NEURONiC WORKS

Our Design, Your Success!

CUSTOM PRODUCT DESIGN & DEVELOPMENT

NeuronicWorks Inc. is a Toronto-based custom electronic product design and manufacturing company.

NeuronicWorks is a multi-disciplinary design house in the heart of Canada's leading tech community. We focus our efforts on helping companies develop innovative engineering solutions for their businesses, and developing new products that reflect the realities and future of technological progress.

Established in 2009 in Toronto by a couple of visionary engineers, Simona and Titu Botos, NeuronicWorks initially focused on custom electronics and software development. Over the years the company has grown into a powerful design house with a diverse team of over 60 designers and engineers, with a wide range of expertise in innovative technologies, design and product development. We work-on all phases of product development, from initial concept design to manufacturing and certification.

Our broad experience in electronic product design and software development across a wide-variety of industries gives us confidence to get the job done for a project of any complexity.

Professional Engineers Ontario

NSF NSF-ISR Registered to ISO 9001

IPC

RoHS COMPLIANT

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NEURONIC WORKS

CUSTOM PRODUCT DESIGN & DEVELOPMENT

Design Services

- Electronics Hardware Design
- Firmware Design
- FPGA Design
- Software Development
- App Development
- Industrial design
- Mechanical Design
- UX/UI Design
- Prototyping
- Testing Support
- Qualification and Certification

Manufacturing Services

- PCB Assembly
- Box Build Assembly
- High-volume Manufacturing Support

Surgical Tool

overview

LeMaitre Vascular is a leading global innovator, manufacturer and marketer of devices for the treatment of peripheral vascular disease. The company provides vascular surgeons with the solutions they need to diagnose and heal their patients.

project scope

We were tasked with taking their POC design, add peripherals and integrate those into a defined PCB. The PCB was designed with compliance to 60601 standard. Firmware development on the MPU to monitor/control the RPM, motor position, current consumption, voltage level was implemented. Various fault conditions and response were also implemented. The system was tested and documented every step to pass FCC and medical standard. The device is set to launch in the fourth quarter of 2019.

La Maitre vascular device

Assembled prototype top view

Assembled prototype side view

From the existing POC provided by the client, our hardware team developed custom PCB for the device with compliance to 60601 standard.

Our firmware design team has developed functionalities to control motor and position, voltage consumption levels and multiple fault prevention responses.

AAID

overview

Automatic air inflation-deflation control system allowing the end customer to increase the fertilizer application time-window, reduce soil compaction, protecting soil structure, reduce fuel consumption, less slippage and reducing yield loss due to soil compaction. The system lets a farmer automatically inflate or deflate their tires with the simple flip of a single switch.

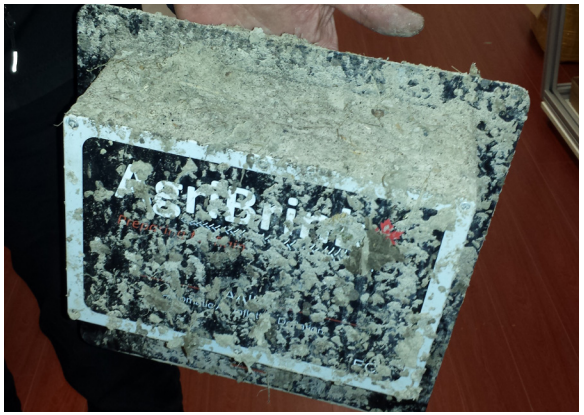
project scope

NeuronicWorks designed the complete system: hardware, PCB, firmware and industrial design. The product was upgraded from an analog version to an electronic control system with a user interface, many sensors and multi-channel real-time control and monitoring.

AAID control unit with touch screen, visualisation


PREMIER'S AWARD FOR
AGRI-FOOD INNOVATION EXCELLENCE
Award Recipient
AgriBrink


AgriBrink
Preparing for Rain
AAID
Automatic Air Inflation Deflation
ECU



NW-4G LTE
Modem

overview

The NW-4G LTE Modem is NeuronicWorks' plug-and-play solution to upgrade all existing Motorola G24 2G/3G modems used in INIT systems to the new 4G LTE standard.

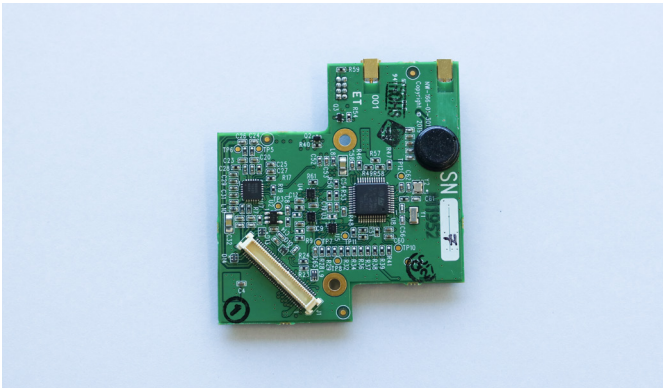
our contribution

Network carriers are phasing out the 2G standard by early 2021, leaving current transportation services without their 2G cellular connectivity.

NeuronicWorks designed a direct replacement unit for the current Motorola G24 modem used in INIT transportation systems around the world. The NeuronicWorks modem supports the new 4G LTE standard with 3G fall-back without losing any features of Motorola G24.

Motorola G24 modem vs. NW-4G LTE modem

NW-4G LTE modem board



NW-4G LTE modem board

NW-4G LTE modem board installation

NW-4G LTE modem board installed in INIT transportation system

NW 4G LTE
Modem: GRT

overview

Rapid advancement in network technology has resulted in sunsetting of 2G and 3G networks across the globe. The sunset has forced transit companies relying on 2G/3G connectivity for communication to invest in system upgrades of transit buses and bus station signs to the new 4G LTE standard.

our contribution

NeuronicWorks developed the NW-4G LTE, a cellular communication modem specifically designed to replace the 2G&3G Motorola G-series based modems that carriers will no longer support. The NW-4G LTE modem mechanically fits in existing systems and allows connections with the same interfaces as the Motorola G24 in buses and bus station signs.

NeuronicWorks delivered the requested number of modems for the GRT Fleets and worked on system analysis and integration analysis of VMS. Our services included hardware & firmware designs, testing, certification and manufacturing.

NW-4G LTE modem board

HydraGen2

overview

Hydragen™ is a portable, safe and reliable aftermarket unit that produces hydrogen and oxygen on demand. It is designed by dynaCERT, a Canadian company, for on-road applications with class 6-8 engines. With its patent-pending delivery method, DynaCert technology is centered around providing a hydrogen-oxygen mixture, generated through electrolysis, for internal combustion engines.

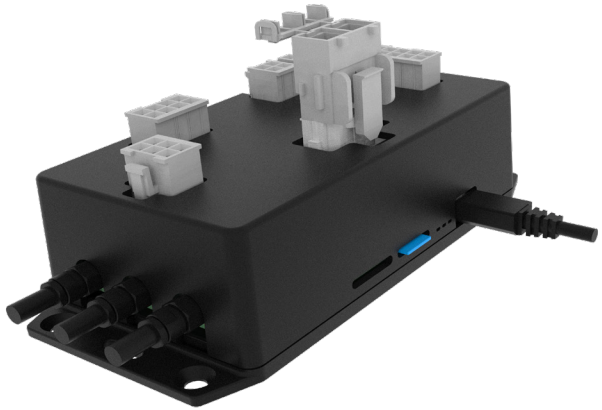
project scope

We were responsible for the design of the second generation of the Hydragen™ unit which automates the process of hydrogen-oxygen mixture delivery as well as the process of data collection. Our team helped with the system design, developed a compact hardware unit, and designed the real-time running firmware and the cloud repository database.

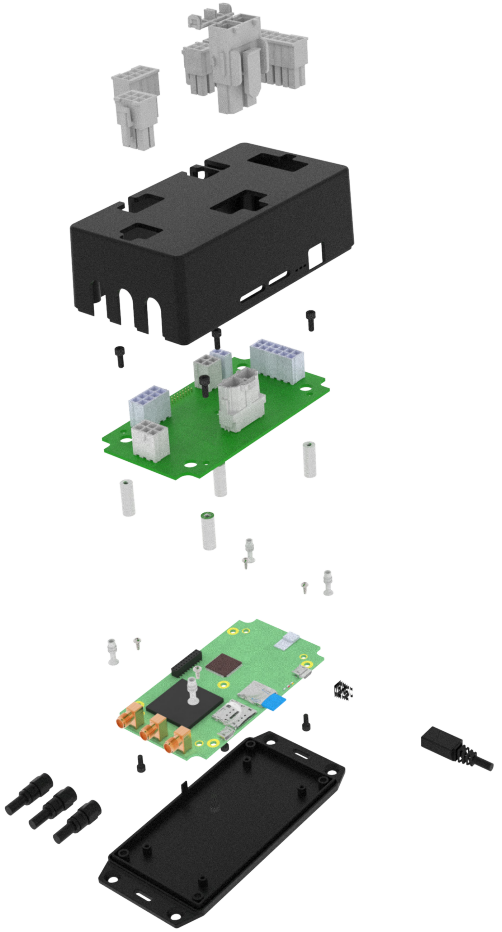
Edison Awards 2018
TOP GOLD
Vehicle Advancement

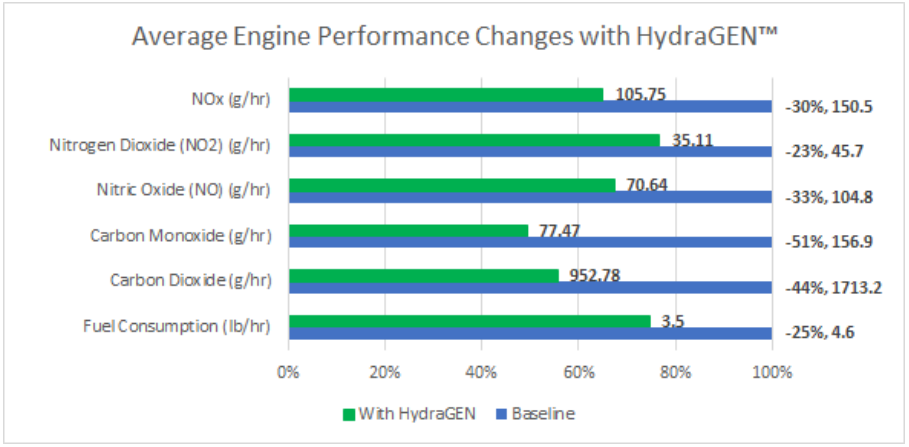
German Innovation Award'19 Winner

HydraGEN unit



HydraGEN hardware case enclosure 3D rendering





A1 CIRCULATOR

overview

With expertise in fluid flow, heat transfer and demand-based control our client leads the fluid systems industry for industrial heating and cooling by providing the most energy efficient and cost-effective solutions to building professionals and owners around the globe.

project scope

We have developed for our client a family of fluid circulators, that are capable of performing in various modes. For instance, constant pressure, constant flow, proportional flow, adaptive and self-optimized operation based on previous pump data and sophisticated algorithms like sensor-less reverse mapping for pump control. Multiple control option including patented auto mode which adjusts the speed to match the flow demand.

