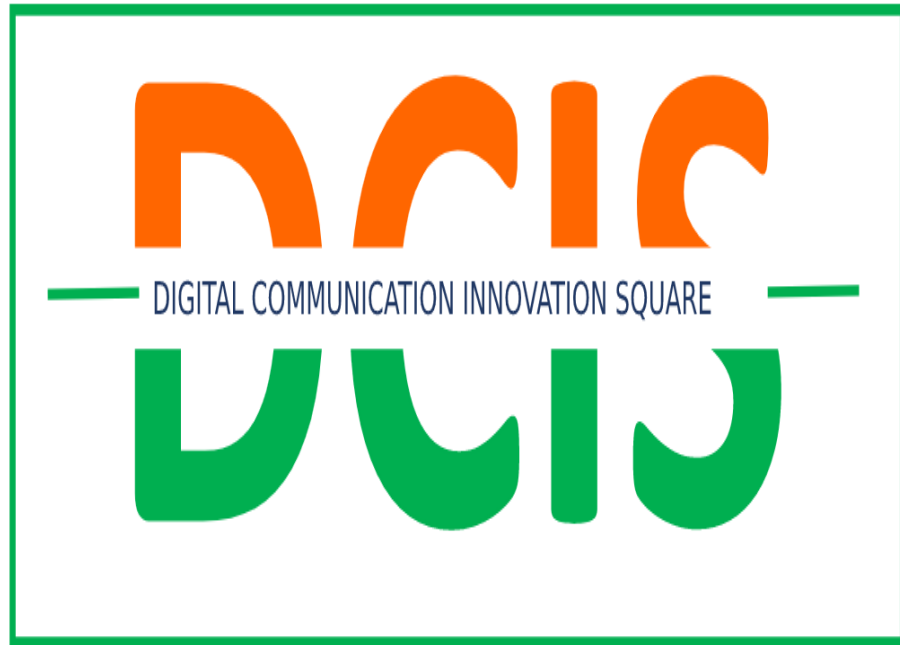




दूरसंचार विभाग
DEPARTMENT OF
TELECOMMUNICATIONS



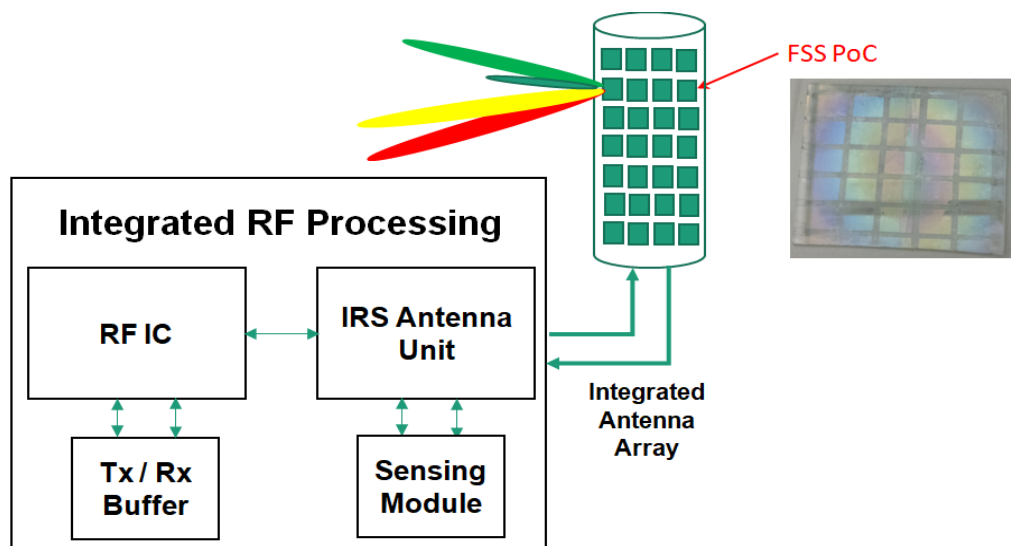
Driving Telecom Innovation



Digital Communication Innovation Square (DCIS)
under Champion Services Sector Scheme (CSSS)

43 GRANTEES SHORTLISTED IN 2022

Heterogenous Communication Technologies Pvt Ltd



- To design, develop and optimize the femto-cell modem for 5G and B5G systems that enable smart radio environments and support systems with on demand beam coverage for enhanced mapping and localization controlled through algorithms embedded in an FPGA system.
- To reduce latency and improve throughput by appropriate design of time-coding sequences towards the generation of desired frequency components for dynamic sensing of 5G, IoT and M2M devices.
- To test and validate the developed B5G modem

Prototype: 5G Antenna for Sub-6GHz Application

Solution: 5G is the key front-end component towards the evolution of small cell in Fifth Generation (5G) systems. The project aims to develop frequency selective surface antenna for sub 6GHz 5G application.

