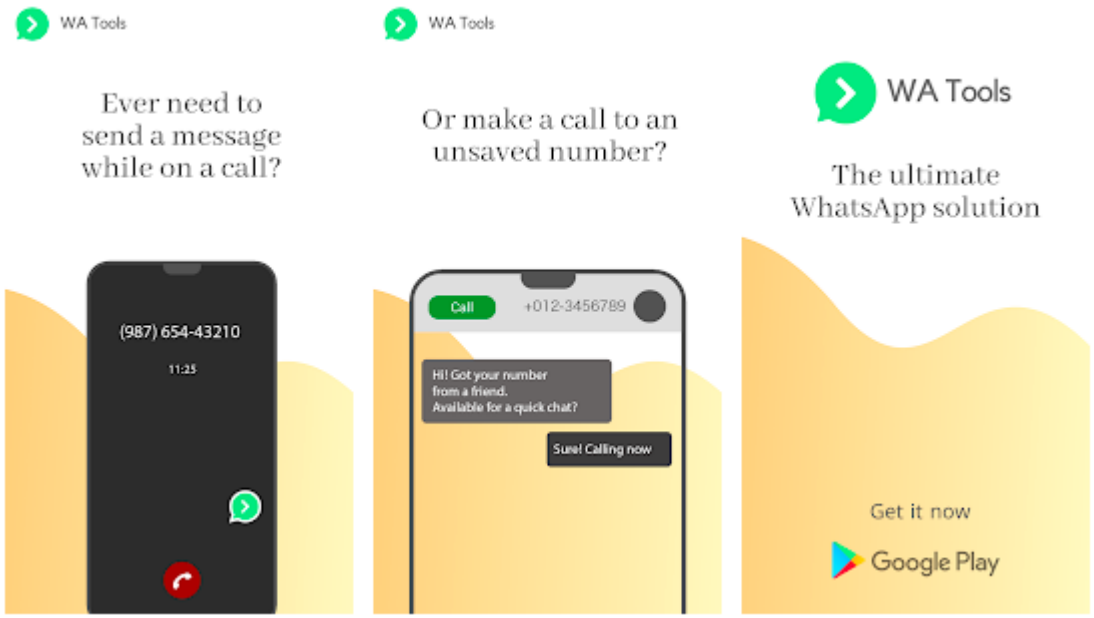
Auxiliary application for agents in the broad marketing field. Through it you can order goods from different suppliers. You can see the order history from different suppliers. The application is conveniently designed and allows great flexibility to the users.



An application designed to communicate with a Bluetooth component located in the home pool, and to warn of any unauthorized entry into the pool and even to remove the cover of the pool. The system is designed to prevent cases of falling and drowning in private pools.



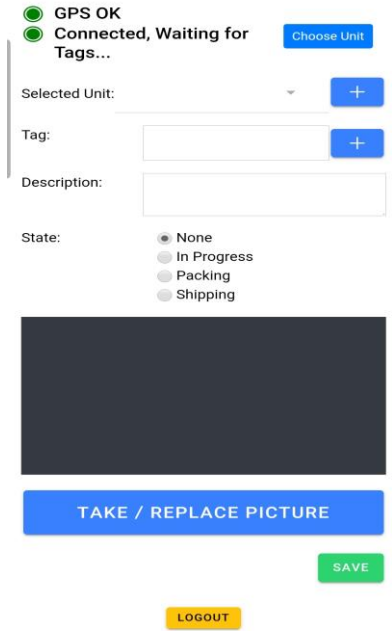
I-Sticker Mobile App is a graphic user interface which connects to your I-Sticker device via Bluetooth and facilitates the transmission of your driving data to the cloud for multi-platform access.



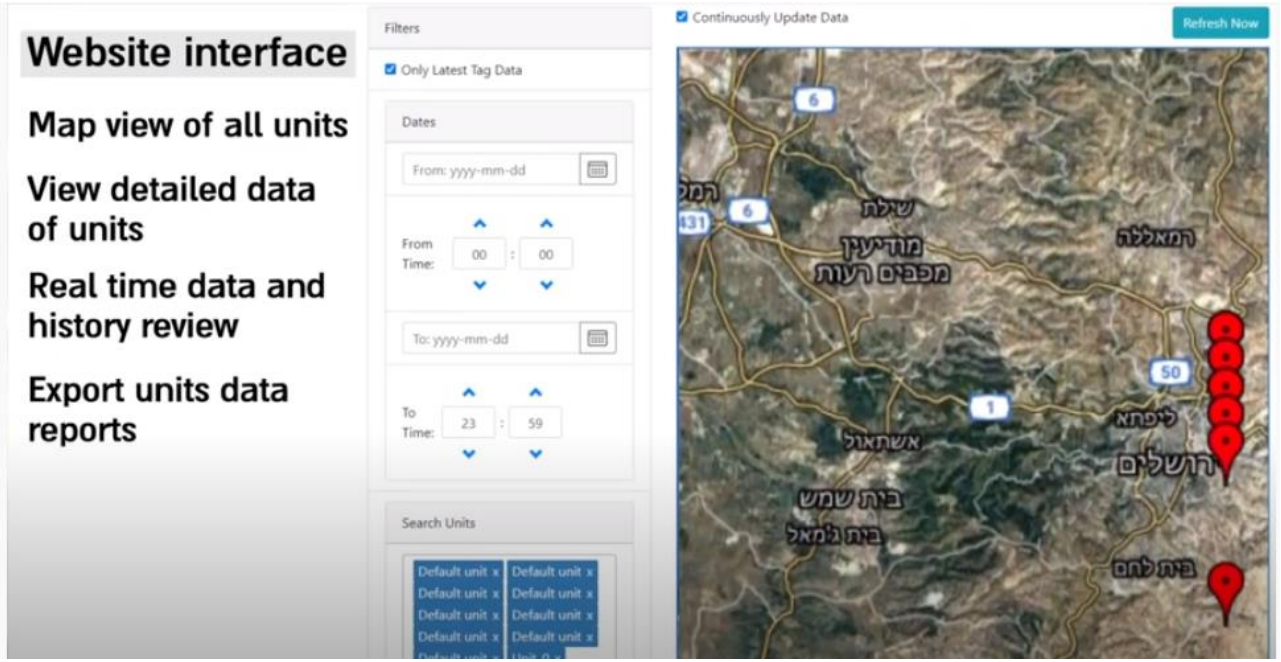
Quickly send a WhatsApp message to
whoever you're talking to,
even if they're not in your contact list!
Just click the icon, and start messaging on WhatsApp!

real-time tracking system (GPS+WIFI+BLE+GPRS\LTE)

GTAG930 –
Application for TAGs collecting data :
GPS location, BT interface with tags reader, reading active and passive tags, taking photos and sending data to a cloud database.