A1 circulator designed by NeuronicWorks

version A1:

Build with Renesas highly secure temper-proof controller. System features v clog/lock detection, dry-pipe detection and fail-safe mode for efficient and safe operation. Interface: UART, Analog/Digital Input, 8-Segment Displays, Button Input.

A1 circulator

A1 circulator installed

A4 CIRCULATOR

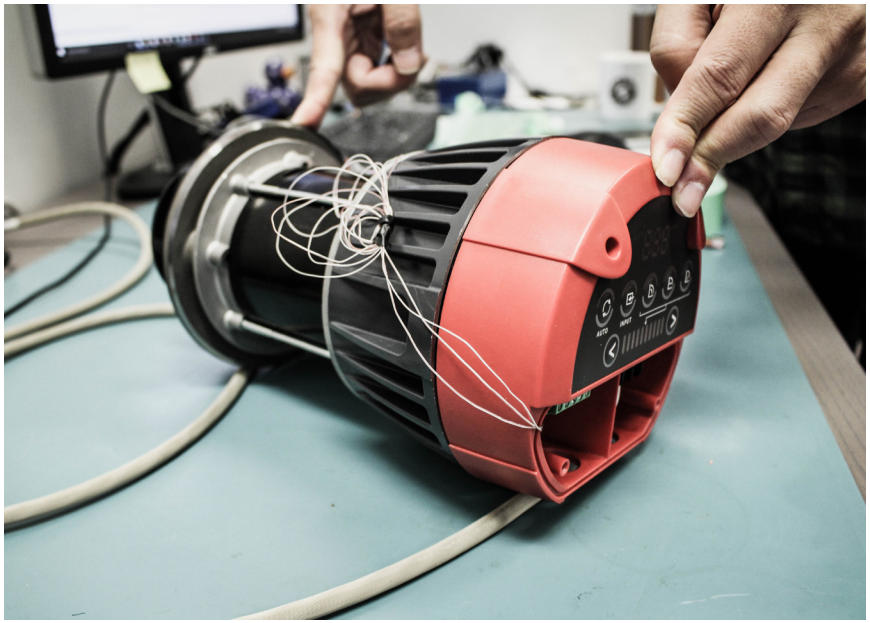
project scope

For the circulators projects our team developed industrial grade hardware and optimized C based firmware. We have also helped with the industrial design of the A4 circulator and we supported the mechanical design.

version A4:

Modern based controller which provides faster computation power for better controller response. The circular advances the features in A1 functionality by providing more modes of operation and in-field firmware upgrade for maintenance. Interface: UART, Analog/Digital Input, 8-Segment Displays, Button Input

A4 circulator 3D rendering



A4 circulator design progress

A4 circulator testing

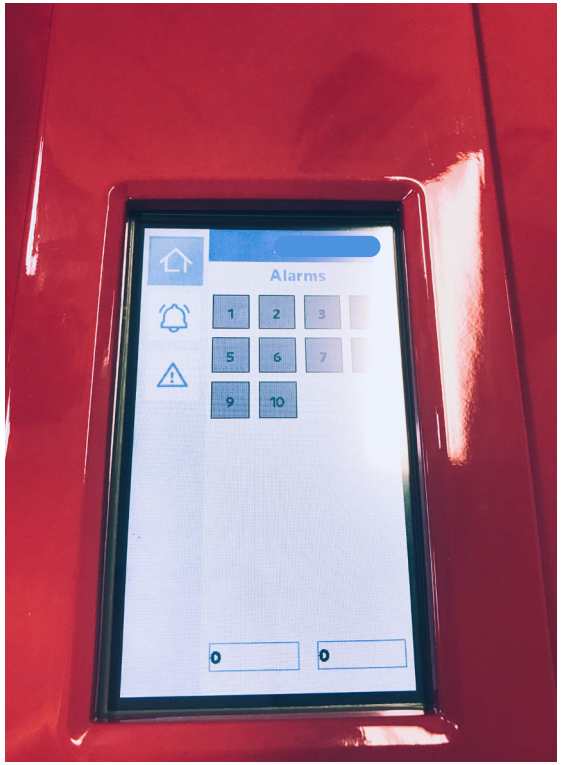
DEPC

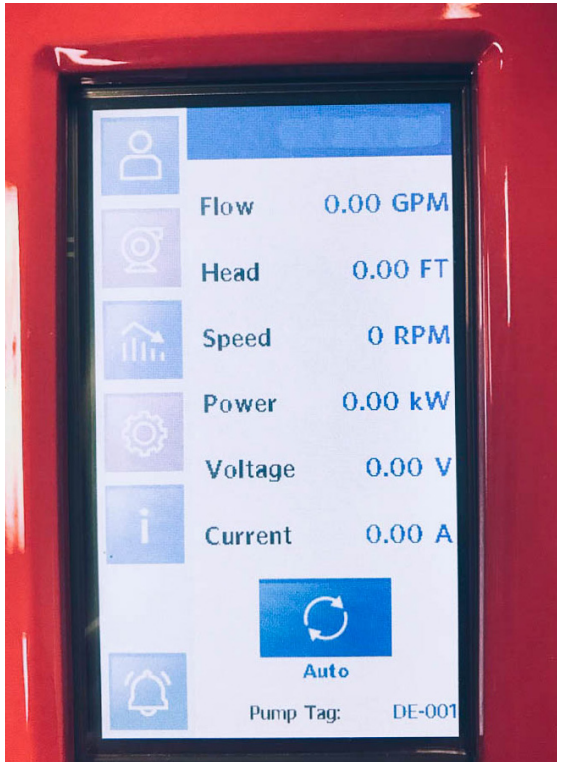
design envelope pump controller

One of the most advanced circular control system, which enhances A1/A4 features with touch LCD, customizable system setup, scheduling and auto operation. Build with advanced micro -controller the device provides Wi-Fi and Ethernet connectivity for remote monitoring, integration with building automation system (BACnet), building pump network in-between themselves for tandem & failsafe operation and allow automatic system upgrade securely. The controller also hosts web pages to view device information securely with multiple layers of user access control.

Interface: LCD, Resistive touch, Ethernet, WiFi, RS485 (UART), SPI

Pump controller with resistive touch screen





Pump controller with resistive touch screen

CO^2 MINERALIZATION TECHNOLOGY

overview

CarbonCure is a winner of the NRG COSIA Carbon XPRIZE for their breakthrough technology of CO^2 conversion into valuable concrete products. CarbonCure's carbon dioxide (CO^2) utilization technology combines captured CO^2 into concrete manufacturing thereby reducing the carbon footprint of the process. Once injected, the CO^2 undergoes a mineralization process and becomes permanently embedded, resulting in economic and climate benefits for concrete producers

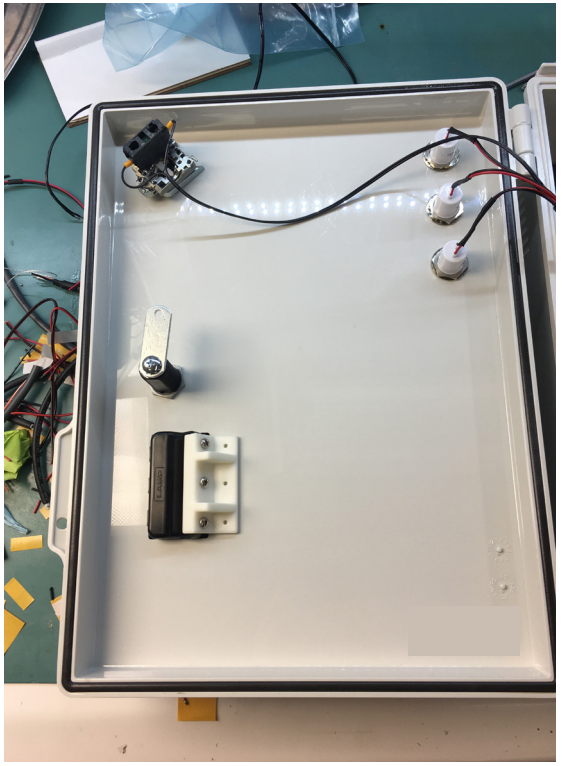
project scope

NeuronicWorks was tasked in designing and developing a fully functional, assembled and tested system for controlling the concrete manufacturing process.

Our team's contribution ranged from Firmware design to Industrial and Mechanical Design, offering pre-certification support for the entire system. We completed a review and update of the existing hardware, and we utilized a bare metal approach for firmware development, ensuring the system was set up for OTA updates and communication with cloud backend for a seamless operation.

CO2 reduction equipment for industrial manufacturing.


Power
Communication Link
Injection ON
Stop
EMERGENCY
STOP
CO_2 Mineralization Technology
CO_2 Mineralization Technology



RFRC

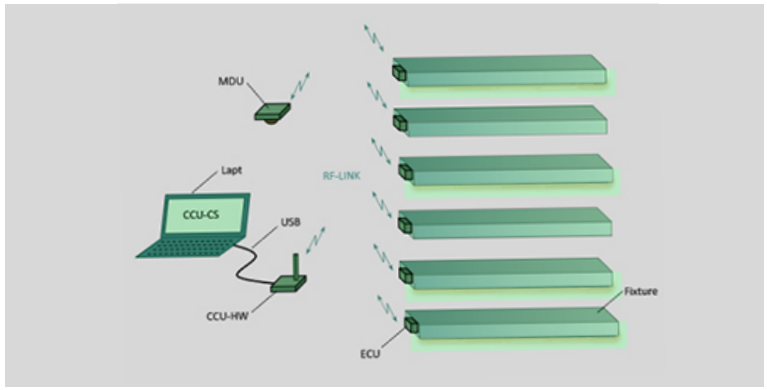
overview

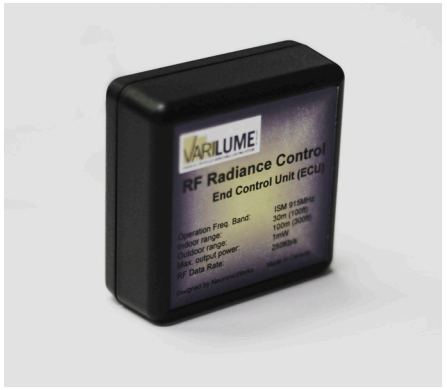
A modern and sophisticated wireless lighting control system that makes use of a proprietary RF-based communication for the purpose of controlling and monitoring the status of high numbers of lighting electronic ballasts. This product, designed for Varilume lighting, provides granular control of individual end units, adjusting the lighting based on motion detection, ambient light measurement, and a complex scheduling feature.

project scope

For this project, the team at NeuronicWorks performed the research, designed the complete system (industrial design, hardware, firmware, and software), and optimized system performance through testing, while paying attention to the product manufacturability.