Uniqueness: Development of multi-band antenna for 5G, IoT and LoRA application.

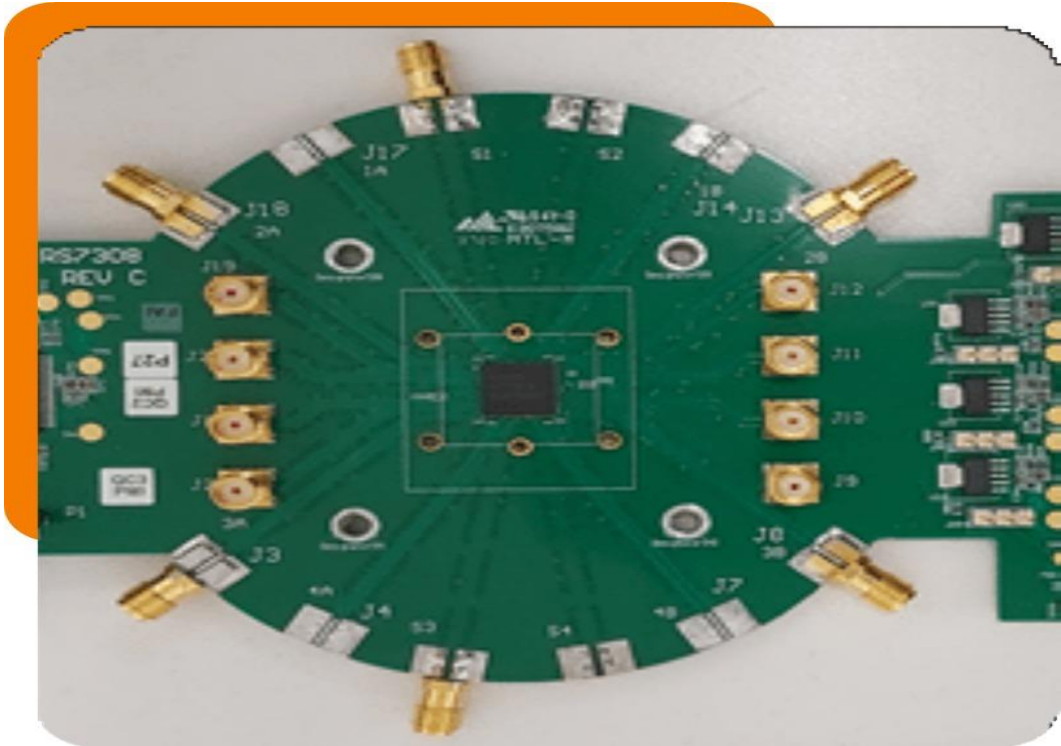
Contact Details

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Email ID: *rajasha@ece.sastra.ac.in*

Versatile Antenna Systems



The foundry proven VAS7308 core IC product line is a beam forming ASIC that addresses the market segment of phase array and antenna beam forming for radar and 5G wireless communication and satellite applications. Availability of foundry proven core IC meets the technology readiness requirement (TRL) level of 7 with development of adaptive antenna systems (AAS) using available core IC's. The critical advantage for VASBEAM to develop Adaptive Antenna Systems is the ownership of the Beamforming ASIC which is already in production

Contact Details

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Aheesa Digital Innovations Private Limited



Aheesa™ ECQ6018A is a single board edge computing platform with integrated AI modules designed, developed, manufactured and supported from India for OEMs to develop Edge Computing Devices such as Routers, Firewalls, IoT Gateways, RTUs, etc. The platform is designed with flexibility and with integrated Nimbus Controller Management to achieve customised requirements and cost considerations.

Contact Details

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Astrome Technologies Private Limited



GigaMesh 5G is a ground-breaking wireless backhaul and midhaul solution to enhance the deployment of the 5G network. It utilizes Astrome's patented millimeter wave wireless technology and will be capable of delivering high capacity (up to 8Gbps) required by 5G sites. GigaMesh 5G functions in E-band, and unlike other E-band backhaul solutions, GigaMesh forms multiple point-to-point (Multi-P2P) links. GigaMesh forms 6 non-interfering point-to-point links with a single radio and antenna.