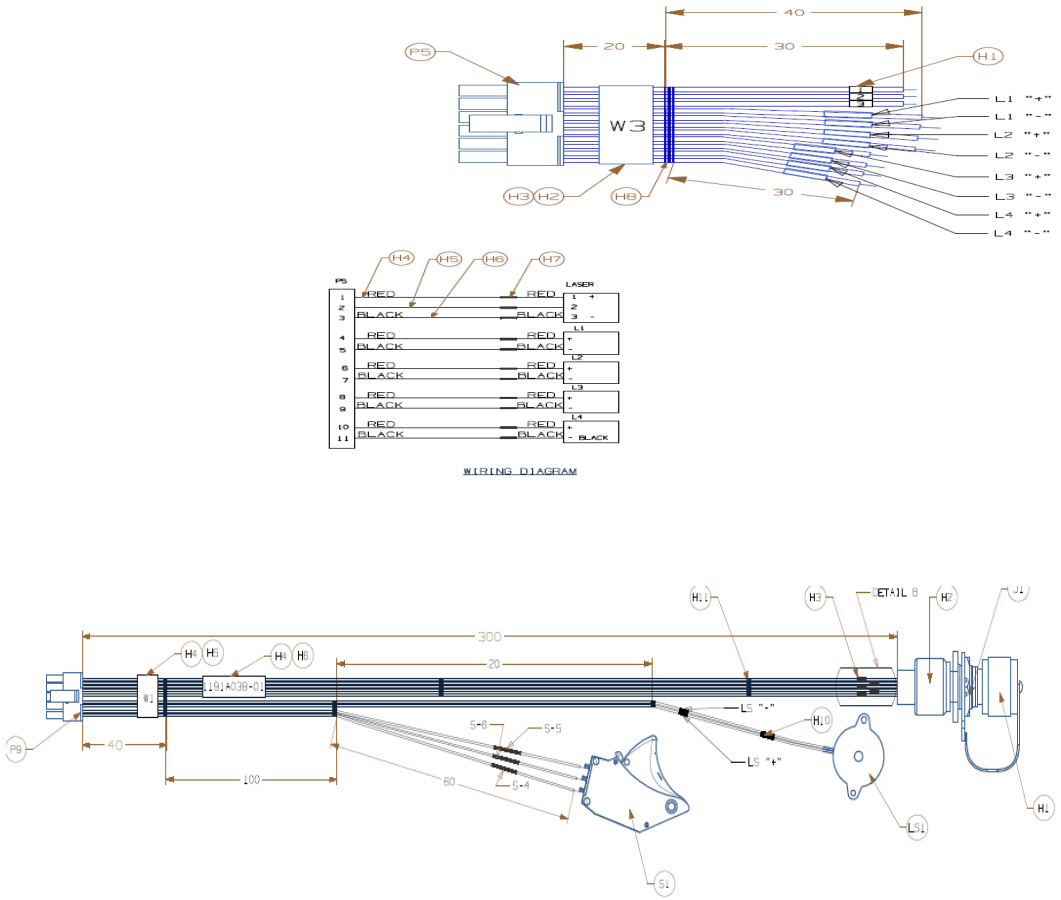


[Product video link]

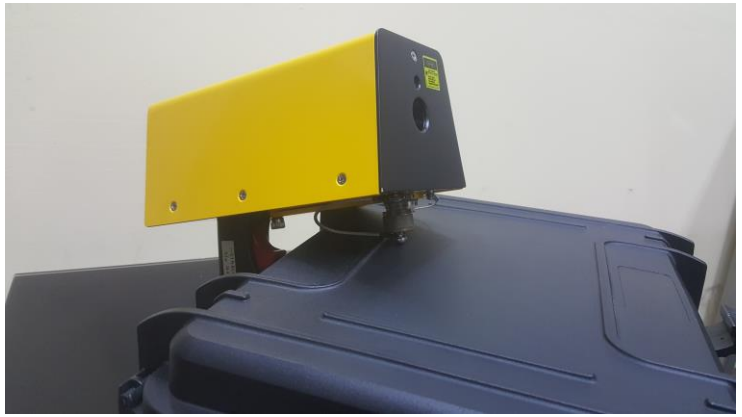


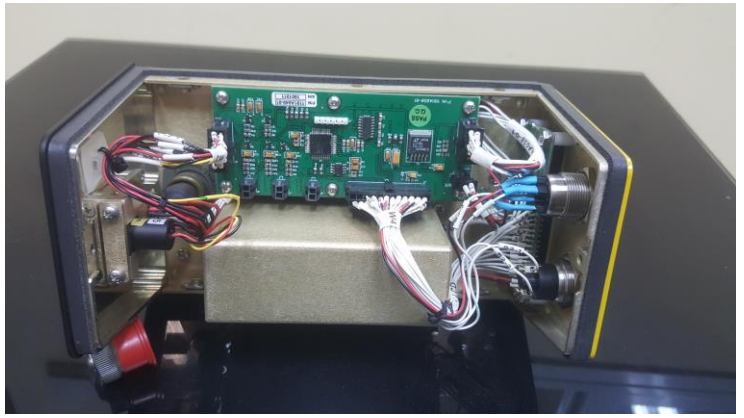
Date	Unit ID	Tag ID	Tag voltage	Tag temp	Tag RSSI	Unit voltage	Main voltage indicate	Unit RSSI	Network host	Unit cpu temp	Unit sns temp
2017-05-30 14:36:04	Simchoni: 50-252-73	0000	V	°		3682 V	Ext_OFF	13, 9	"Partner"	TPM38.53°	TPS32.33°
2017-05-30 11:23:49	Simchoni: 50-252-73	0094	V	°	-43	3962 V	Ext_OFF	13, 9	"Partner"	TPM54.41°	TPS48.07°
2017-05-30 11:23:49	Simchoni: 50-252-73	0072	V	°	-50	3962 V	Ext_OFF	13, 9	"Partner"	TPM54.41°	TPS48.07°
2017-05-30 11:23:49	Simchoni: 50-252-73	0038	V	°	-55	3962 V	Ext_OFF	13, 9	"Partner"	TPM54.41°	TPS48.07°
2017-05-30 11:23:49	Simchoni: 50-252-73	0064	V	°	-55	3962 V	Ext_OFF	13, 9	"Partner"	TPM54.41°	TPS48.07°

Military & Security



Cable documentation and planning

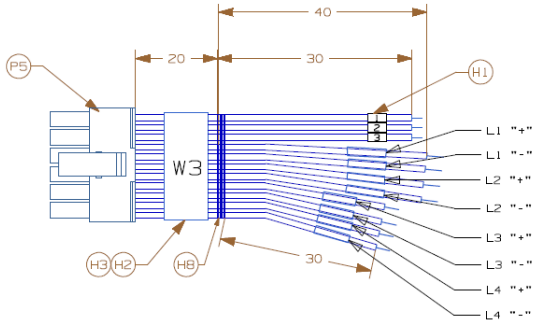


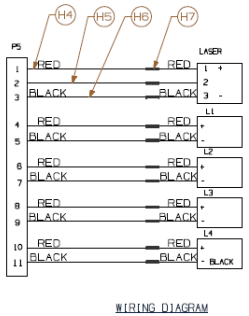


Designing a laser system for a security company

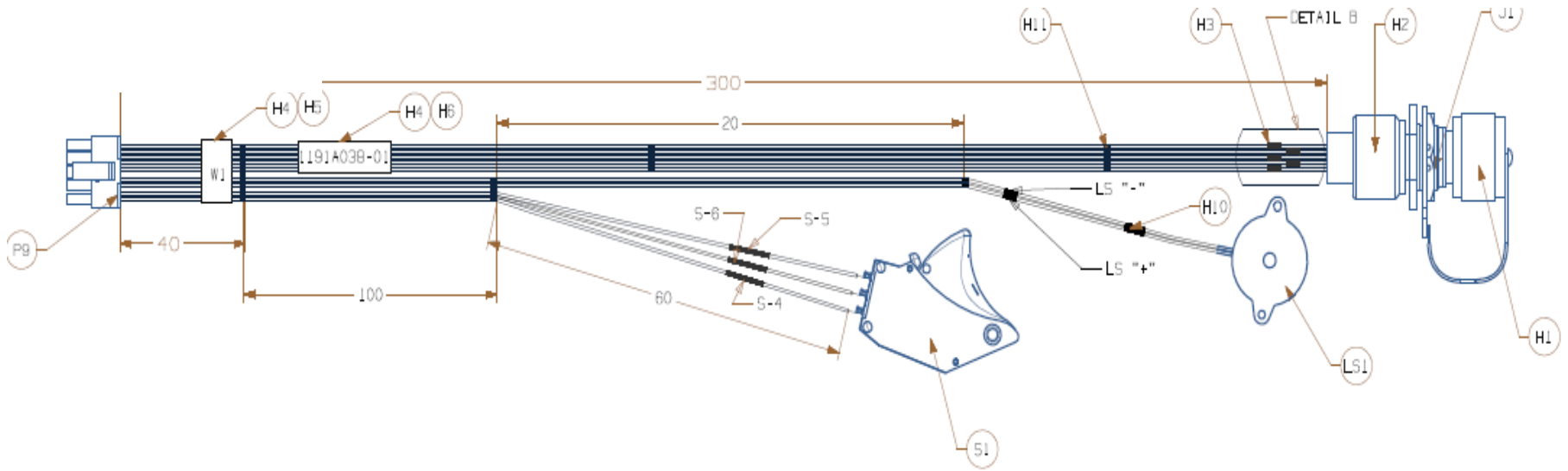
Cable documentation and planning

No	PART NUMBER	DESCRIPTION	QTY	NOTES
P9	43025-1008	CONNECTOR,RECEPTACLE	1	"MOLEX"
J1	D38999/24WA35PN	CONNECTOR CIRCULAR JAM NUT	1	
LS1	PKB24SWH3301	BUZZER	1	"MURATA"
S1	U2-016	SWITCH-TRIGGER	1	
H1	D38999/33W9N	DUST CAP	1	
H2	M85049/14-9W	SELF-LOCKING E NUT	1	
H3	TMS-SCE-3/32-2.0-9	TUBING HEATSHRING	10	"TYKO"
H4	TMS-SCE-1/2-2.0-9	TUBING HEATSHRING	2	"TYKO"
H5	TMS-CCUV-SLEEVE-10-X-32MM	TUBING HEATSHRING	1	"TYKO"
H6	TMS-CCUV-SLEEVE-10-X-62MM	TUBING HEATSHRING	1	"TYKO"
H7	55A0111-22-2	WIRE 22AWG RED	18CM	
H8	55A0111-22-9	WIRE 22AWG WHT	240CM	
H9	55A0111-22-0	WIRE 2AWG BLK	18CM	
H10	RNF3000-3/1-0	TUBING HEATSHRING	A/R	"TYKO"
H11	No. 18BL	TAPE LACINGTYINGBRAIDED NYLON BLACK	A/R	