Varilume wireless lighting control system





Varilume wireless lighting control system, individual components

Electronic Labels

overview

An effective wireless shelf label solution for the retail industry. Increases the speed at which pricing information makes its way securely from the head office directly to the store shelf. It enables retailers to be more competitive, optimizes store operations, and naturally increases productivity and profitability. Including the use of a no power to zero-power LCD! A NeuronicWorks product available for OEMs.

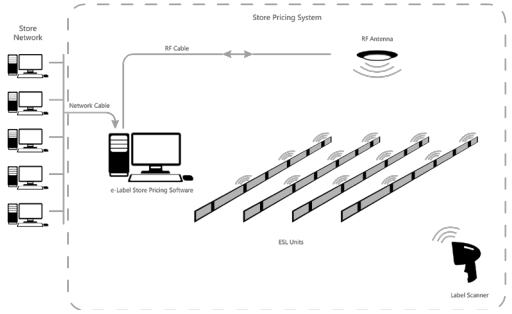
project scope

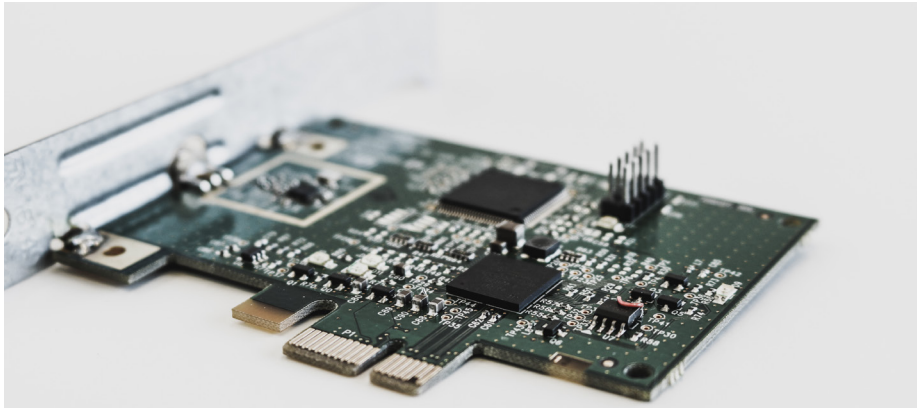
The team at NeuronicWorks designed the complete system from the idea to the complete product, industrial design, hardware, firmware, RF-communication and software for the PC.

E-ink wireless shelf labels for retail. Prototypes

E-LABEL STORE PRICING

ELECTRONIC SHELF LABEL (ESL) CONTROL SYSTEM





E-ink wireless shelf labels for retail. Hardware

E-ink wireless shelf labels for retail. Shelf mounting concept

Lotus

overview

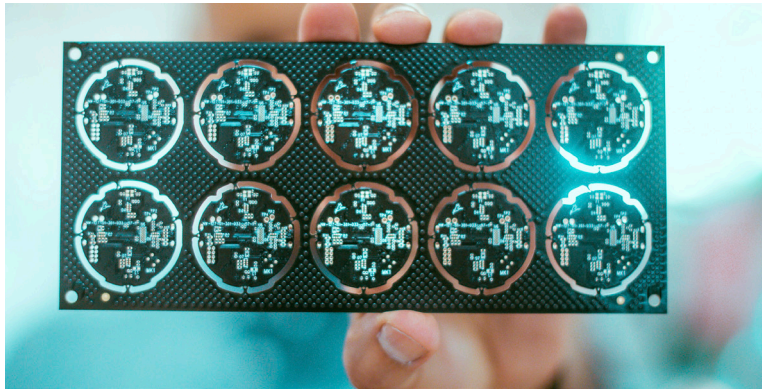
The Lotus device is a fashion-forward, gender-neutral wearable device that pairs to the App via Bluetooth, allowing for remote control of the App's features. Without fumbling for your phone, you can easily and quickly use the lotus to activate tracking and sharing of your GPS location, photo, and audio data. It also allows you to make hands-free phone calls in emergency situations to your nearest guardians, or local emergency services (Android OS only).

project scope

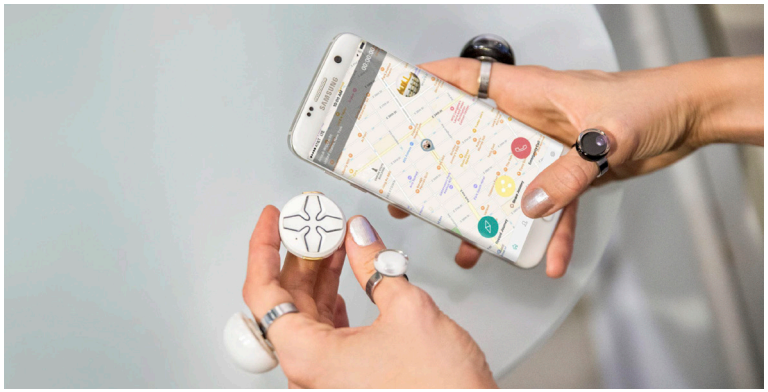
Provided with an initial industrial design, we transformed this idea into a reality by designing the hardware, firmware, and mechanical features of this device. The challenge of this project was to fit all desired functionality into a small coin-like shaped device.

Lotus devices

Lotus device worn on a jacket



Lotus PCBs



Lotus device with accompanying Seam App

Our team creatively met all the requirements, including a bidirectional audio communication channel and a long-lasting battery. While small and only having two buttons the Lotus unit is an example of elaborate user interactions using only RGB LEDs for feedback.

In the later stages of the product development our team has helped to integrate the device Firmware with Google Assistant and Siri.

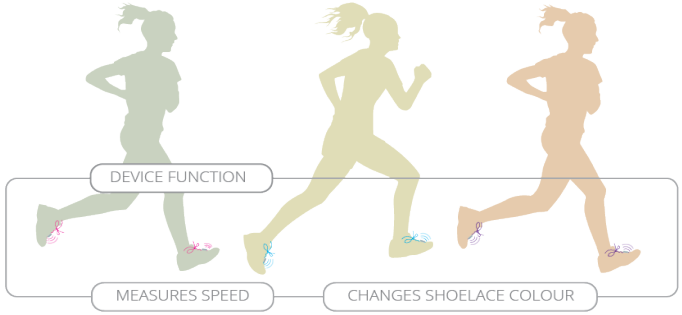
Pace.Fit

overview

Pace.fit is a wearable device that monitors and helps to maintain the cadence of the user by light indication. This wearable uses RGB LED lights to indicate the speed of the user during walking or running. The current version of this device is powered by rechargeable battery with manual On/Off button for control. The device is versatile and fits on most shoes.

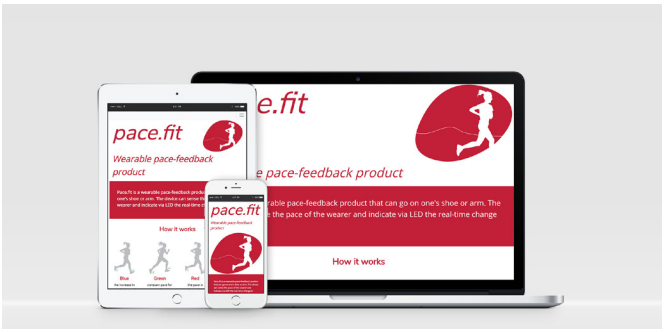
project scope

NeuronicWorks was presented with a task to design **Pace.fit** wearable device from scratch. We worked closely with the client to translate his idea into a product. Our design team came up with the look of the device through multiple phases of prototyping. The engineering team developed complete system design including electrical and PCB design, firmware, and performed rigorous QA and testing.

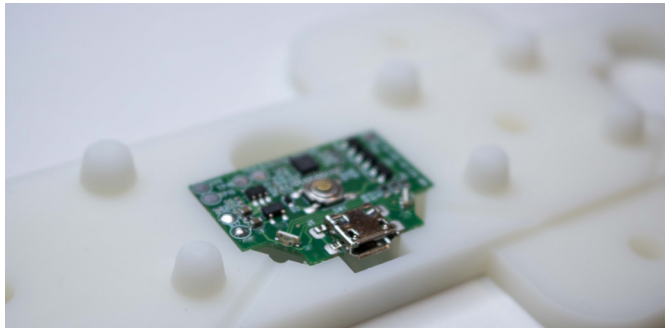


Pace.fit on a shoe 3D rendering

Pace.fit enclosure casings



Pace.fit responsive web page



Pace.fit hardware board

Pace.fit tri-fold brochure

The NeuronicWorks team assisted the client with international sourcing (China, Korean and USA) and price negotiation of components for production of the first 1000 units.

Glowing Logo

overview

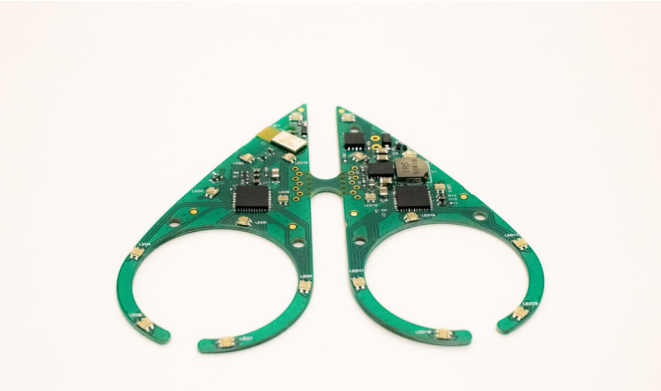
Moose Knuckle is a Canadian Luxury outerwear brand known for its fashionable winter parkas and bombers. The brand quirky character and outgoing personality inspired the project of glowing LED logo.

project scope

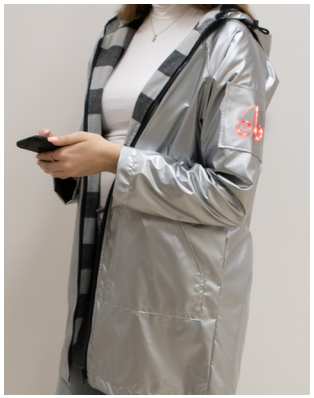
We collaborated with Moose Knuckles on the task to find a creative and engaging way to incorporate technology into their product. We started with research of their brand and a brainstorming session at their office. Based on the brand character and their customer we created the concept of the glowing logo that changes colors and recognizes other owner's of the Moose Knuckles jackets.