Contact Details

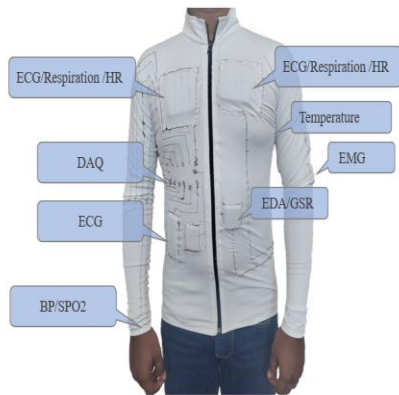
Name of the Project Lead: *Neha Satak*

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Astromeda Space Private Limited



Astromeda develop technology to access the health vitals and stress factors of individuals using e-fabric based tele health monitoring systems. It is a simple vest (wearable & washable) which is capable of collecting health data (Heart rate, RR, BP, Spo2, temperature, ECG, EMG& EDA) of individuals continuously. The collected data from AstroMon will send to the cloud using 4G/5G telecommunication and doctor can assess the data remotely and asses the health of the patient.

Contact Details

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CEQU

VISION BEYOND LITERAL

CEQU LABS Pvt. Ltd.



CEQU Labs has solved surveillance problem with one of a kind integrated Video Surveillance and Security system built on an AI powered. The answer lies in an OEM IP based IoT camera relayed from our own servers based designed to bypass Chinese servers powered with additional layer of security through Blockchain authentication at the login stage for users. The platform also provides features of video analytics through AI based face recognition detection technologies provided as SaaS Platform.

Contact Details

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Cimware Private Limited



CIMware's product / solution is based on awarded US patent #: US9892079B2 that enables CDI at cloud DC with its ToR switch, a world's first CCNA that pools disaggregated compute, network & storage devices and make them available as direct attached devices on demand thereby reducing Data Center's higher TCO.