WIRING DIAGRAM



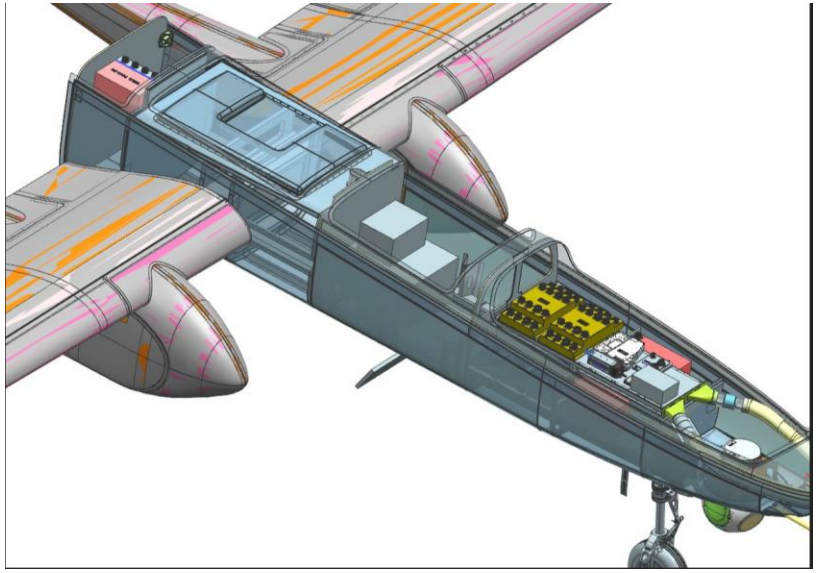
High power PDU development

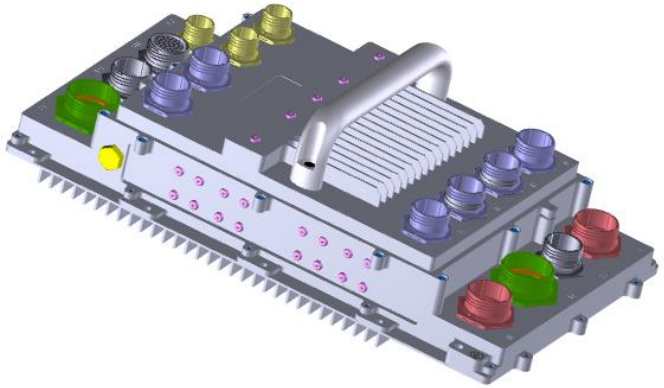
Developing a Power Distribution Unit up to 3000(W)

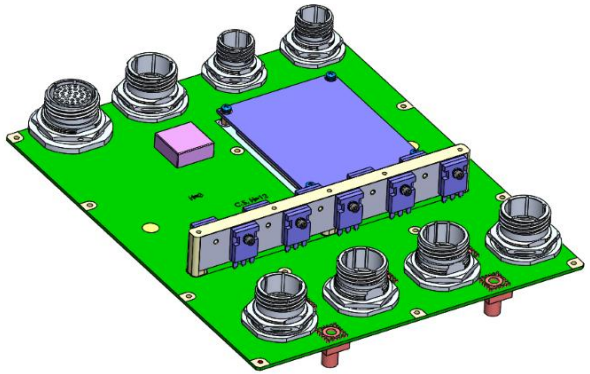
for aviation industry.

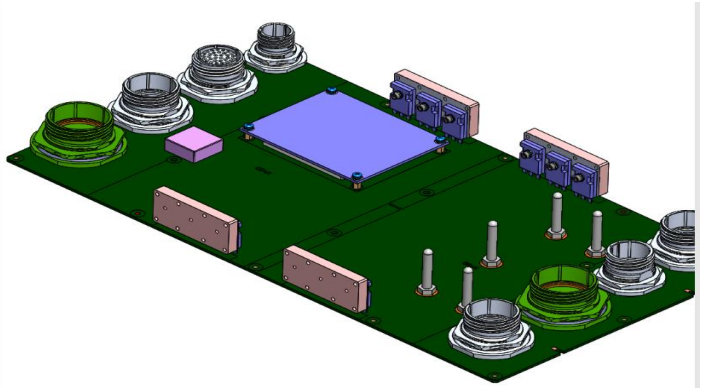
Hardware to mechanics design, from concept to production

including analysis during design.





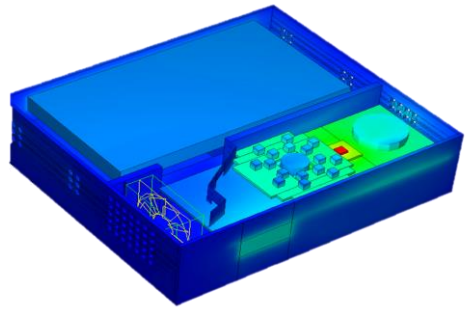


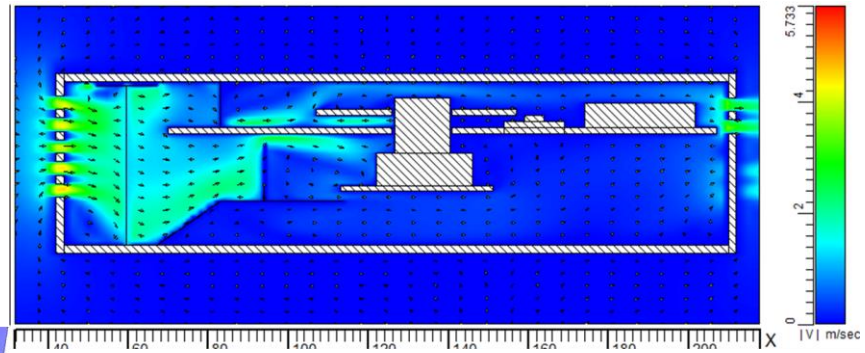


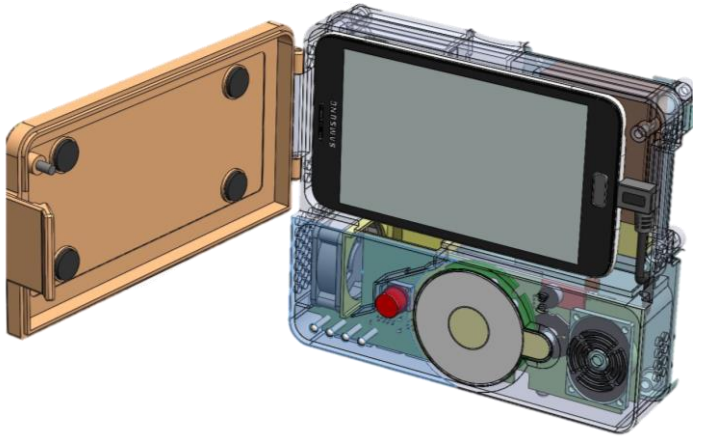
Developing a system for identifying objects in area

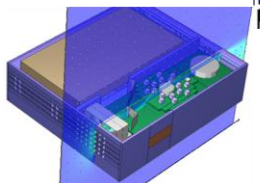
Developing a product with option to integrating a mobile phone as an alert system with independent working ability in the field, including a software image and sound recognition algorithm.

Hardware to mechanics design, from concept to serial production including analysis during design.