The NeuronicWorks team has developed custom hardware in the shape of Moose Knuckles logo, firmware and designed a mobile app to control the lights. We executed the entire system from scratch and created functional garments and a bag to demonstrate the potential of the LED Logo.

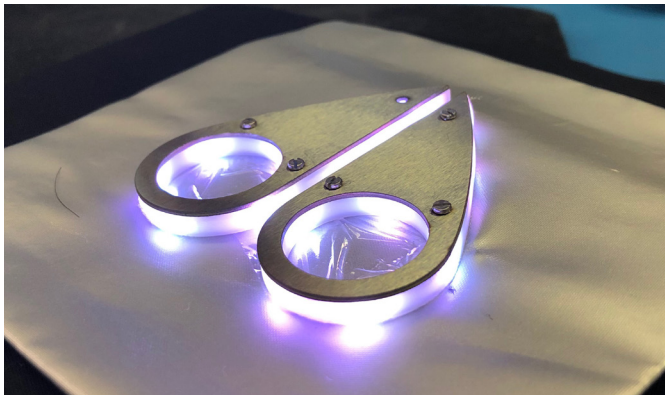
FW20 campaign image from Moose Knuckles



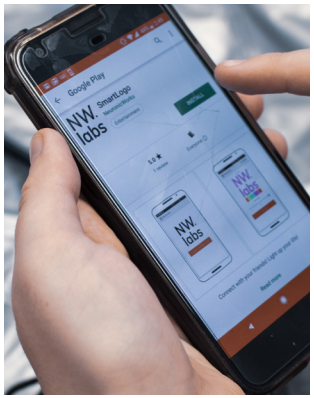
LED Logo custom PCB for Moose Knuckles

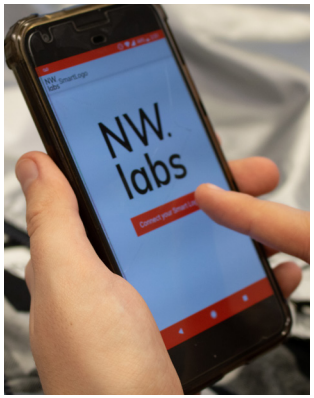


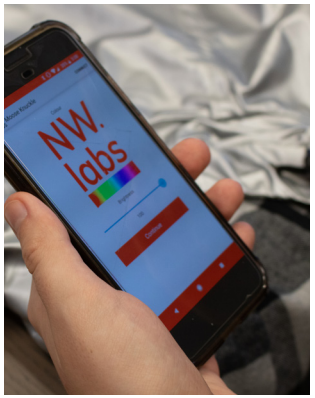
LED Logo prototypes



LED Logo prototype assembly







LED Logo Mobile App - published on Google Play store

overview

The Buzzclip is a small and discreet wearable for people that are blind or partially sighted. The device uses ultrasound to detect obstacles that may lie directly in one's path. It then notifies the user of these obstacles through intuitive vibrations, allowing the user to safely navigate around any objects that they may encounter. The Buzzclip offers essential head level obstacle detection and can be easily attached to many forms of clothing, making it a highly versatile and useful device.

project scope

The NeuronicWorks team was tasked to design firmware for the product that allows better object detection and higher quality of feedback for the user.

Buzzclip with a package box

Buzzclip use case options. Photos courtesy of iMerciv.

TechNomad

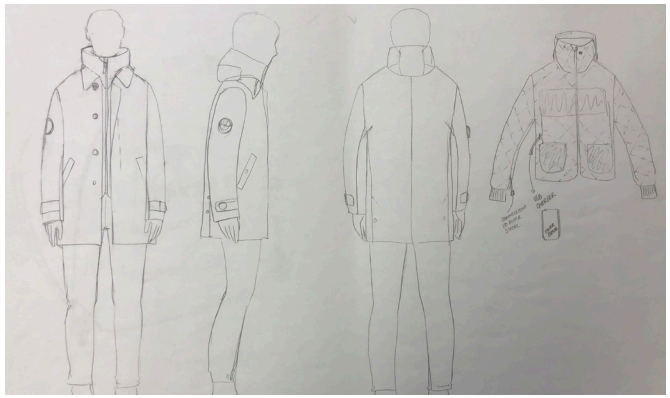
overview

TechNomad is a smart illumination system designed for apparel companies looking to expand into wearables. Smart circuit features wireless connectivity that is easily integrated into any type of garment or accessory, blending leading-edge technology with the latest fashion.

project scope

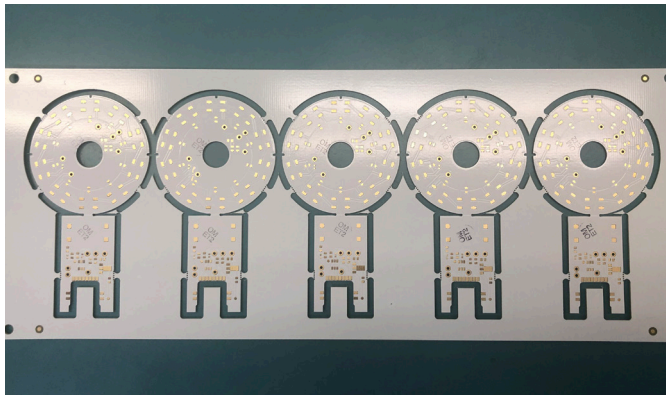
Our team worked on all aspects of the product design - Hardware, Firmware, Mobile App Development, Prototyping and even the development of the sample jackets. The system is able to recognise gestures and change colour and light patterns based on the gesture type. A small embedded PCB board controls the system performance and talks to the accompanying mobile app. The mobile app allows the user to customise colours and switch between the functions of the jacket.

TechNomad City Jacket - Visibility for cyclists and pedestrians

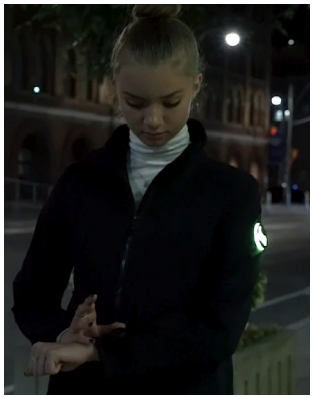


Sketches

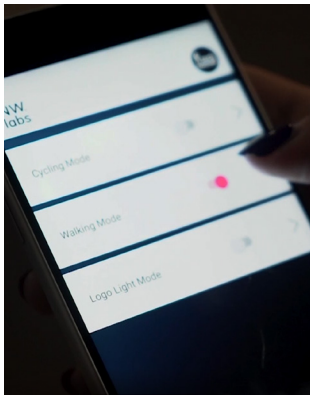
Prototype development

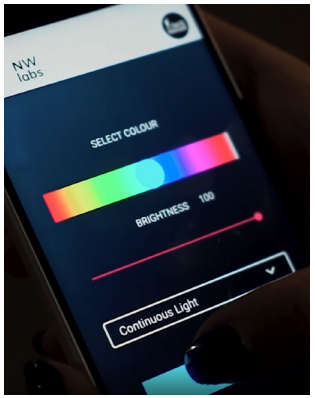


PCB boards



Tap feature





Mobile App - Customization

Domio

overview

Domio is a helmet-mounted audio device which transmits vibrations directly to the helmet itself, transforming it into a speaker. Simply mount it to any helmet, pair it with your phone, and enjoy as your helmet becomes an immersive audio experience. No wires, no earbuds, no fuss.

project scope

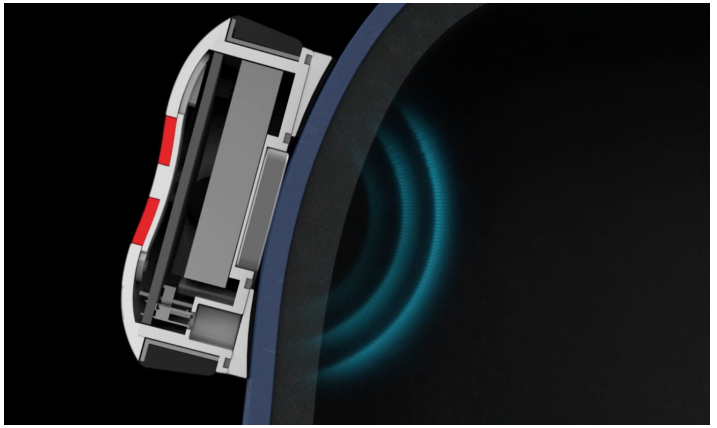
The NeuronicWorks team worked with the client to create hardware and firmware for the device that allows music to be wirelessly delivered to the user through helmet vibration.

We have also provided support with the industrial design of the product to make sure the desired shape is aligned with the tech inside.

Domio device 3D rendering

DIGITAL TRENDS THE inertia TIMES of SAN DIEGO

Domio device Bluetooth communication



Domio device sound delivery diagram

Domio device helmet mounting example

SOMO

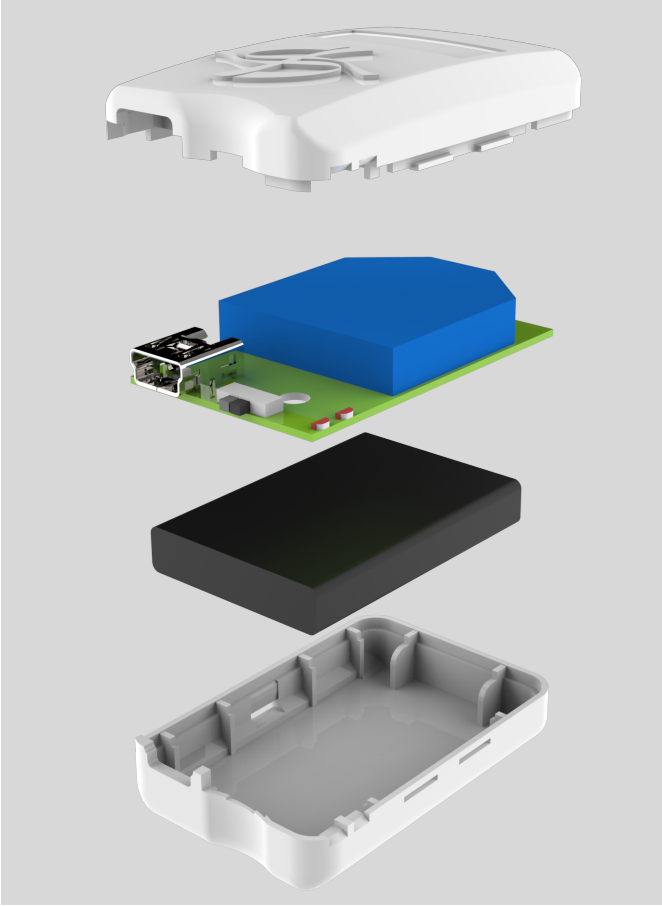
overview

SOMO is a wireless, wearable motion-tracking device that turns movement into rhythmic music. It is meant to be used as a tool to inspire collaboration and creativity in people of all ages and abilities. The goal is to create a safe and comfortable space for exploring body movement.

project scope

The NeuronicWorks team worked on designing a revision to the existing hardware and prepared the PCB for production. Also, the firmware was developed for the system to maintain consistency with their existing software but to work with new hardware.