Contact Details

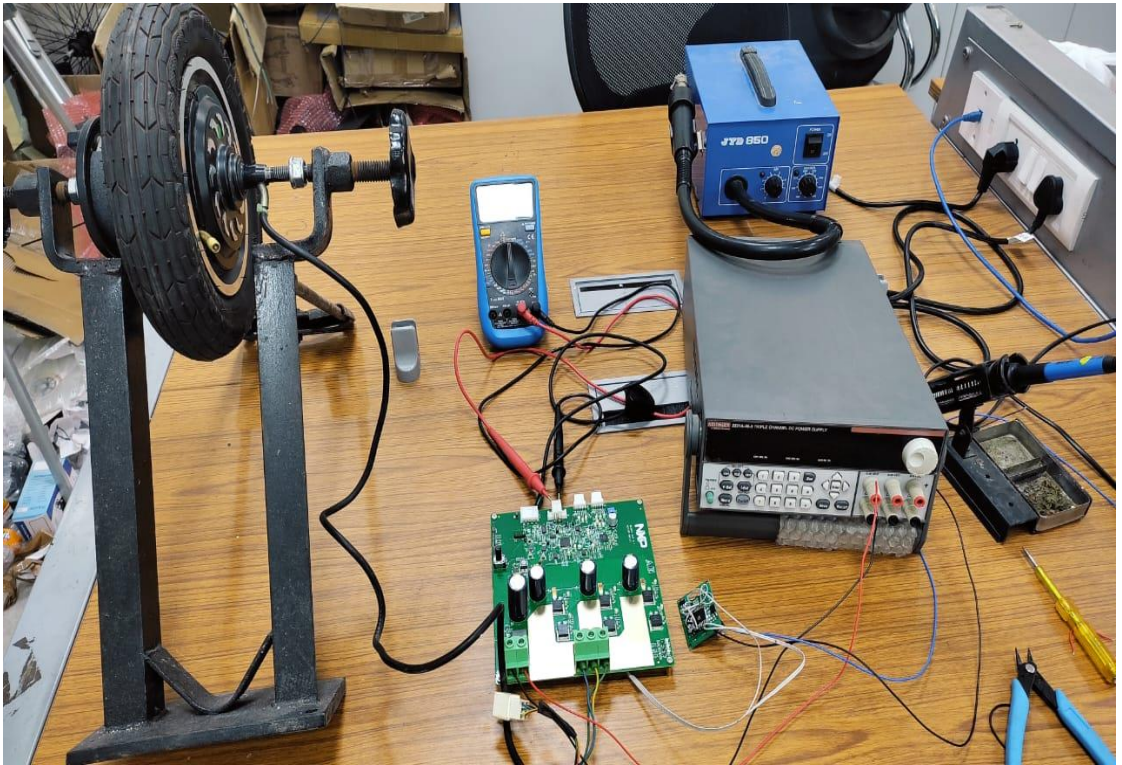
Name of the Project Lead: *Rajiv Ganth*

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E2EM TECHNOLOGIES PVT. LTD.



- Two different design prototypes are ready and tested.
- **Pre-production batch of 15 Vehicles are ready and under testing.**
- Phase 1 IOT Module and Mobile app are ready.
- Indigenous Motor Controller Development is going on with IIT Delhi and NXP Semiconductors.

We are a Micro-Mobility Startup Working on the Development of a Smart and compact Electric Moped. We are introducing a new way of Urban Commutation in India. We are a govt. of India registered startup working in Limited area mobility space, Incubated at Electropreneur Park Delhi.

Contact Details

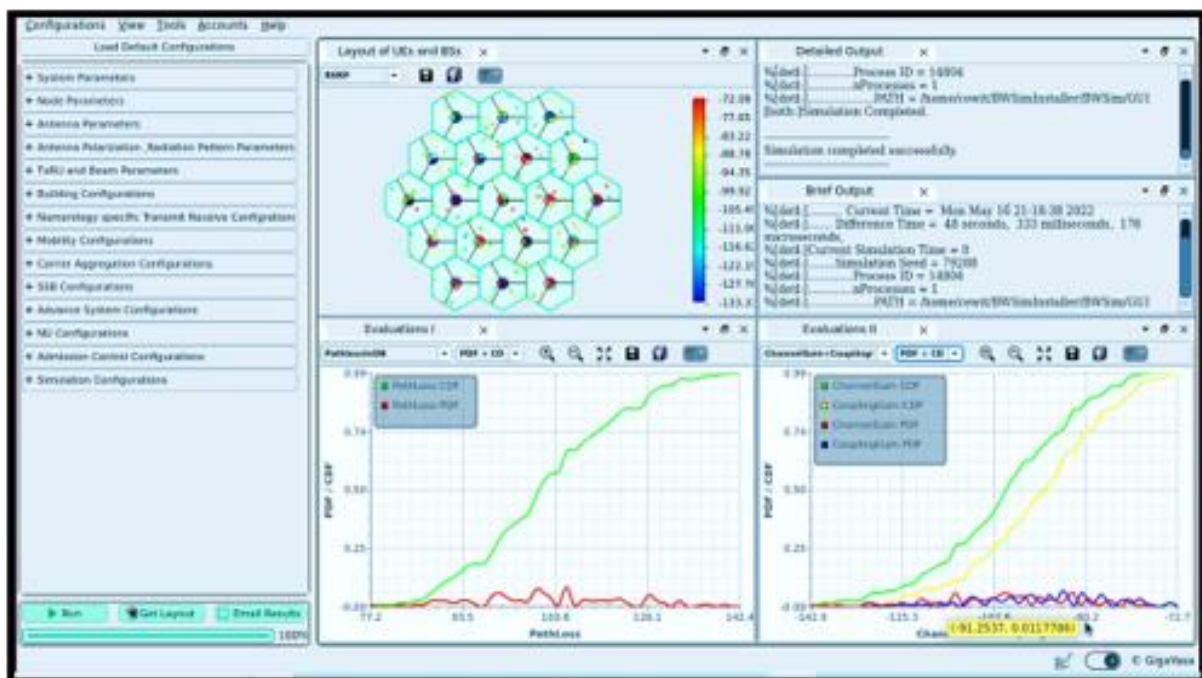
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Gigayasa wireless private limited



We build system level simulation and emulation tools for 5G, Beyond 5G and 6G wireless networks. Currently we are offering two simulators BWSim4G and BWSim5G (two variants: BWSim5G-T22 and BWSim5G-R22) and developing 5G Advance Simulator. Our simulators are used by both industry and academia.

5G-Advance Simulator is a first-of-its kind system level simulator for latest 5G technology to support a wider set of use-cases based on latest release of 5G standards. In this simulator, we aim to implement features for 5G-Advance based on 3GPP release-17 standards and latest agreements in 3GPP release-18.