8TEC
HW&SW Development

ISO 9001:2015 IQC

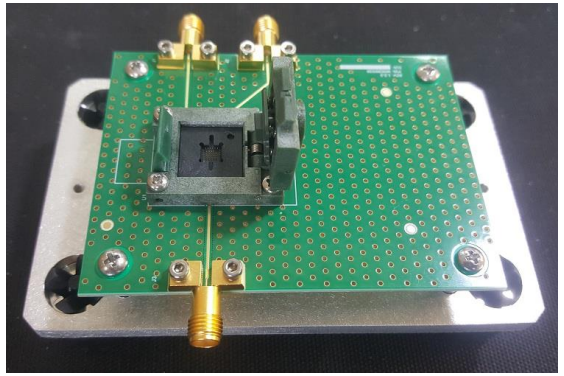
MAGMA Engineering Ltd.

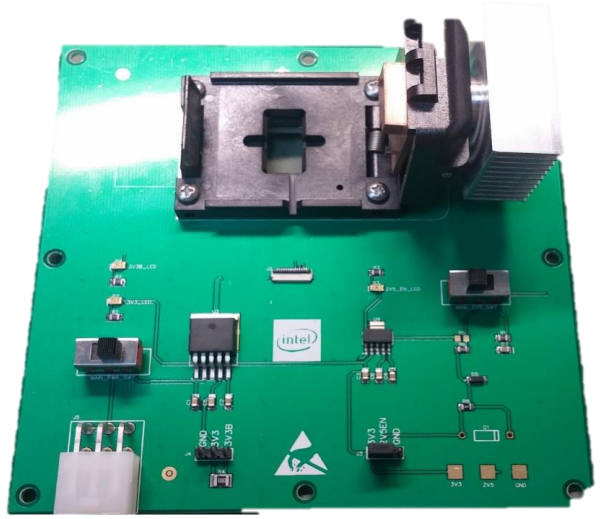
Testers for production line

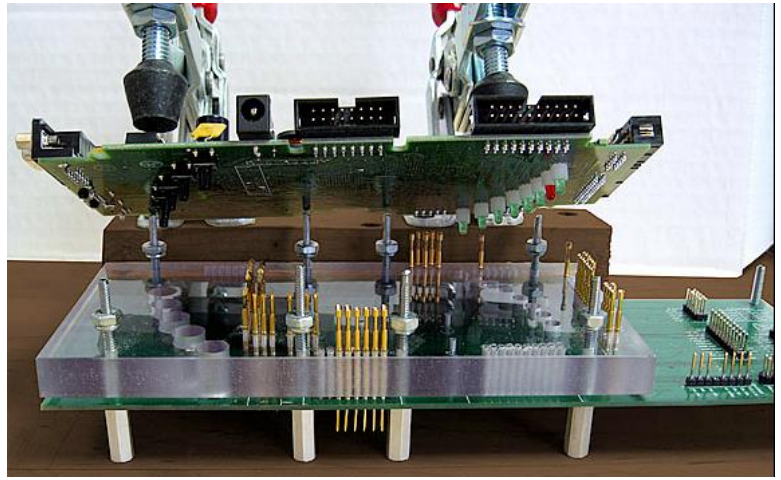
Design and manufacture of high frequency testers:

Checking18GHz - 60GHz frequency modules and varying power.

Designing and manufacturing JIGs by customer's requirement.

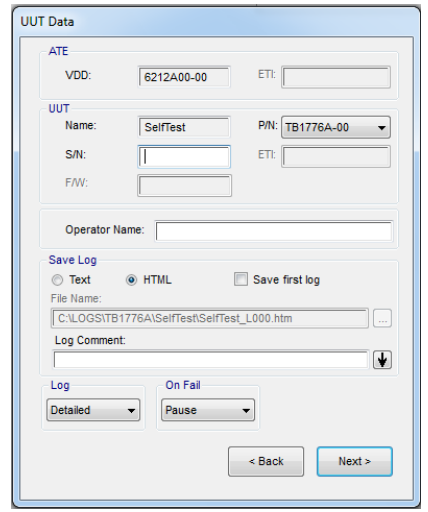


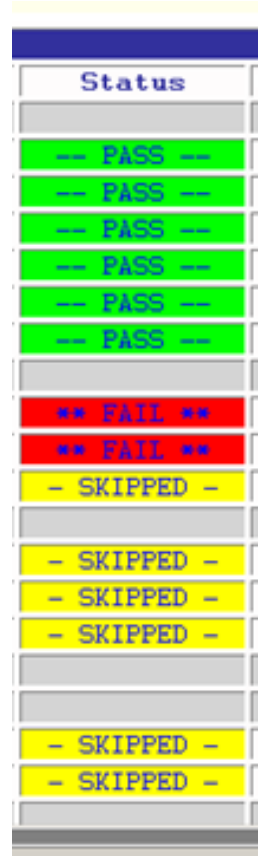




TESTERS FOR SECURITY COMPANY

- Building Customized testers.
- Writing hardware Self-Test.
- Writing tests according to needs.
- Writing and using dedicated software (ATEasy/ C# /python).
- Full coordination between software and hardware.





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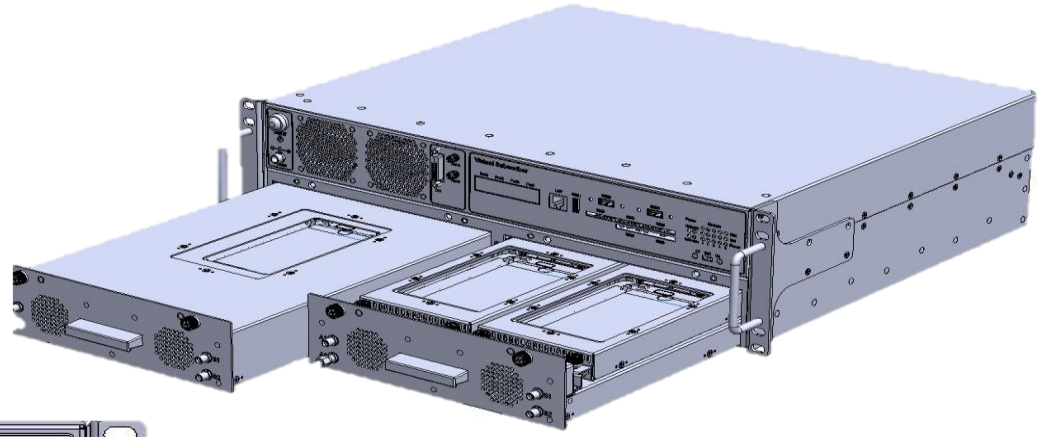
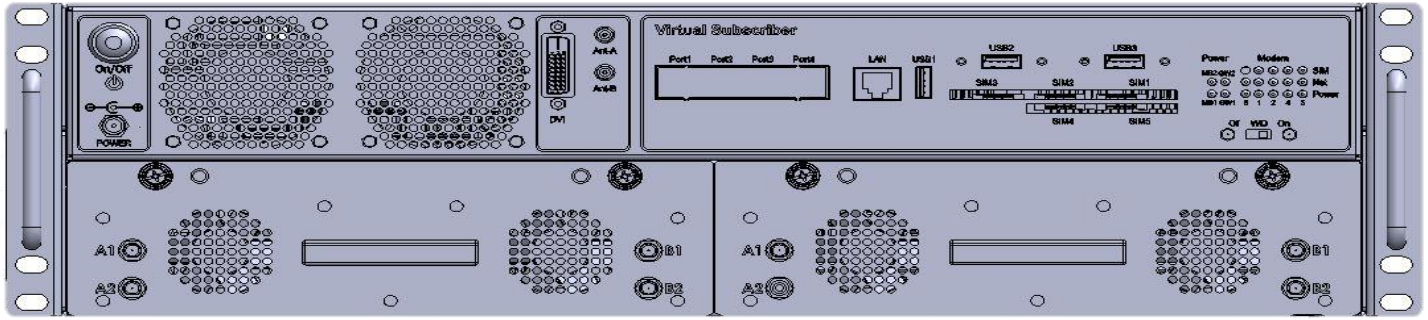
Telecom - Planning a tester for a communication system