CBC news Discovery CHANNEL NOW Global TORONTO



Somo case enclosure 3D renderings

Somo device prototype

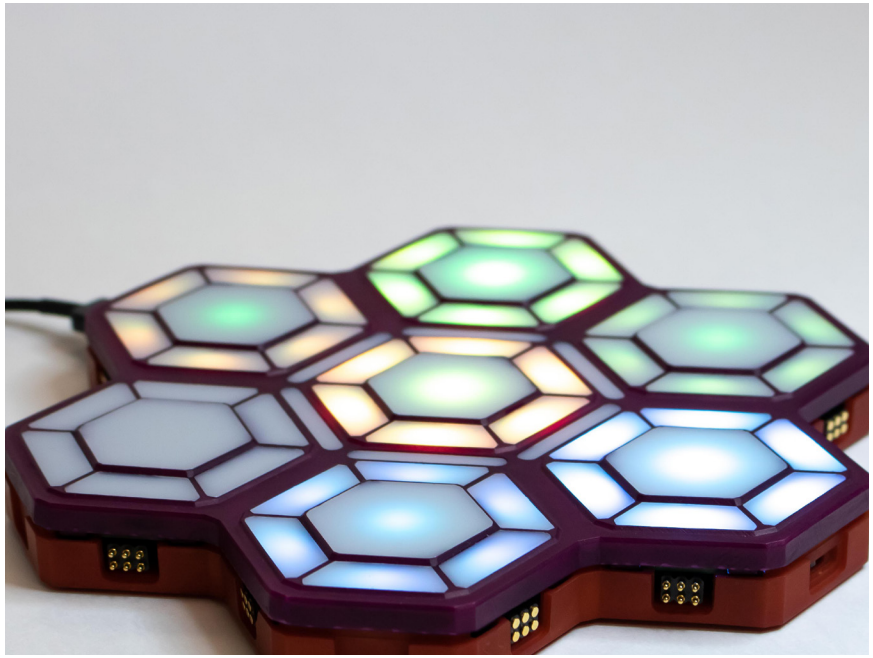
Hexle

overview

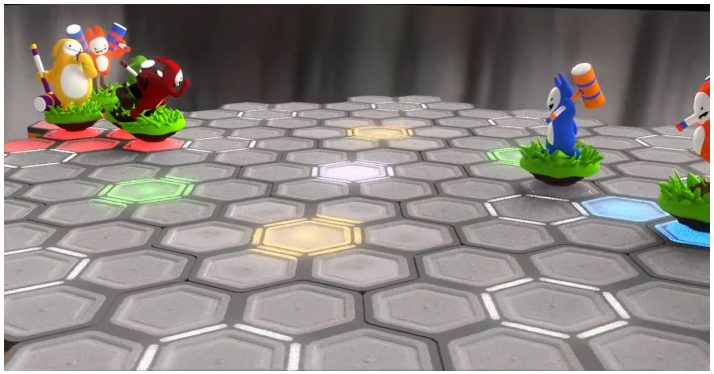
The Hexle is a first digitally enhanced board gaming platform that creates a unique experience combining physical toys, digital environments and board games. The platform invites for collaboration between toy brands, development studios and board games manufacturers.

project scope

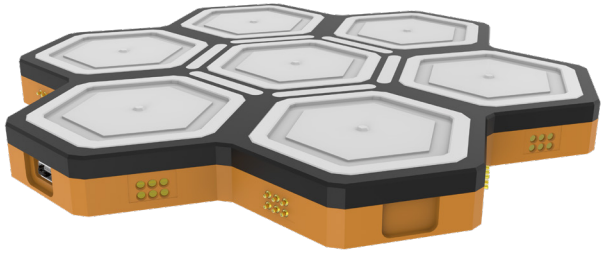
NeuronicWorks team was approached by Pixelnomial Inc. with the task to turn their POC prototype of the gamified board into a manufacture-ready product. Our team was tasked to design Hardware and Firmware for the gaming board along with refining the industrial design solution developed by the client.



Hexle board gaming platform startup LED in progress

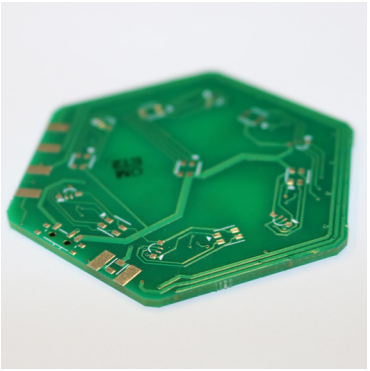


Hexle board gaming platform - concept video with toys

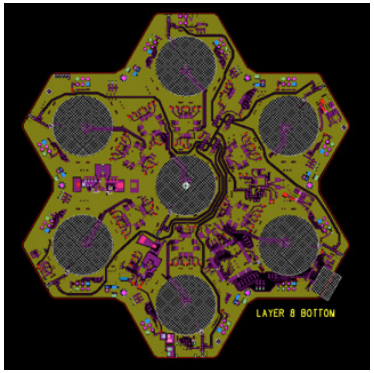


Hexle board 3D rendering with connectors

Hexle board gaming platform - concept video with Tablet view



PCB board, V1



PCB board schematic layer

Armilla Tech

overview

Bringing play-calling to the 21st century, Armilla Tech creates an affordable solution for coaches to increase sports participation for kids and promote involvement for all. Through player education and a higher level of player development, Armilla Tech provides the ability to take youth sports to a higher intelligence level.

project scope

Our team provided Hardware and Firmware support for both the command center system and the wearable wrist receivers.

With our expertise in cloud-based development and android development, we were able to seamlessly configure and develop cloud and android based software for both devices. The User Interface (UI/UX) of the devices were built with careful consideration to the requirement and roles of the various players.

Our Industrial and Mechanical team ensured a rugged, yet comfortable design that increased durability and reliability in all extreme conditions including the ability to take hits while on the field.

Web Portal, Command Centre Tablet and Wrist Reciever Device

Hexle board gaming platform - concept video with toys

Hexle board 3D rendering with connectors

ARAIG

overview

The ARAIG is a futuristic suit that takes the gaming experience to the next level. Through multi-sensory stimulation, the gamer is immersed in an experience that brings together the virtual world with reality. With surround sound and physical feedback including vibratory and muscle stimulation, the gamer is able to embody the complete range of the gaming experience. The ARAIG makes gaming “as real as it gets”, and plays an essential role in every gamer’s arsenal.

project scope

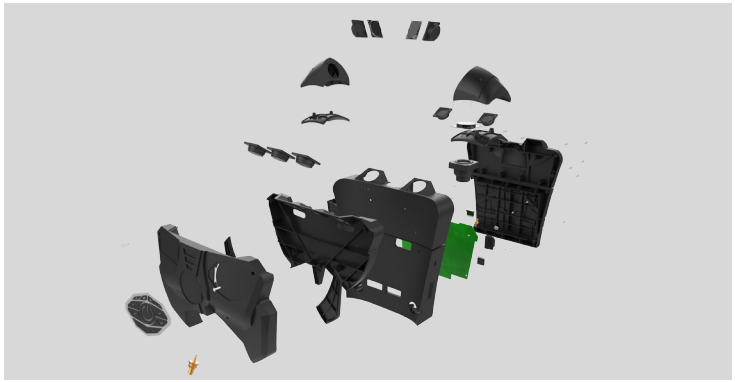
Our team designed the hardware and firmware for the system and assisted with industrial and mechanical design.

From a PC or gaming console, HDMI data is relayed wirelessly to the suit which creates the experience via muscle stimulation, haptic feedback, and a 7.1 surround sound system.

ARAIG suit front view

ARAIG boss box render

ARAIG suit plastic case render



ARAIG suit plastic case render

ARAIG suit side view

20/20 Armor

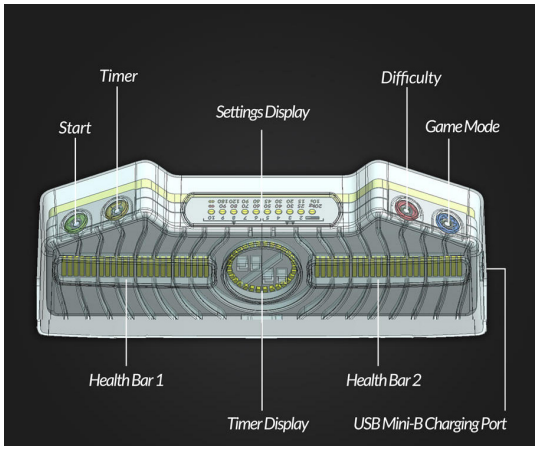
overview

Armor makes an electronic chest-guard that brings the Street Fighter video game to life. This technology gamifies martial arts, making it fun and engaging through its multiple built-in game modes, which teach the fundamentals of sparring such as timing, power, and speed. 20/20 Armor aims to be the standard training system for all striking martial arts and the official scoring system for the Olympics, with the ultimate vision of making Taekwondo a new professional sport.

project scope

The NeuronicWorks team was initially assigned to design and develop the core firmware for 20/20 Armor boards. We worked closely with the client's software design team and developed the response (hardware) for different game modes. Later in the development phase, we were awarded the task to upgrade the initial hardware design and add new features.

20/20 Armor chest-guard



20/20 Armor interactive control display

TipTap

overview

TipTap is a portable wireless device tailored for pre-set denomination; it is compatible with major financial institutions such as MasterCard, Visa, and Interact. Its wireless nature, simple setup and small size make it ideal for charities, fundraisers and any business or venture involving a small fixed amount. It works as a standalone point-of-sale device created to provide faster, simpler and more affordable payment solutions for everyone.