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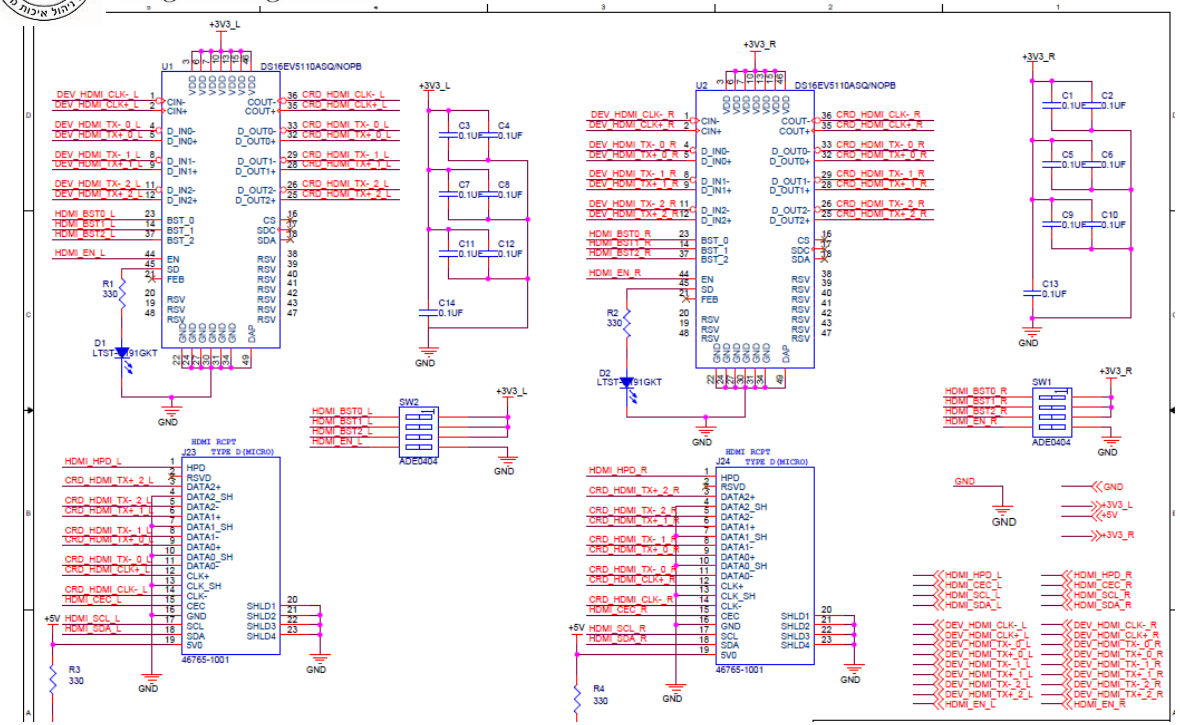
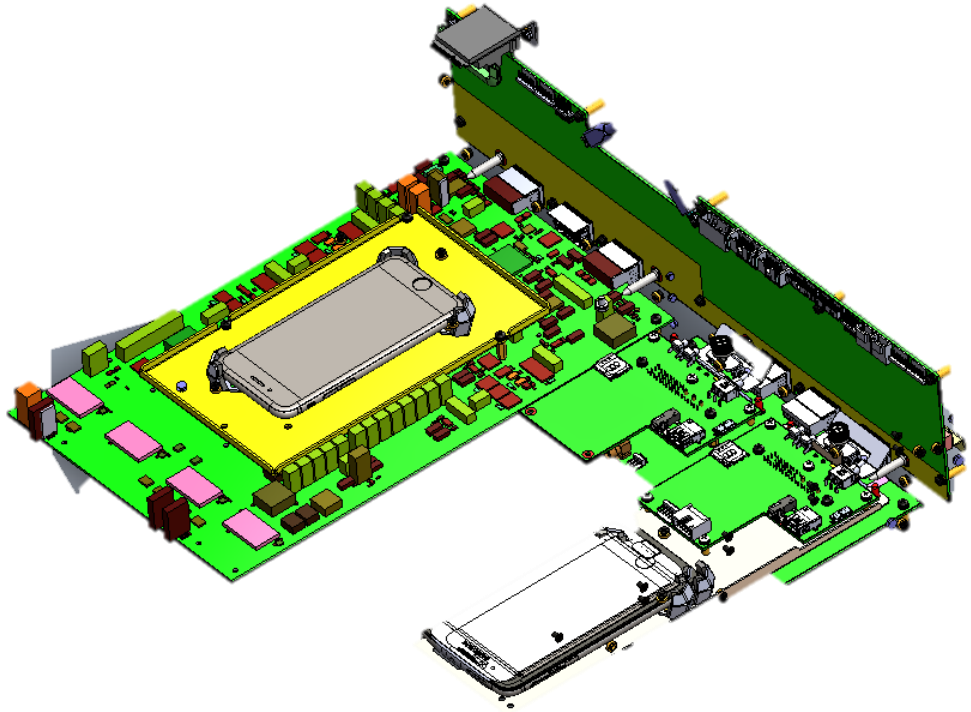
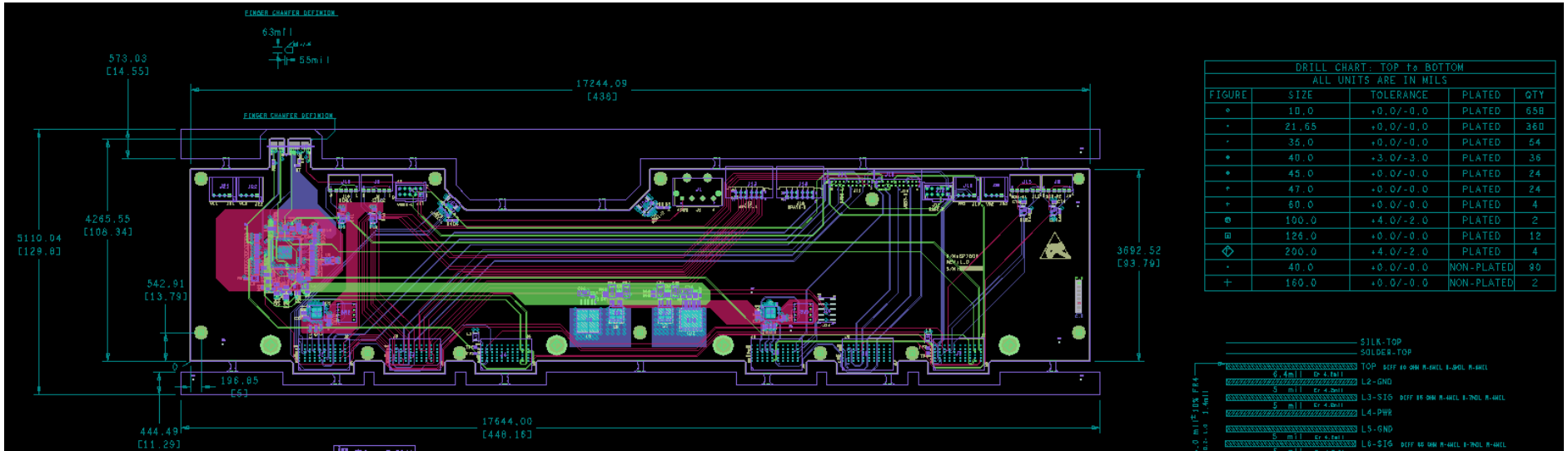
Engineering Ltd.

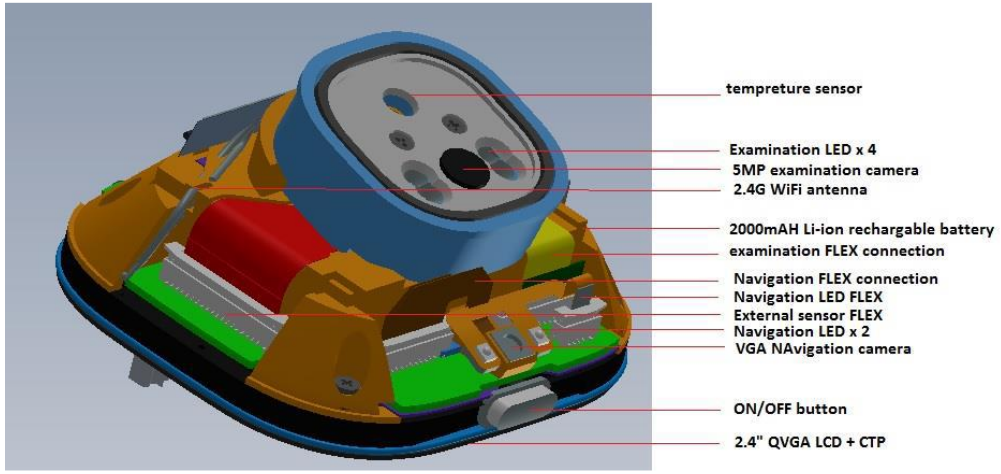




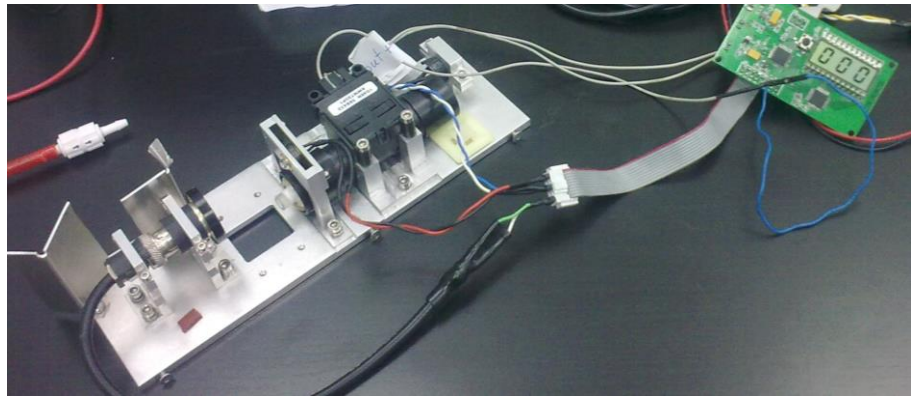


DRILL CHART: TOP to BOTTOM ALL UNITS ARE IN MILS				
FIGURE	SIZE	TOLERANCE	PLATED	QTY
⌖	10.0	+0.0/-0.0	PLATED	658
·	21.65	+0.0/-0.0	PLATED	360
·	35.0	+0.0/-0.0	PLATED	54
✱	40.0	+3.0/-3.0	PLATED	36
✱	45.0	+0.0/-0.0	PLATED	24
✱	47.0	+0.0/-0.0	PLATED	24
+	60.0	+0.0/-0.0	PLATED	4
⊕	100.0	+4.0/-2.0	PLATED	2
⊞	126.0	+0.0/-0.0	PLATED	12
◇	200.0	+4.0/-2.0	PLATED	4
·	40.0	+0.0/-0.0	NON-PLATED	30
+	160.0	+0.0/-0.0	NON-PLATED	2

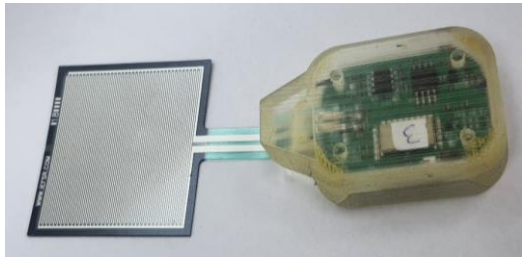
Medical Devices



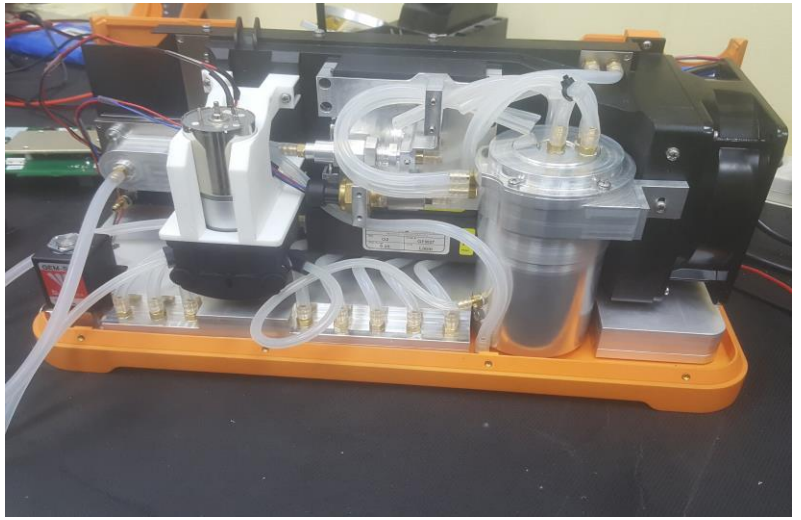
Identifying and sending information in real time



Exhaled diabetes detection system



Develop small size BLE & sensors for medical treatment device



Oxygen flow control system

SLS – SMART LOGISTICS SYSTEM WITH TAGS

- Custom Design & Production

- Antenna Design

  Cellular ,GPS,UHF

  RFID ,WIFI, BLE

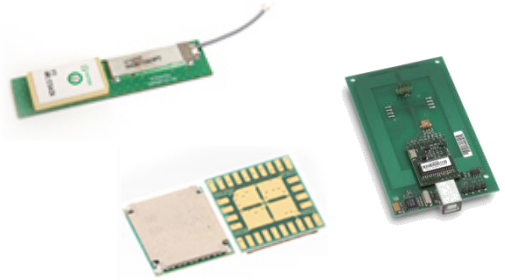
- Smart card & RFID

  ISOCARD ,Ticking, SIM ,Magnetic

  Driver license ,E-Passport , Ticketing …

- RFID reader modules/boards

  125KHZ ,13.56MHZ 916MHZ , 2.4GHZ



Every Surgery Cloth & Tools that their cost is expansive

Contain a RFID Tag.

The system automatic collecting Info of the Doctor or Nurse that taking a Cloth or Tools from the closet.

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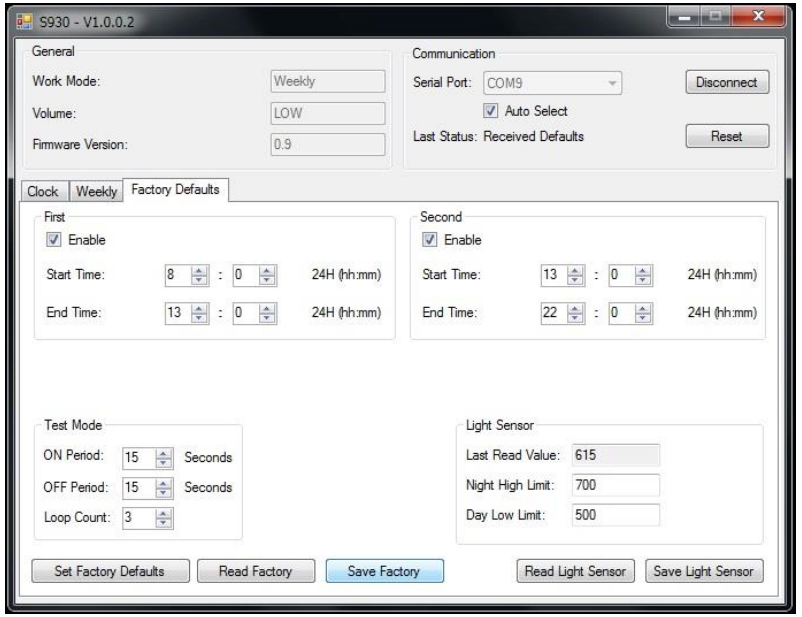
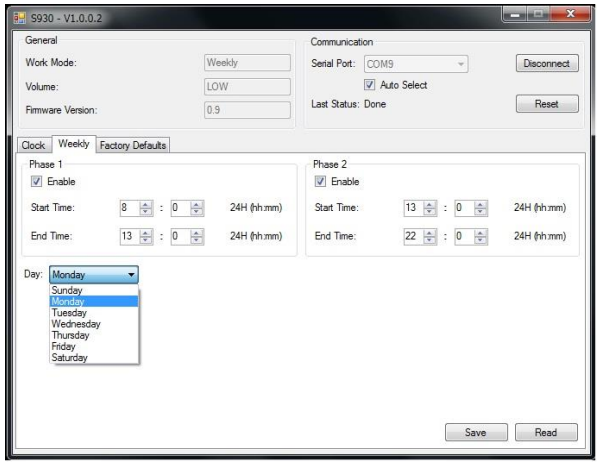
Remote control system design including PC GUI