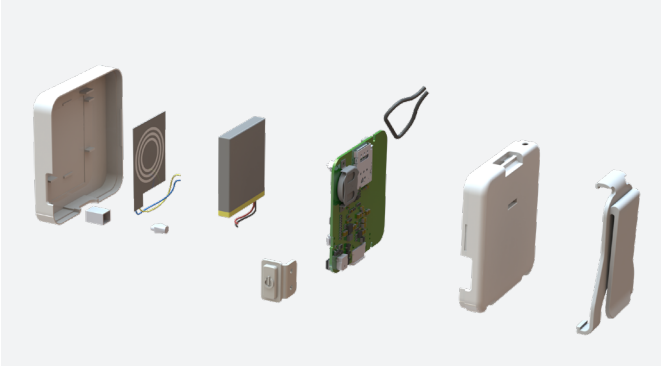
our contribution

NeuronicWorks was tasked to develop the industrial design, hardware, and firmware of the project. We modified and redesigned the unit, from its prototype phase, for production and usability. From enclosure, light pipe, lanyard mount, and clips, to hardware design, layout and manufacturing, NeuronicWorks worked closely with the client to make sure the final design was production and market-ready.

TipTap visual concept

TipTap final version 3D rendering

TipTap device with mounting clip



TipTap assembly view

TipTap mounted side view

Interactive Brush display

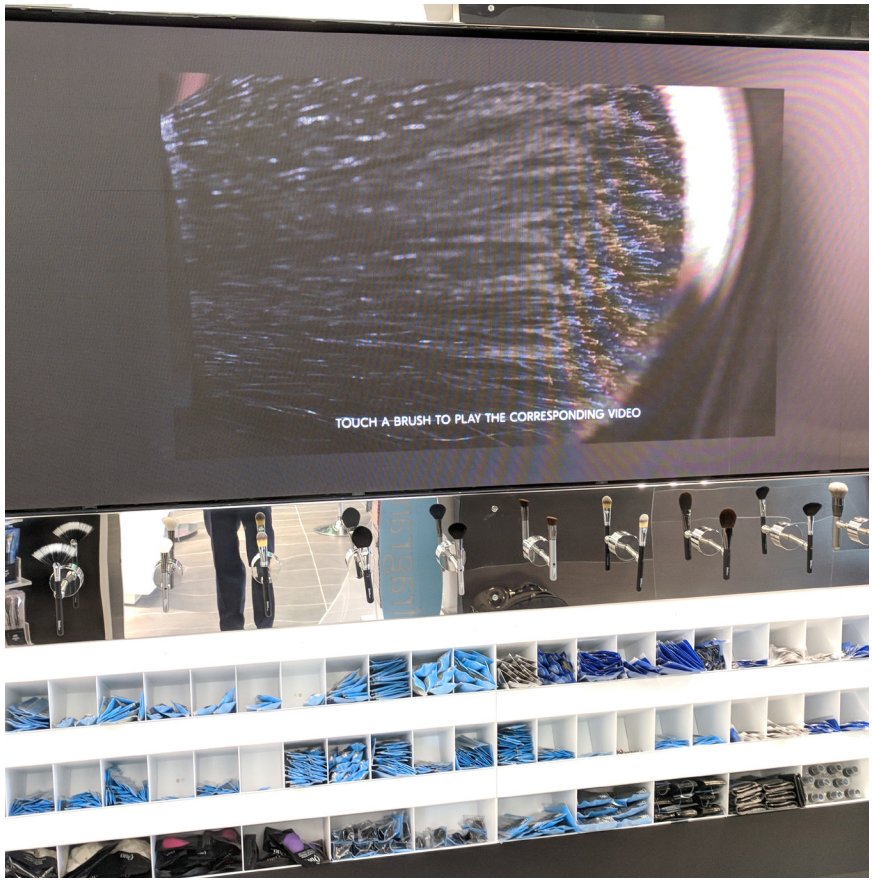
overview

The NeuronicWorks team collaborated with ICON digital media agency on an interactive brush display for Shoppers DrugMart. The display plays short video clips describing how to use each cosmetic brush presented. Each video is activated when the customer touches the particular brush mounted on display.

project scope

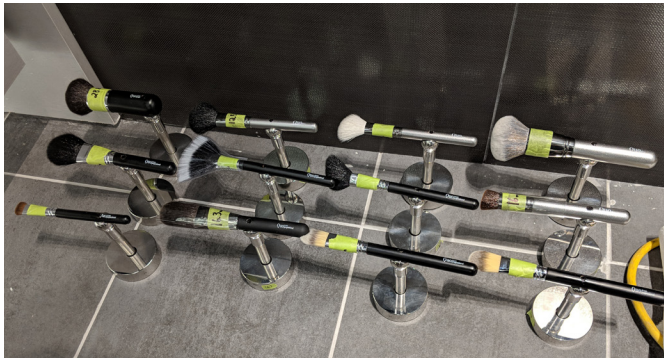
We worked closely with the ICON team to create an elegant solution for customer interaction with the brushes that reliably activates the video clip about the corresponding brush.

Our team was responsible for custom PCB design, firmware development and industrial design of the brush holders mounted on display. We also performed rigorous system testing and on-site installation.

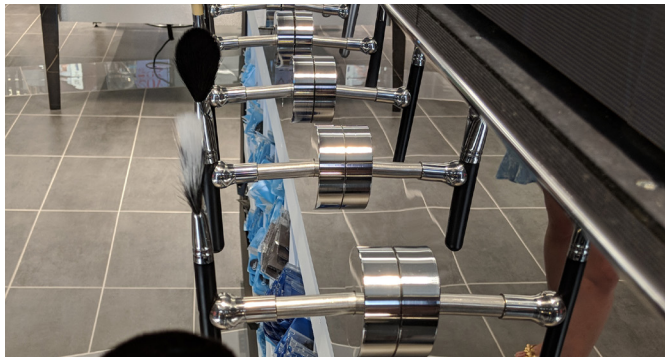


QUO interactive brush display

Quo brush and brush holder



On-site installation process



Quo brush display after installation

Quo brushes interactive display - in-store view

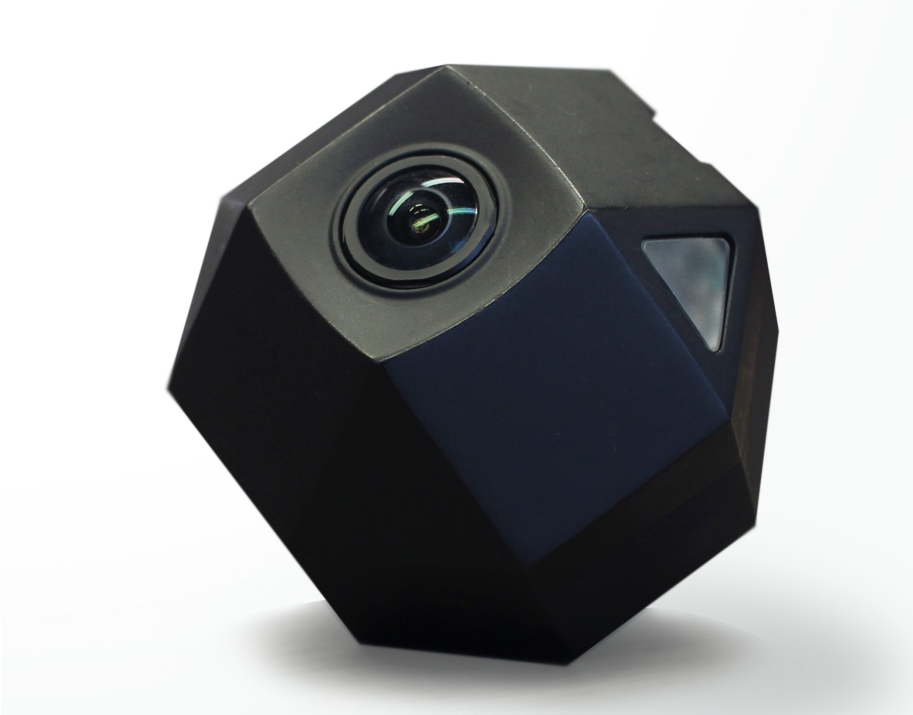
Zeitdice

overview

With only the touch of a button, you can create and share stunning time lapse videos. Made to endure any type of climate, the Zeitdice is a fully weatherproof camera that shoots beautiful 1080p HD photos at any interval of your choosing. With both Wi-Fi and Bluetooth built-in, this makes for the most intuitive and advanced time-lapse camera to date.

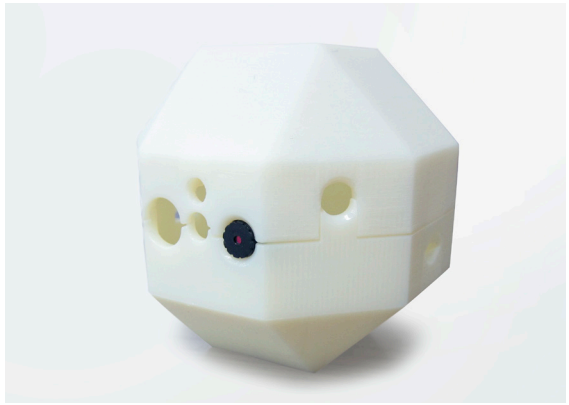
project scope

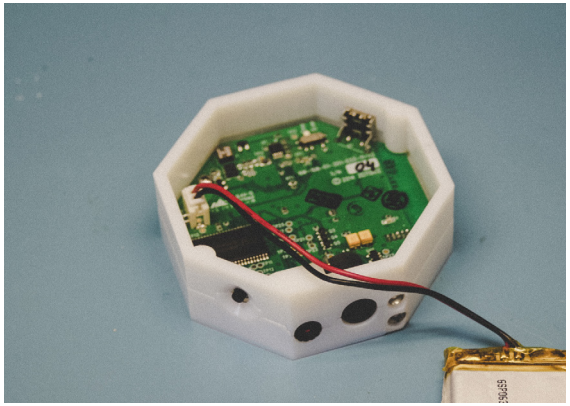
NeuronicWorks designed the hardware and firmware for the product. The Zeitdice time-lapse camera was engineered to make high-quality time-lapse photography as easy as possible..