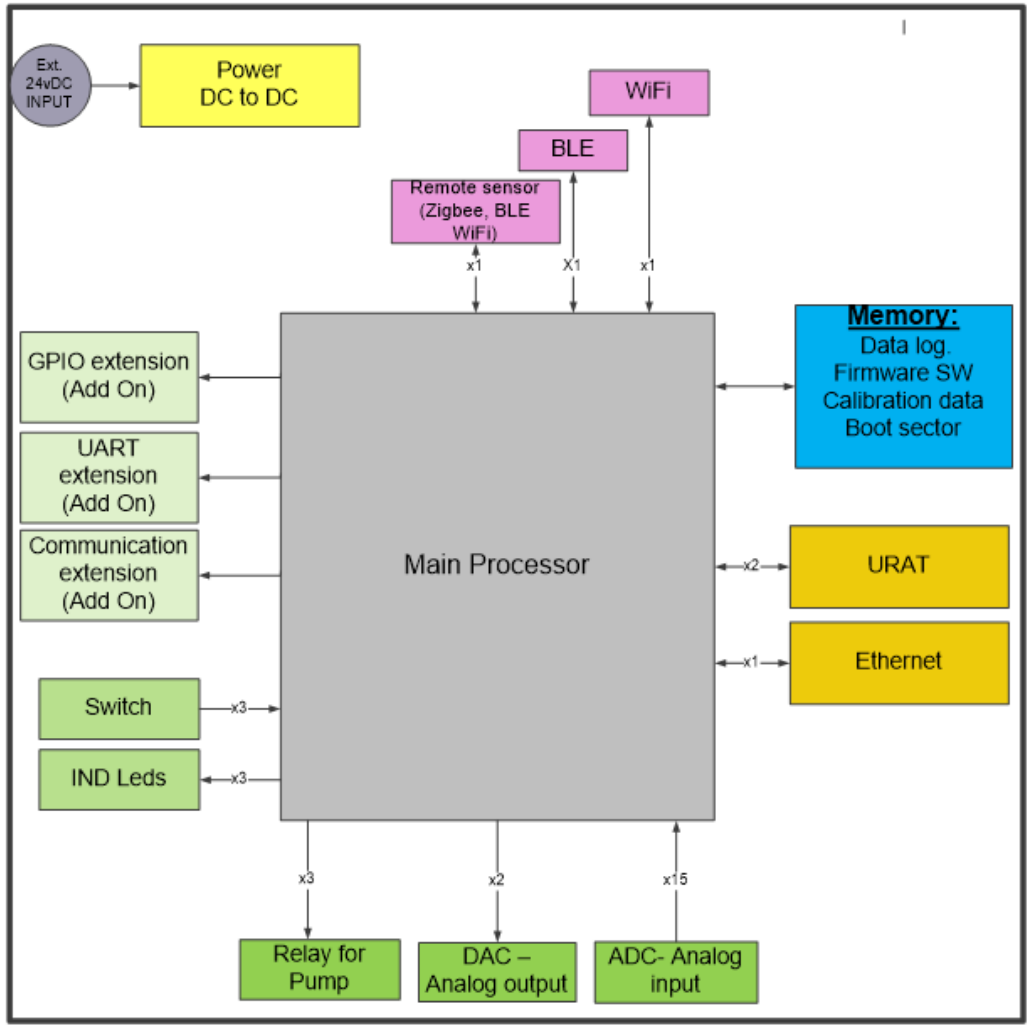




sensors Link unit

Customer requirement for primary design for designing a remote-control unit for sensors in external environmental conditions and sending data to a data server:

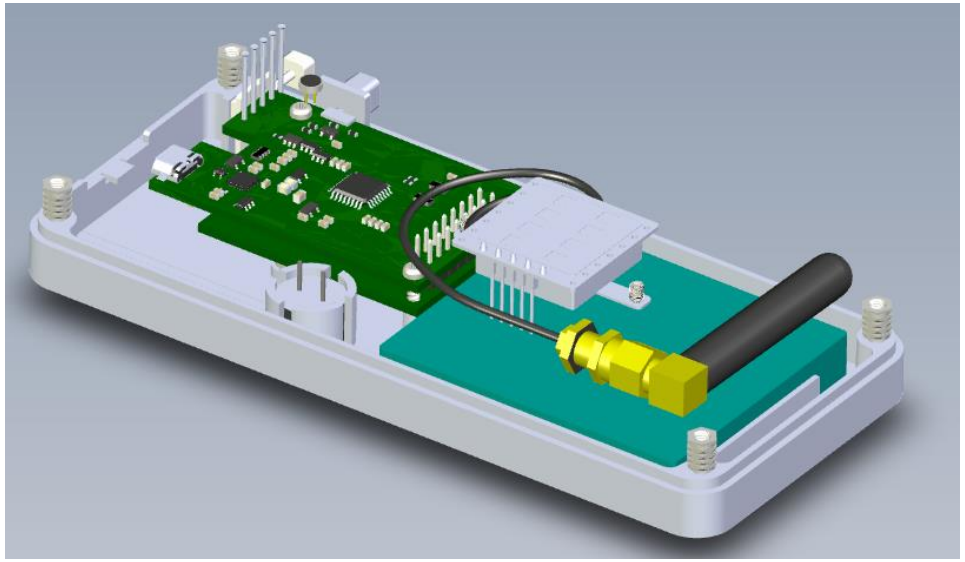
- Core : Main CPU and communication
- Sensors: sensors connectivity and data analyzing
- Communication: several communication ports and options for local and remote sensors and cloud connection.
- Enclosure.

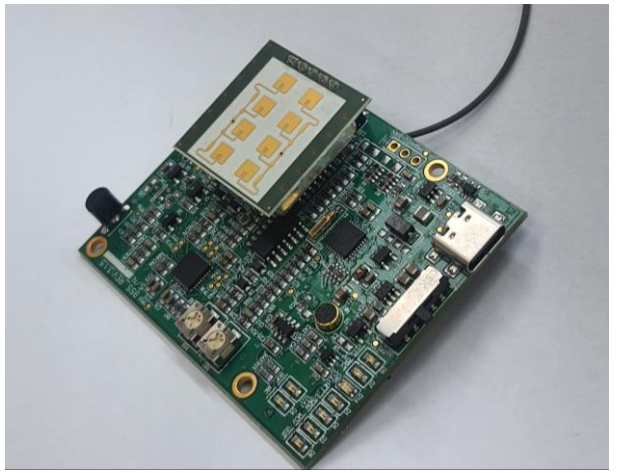


Product design and development with Doppler radar.

The product performs voice recognition and movement with the help of:

- A software sound algorithm.
- Using advanced Doppler radar.
- Sending user alarm by LTE MODULE



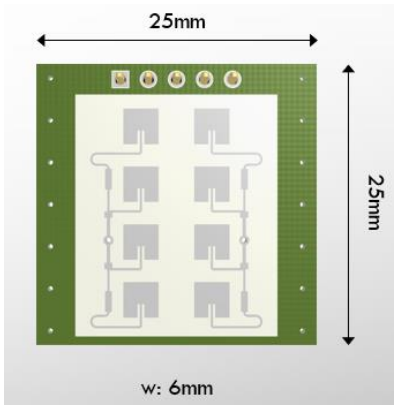


8TEC products

RF Radar & LiDAR MODULES

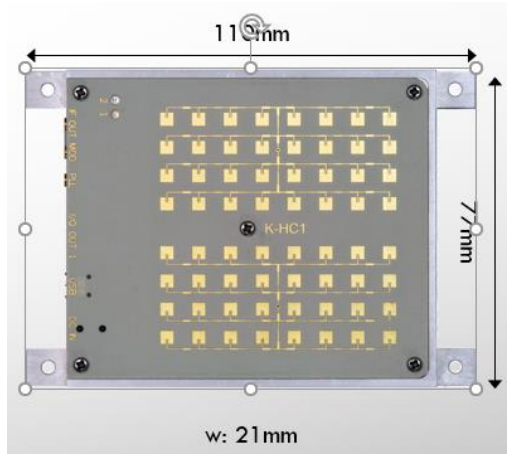
Features

- 3.3V version of K-LC1a
- 24 GHz K-band miniature transceiver
- 100MHz sweep FM input
- Dual 4 patch antenna
- Single balanced mixer with 50MHz bandwidth
- Beam aperture 80°/34°
- 15dBm EIRP output power
- Detection range of about 12 meters for a moving person.
- Detection range of about 50 meters for a moving car.