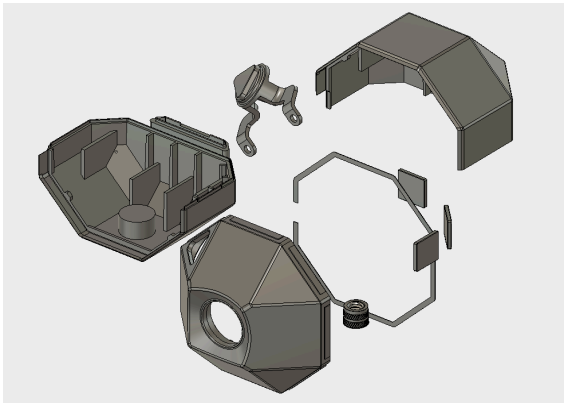


Zeitdice time lapse camera

Test images taken during design process







Prototyping process

SELFTRAITS

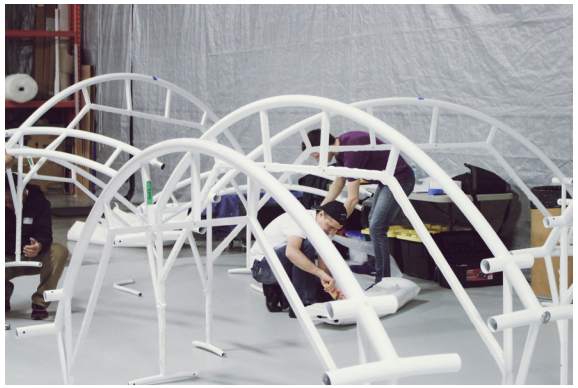
overview

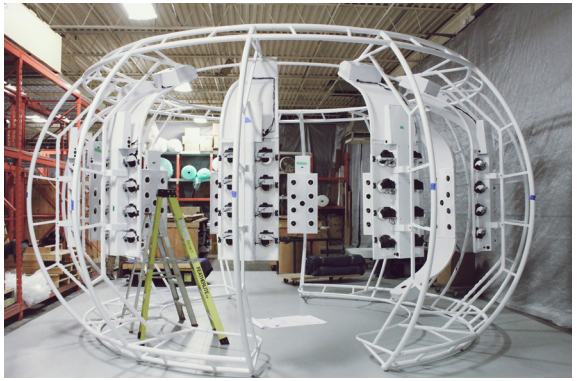
The system instantaneously captures images from 100+ cameras and renders them into a digital model for 3D printing. Created for Objex unlimited, a 3D printing company based in Toronto that makes highly detailed physical models, rapid prototypes, and unique personalized products.

project scope

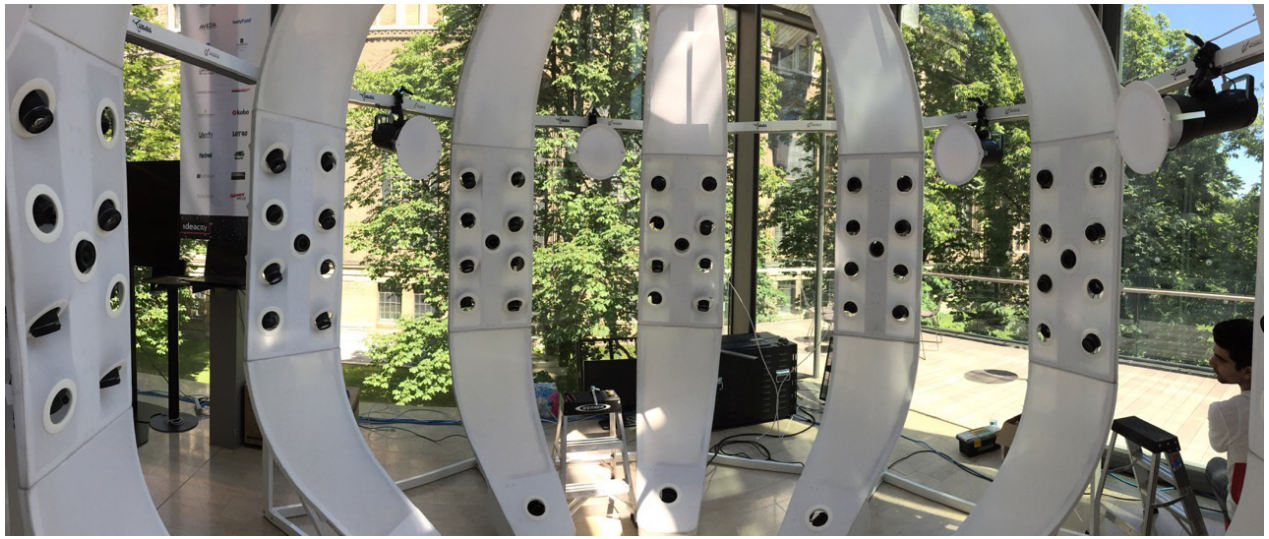
NeuronicWorks supported the industrial design process along with the design of the hardware, firmware, software, and web application.

NARCITY blogTO CP24 Bloomberg THE GLOBE AND MAIL
metro Global TORONTO STAR THE HUFFINGTON POST TORONTO LIFE





Selftraits 3D body scanner assembly progress



Cobra

overview

Similar to its predecessor, 100+ photos are captured instantaneously and digitally stitched together to create a 3D model. From here, once the rendering is created, the possibilities are endless. If you're interested in learning more about the system, visit Pics 3D, a division of Objex unlimited and sister affiliate of Selftraits.

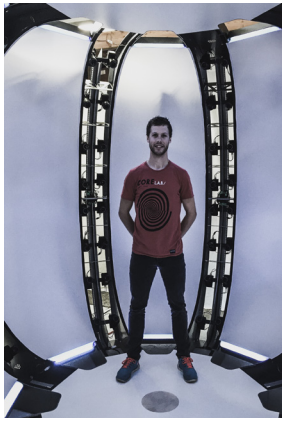
project scope

The NeuronicWorks team was presented with a complex task to help design the system and mechanical construction for the new generation of 3D body scanners. We helped the client to build a superior full-body photogrammetry instant capture system for studio integration and event experiences.

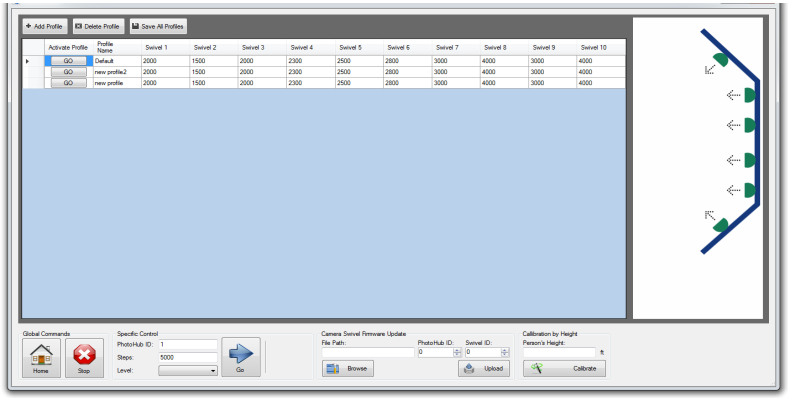
Our team supported the industrial design process along with the design of the hardware, firmware, software, and the web application.

Cobra 3D body scanner assembly

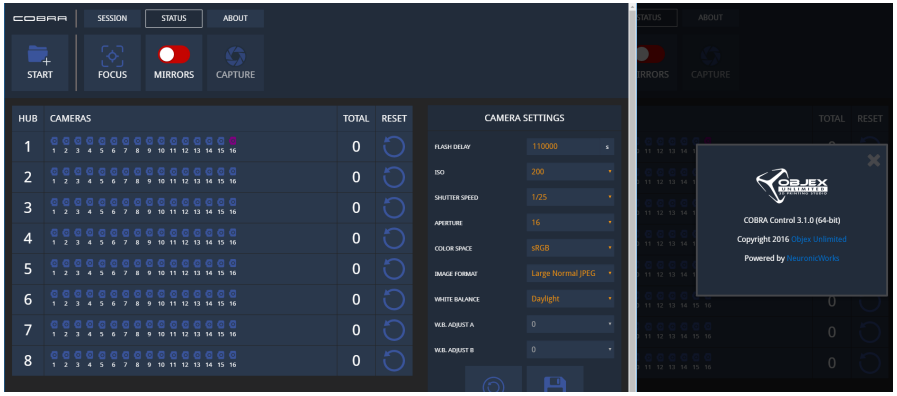



Cobra 3D body scanner design process



Cobra software 1st generation



Cobra software 2nd generation

Xaby Tech Labs

overview

Xaby Tech Labs is a tech company that specializes in software development in an Agile environment.

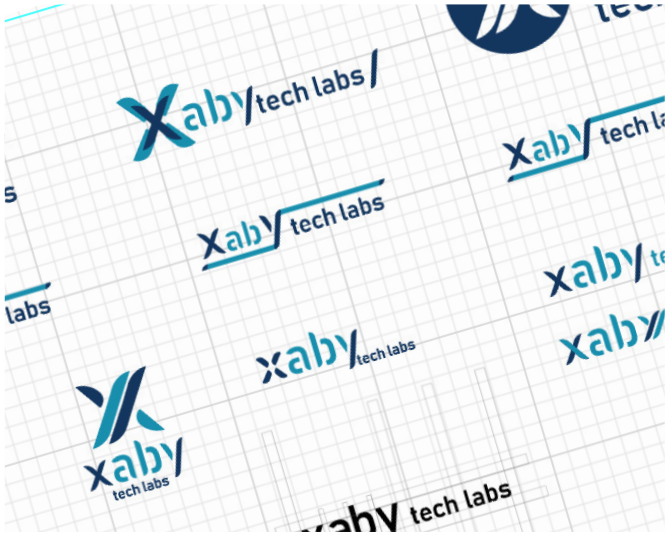
project scope

NeuronicWorks was presented with a task to design a visual identity and a new website for Xaby Tech Labs.

Based on the conversations with the client and the vision conveyed for Xaby Tech Labs our design team proposed several design concepts for the new visual identity.

The next step in the project was to develop a web page that conveys the company's information in a visually appealing way. Our web design team created a Wordpress based solution that is easy to manage and update with new information.

Responsive web page for Xaby Tech Labs



Logo development process

Stationary mock-up

Logo ideas sketch

Business cards design

Lynk

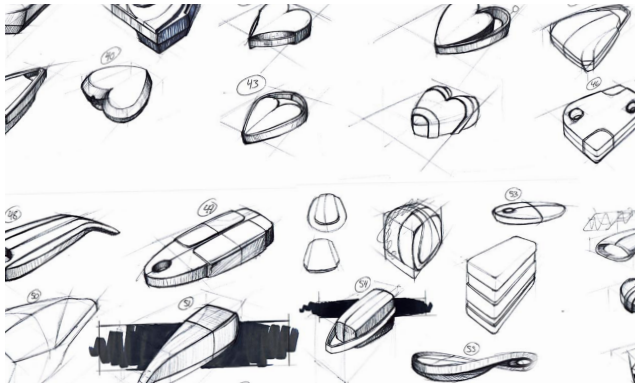
overview

Lynk allows you to securely store your private data while you are the only person allowed to access it from anywhere in the world at any time. Lynk will help to avoid losing your smart-phone by providing alerts when you are further than a preset threshold. It also helps you to locate your phone when it is misplaced. The device incorporates NFC and Bluetooth low energy connectivity with your smart-phone through its mobile App.

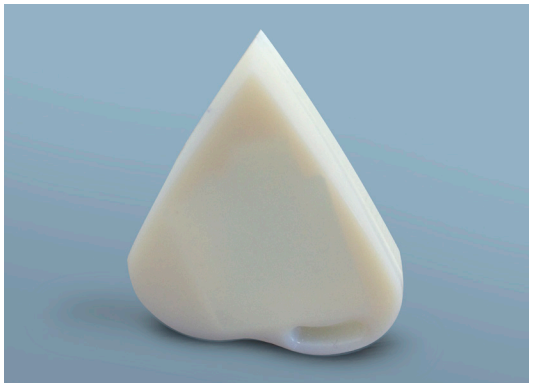
project scope

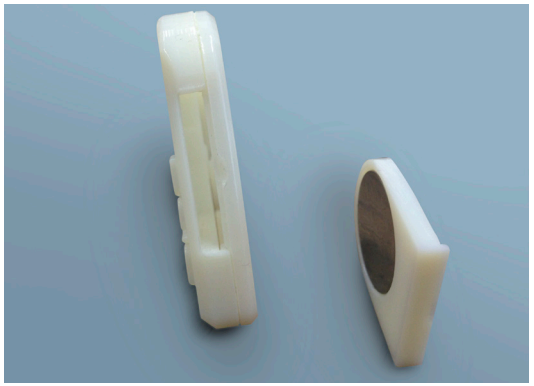
NeuronicWorks performed the research, designed the complete system: hardware, firmware, mobile app (support Apis) and industrial design.

Lynk device final version prototype

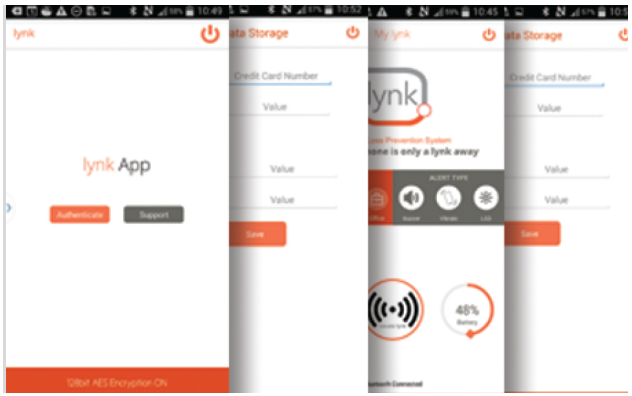


Industrial design sketches





First version prototype (3D print)



Lynk mobile app UI/UX

Lynk device final version prototype, colour options

D.Moat

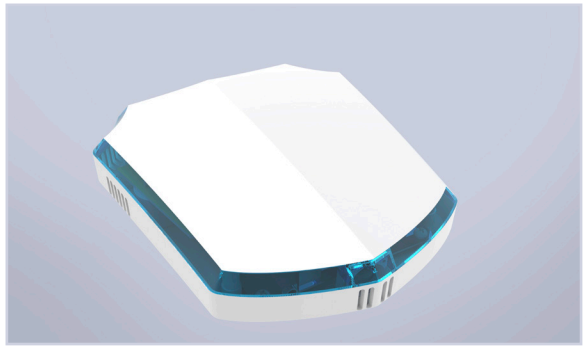
overview

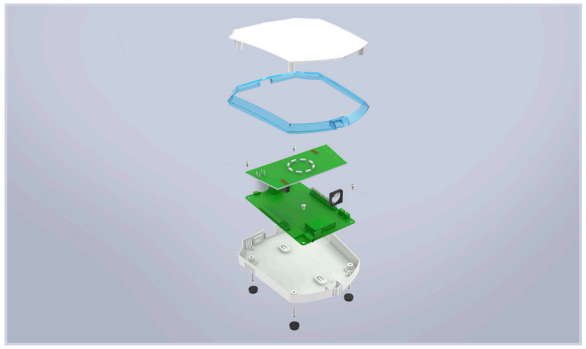
As the market for Internet-of-Things devices expands, the increased number of devices will ultimately lead to a similar increase in vulnerabilities. That being said, often times, security may be overlooked for the sake of simplicity, convenience, or even a lack of awareness. The digital moat aims to be a simple plug-and-play solution to eliminate the worry of any IoT security concerns within your network. Similar to every other area in life, you never want to compromise on safety.

project scope

NeuronicWorks performed product development in the form of industrial and hardware design. Our team developed the packaging for the product as well.

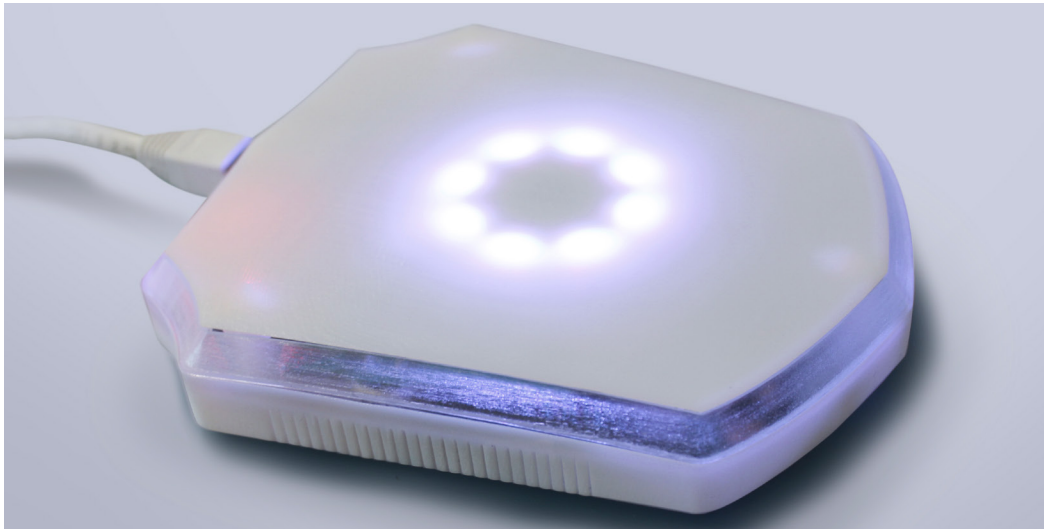
Package box for d.moat





d.moat case enclosure 3D rendering

d.moat in a package box



d.moat working unit

IRIS

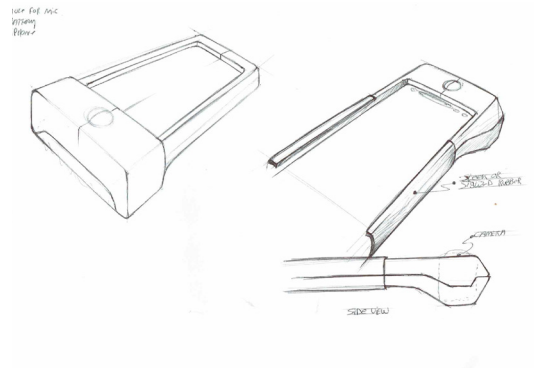
overview

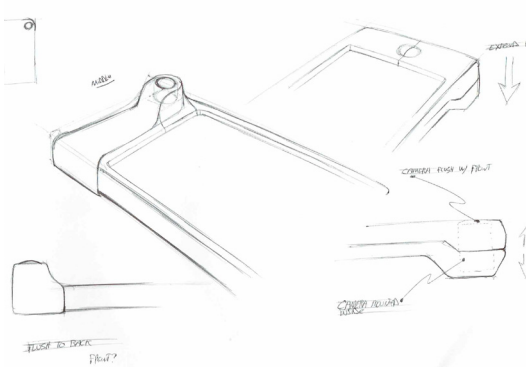
Today cellphones contain a tonne of private and confidential data. Our client was seeking a viable solution for a biometric recognition of the cellphone user. The human iris is one of the unique fingerprints of each individual. The IRIS identification shield is keeping the cell phone locked until the IRIS camera and led system is able to recognize a memorized iris pattern.

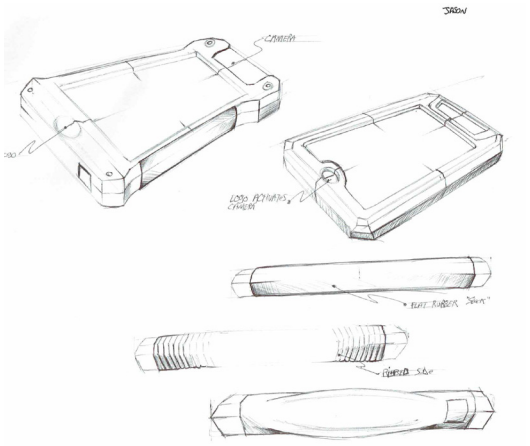
project scope

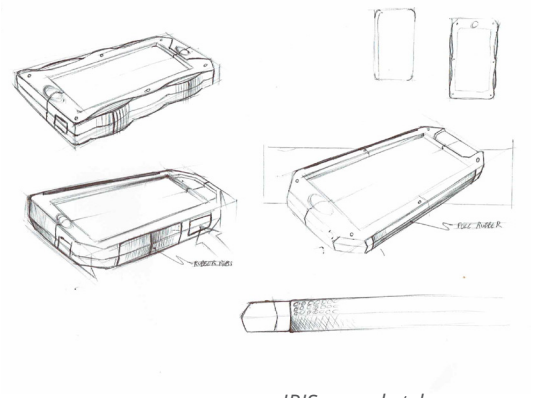
The NeuronicWorks team accepted the challenge to produce an alpha prototype in only six weeks. That included the schematic and PCB design, real-time firmware, industrial design and 3D modeling, prototyping a few 3D prints, and system integration, all within six short weeks.

IRIS case visualization









IRIS case sketches

Contact

our design, your success!

hardware design | firmware design | FPGA design | software development | web and app design | UI/UX design | industrial design | mechanical design | testing support | qualification and certification | prototyping | PCB assembly | box build assembly | high-volume manufacturing support |

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