Features

- K-Band Superhet Transceiver System
- Highest Sensitivity Receiver with Integrated IF Amp
- Dual 32 Patch Antenna with 25°/12° Aperture
- PLL Controlled Precision Transmitter
- I/Q IF Doppler Output
- IF Amplitude Output
- USB Configurable Transmitter Modes
- Rugged and Compact Construction



- Long range movement detection of persons up to 400m
- Speed measurements in sports applications (persons, balls, …)
- Long range traffic detector (cars up to 1,000m)

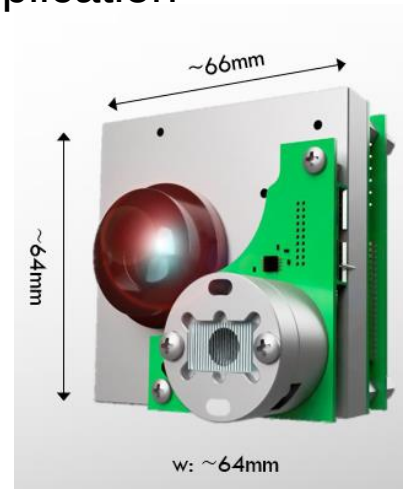
RF Radar & LiDAR MODULES

Features

- Beam width options: 19°, 36°, and 48°
- Max. sensing distance: 165 meter
- 16 detection segments
- Real-time data acquisition and display (through USB)
- RS-485 port for measurement acquisition
- CAN bus for measurement acquisition

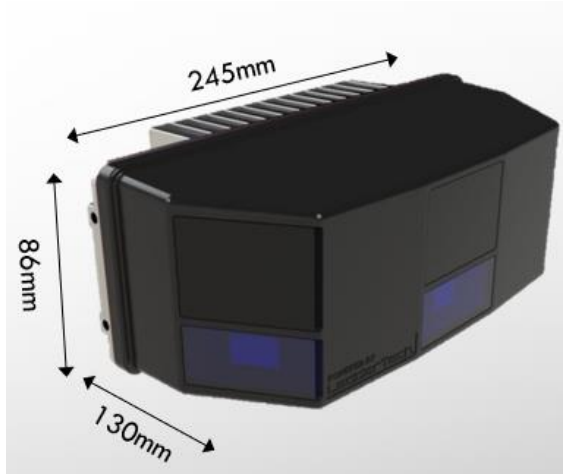
Interfaces available for custom application development:

- RS-485
- CAN bus
- DIP switches1 (4)
- MicroSD card slot1
- Expansion connector (UART, CAN, SPI1, GPIO1, DAC1)



Features

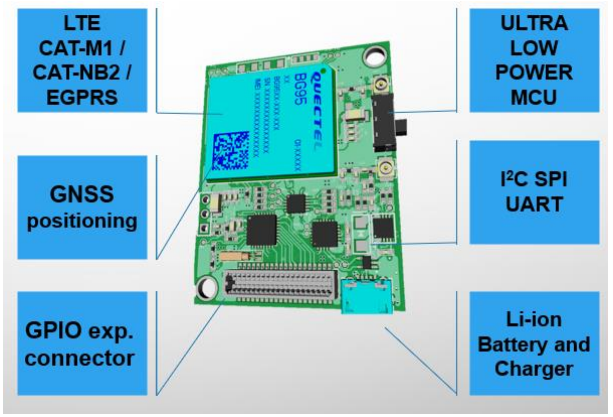
- 3D flash LiDAR with 180-degree field of view (FoV) specifically designed for ADAS and autonomous driving applications.
- 3D flash illumination technology, providing 8 times more vertical coverage than most scanning LiDARs
- Pedestrian detection range of up to 32 meters
- Wide operating temperature range

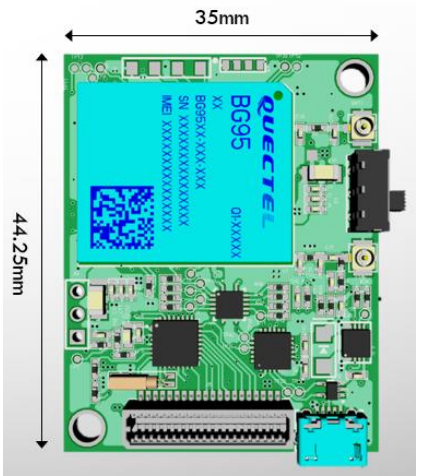


IoT Modules

LTE module – Features:

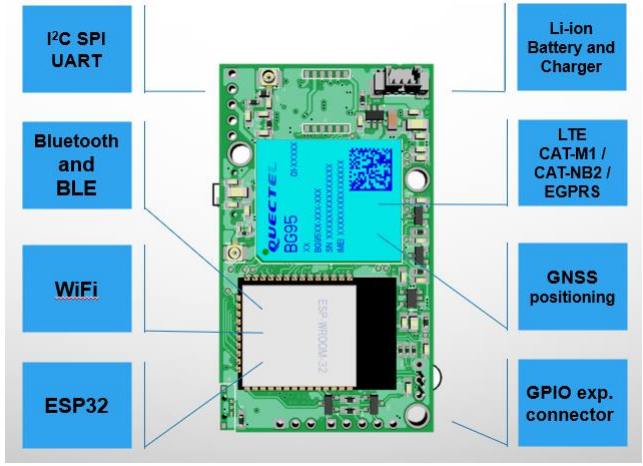
- LTE Cat M1/Cat NB2/EGPRS module with ultra-low power consumption.
- Integrated RAM and flash in the baseband chipset.
- Comprehensive set of hardware-based security features.
- MCU: ADC, 25MHz Clock,
  64 KB RAM, 20 GPIO, I²C SPI UART

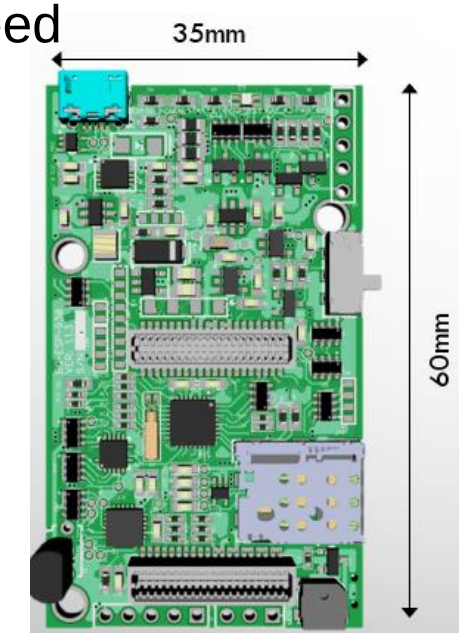




WiFi \ LTE module – Features:

- Wi-Fi, Bluetooth, BLE connectivity and LTE module with GNSS positioning functionality
- ESP32 integrates a rich set of peripherals, ranging from sensors, SD card interface, Ethernet, high-speed SPI, UART, I²S and I²C.





GTAG930 system

GTAG is a system able to read active and passive tags.

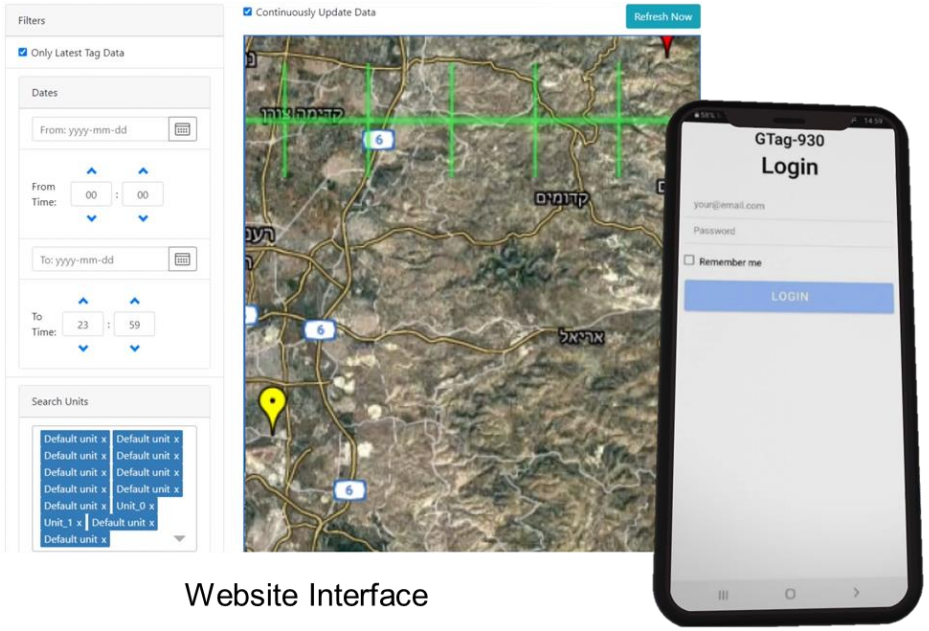
The system contains:

- Designated tags reader
- Active tags in BLE format, long range 2.4 GHz
- Passive tags of 125 kHz and 13.56 MHz

System applications:

GTAG is fully customized for any range of business, such as:

.



Website Interface

Mobile Application

Active Tag

Passive Tag

Tag reader

Thank You !