Contact Details

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KRATIKAL TECH PRIVATE LIMITED



Kratikal is one of the leading cybersecurity companies known for its state-of-the-art security solutions which includes cyber-attack simulation and awareness tool, email authentication and anti-spoofing solution; anti-phishing, fraud monitoring & take-down solution; phishing incident response, Risk detection & threat analysis and code risk review

AutoSecT is a vulnerability management and penetration testing tool that allows organizations to test projects while keeping a track of their progress at any phase along with the provision to download the project report after its completion.

Contact Details

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Nimble Vision Pvt Ltd



Nimble Vision is into smart water & sewage management using IoT & AINi-The Smart Manhole Monitor: A unique solution brings water & sewage level and quality details based on 5G, Vision & AI, ML

- A pilot being done in Faridabad smart City to automate the manholes. This is a sensor based and 4G solution
- 5G, Vision and AI, ML based proto type is developed
- Developed solution based Qualcomm SDX55 a 5G module and show cased the results
- App & Web dashboards are already completed

Contact Details

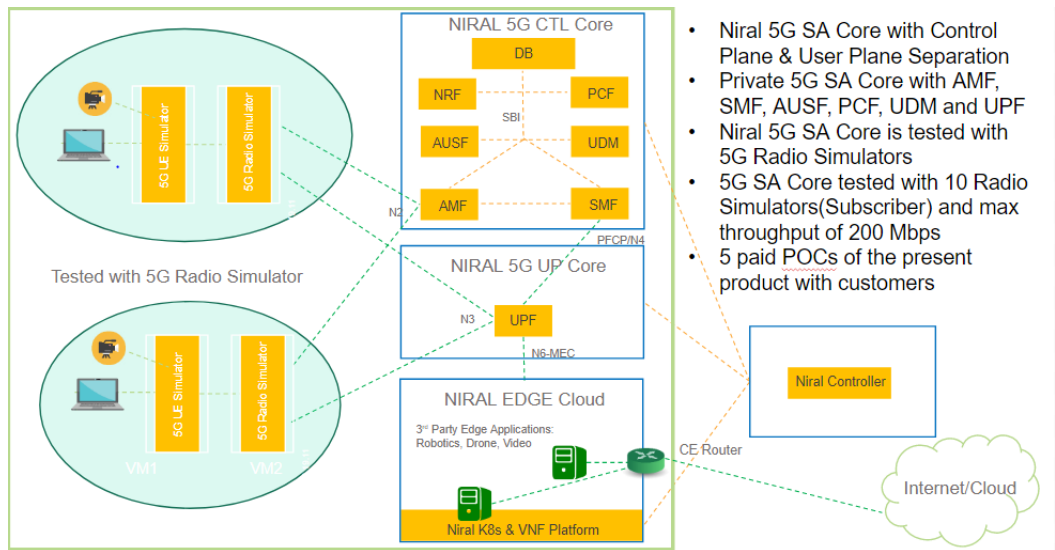
Name of the Project Lead: *Chinnayya Math*

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Niral Networks



Niral Networks provide a comprehensive cloud-native 5G Core and Edge infrastructure platform for Enterprises that can be easily integrated with commodity hardware and 5G Radio to provide an affordable low latency, reliable indoor/outdoor connectivity to optimize emerging applications like Drone, Robotics, IOT, AR/VR, AGV, AI in Mining, Oil & Gas, Power, Railway, Port, Shipping and manufacturing industries.


Contact Details

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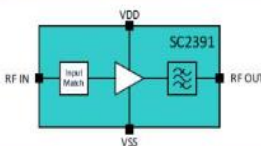
Silizium Circuits Private Limited



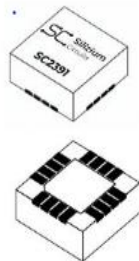
Product Overview

The SC2391 is a Frontend Module with an integrated filter at the output for GNSS applications. The product encompasses an input matching filter, with high gain Low Noise Amplifier cascaded with output filtering ensuring low noise figure, high gain and linearity for low power GNSS front ends. SC2391 simplifies receiver design with reduced external components and low power consumption and replaces multiple front end components in traditional GNSS receivers without sacrificing performance. SC2391 is packaged in 3.5mm x 3.5mm 16pin package with low external component count.

Functional Diagram



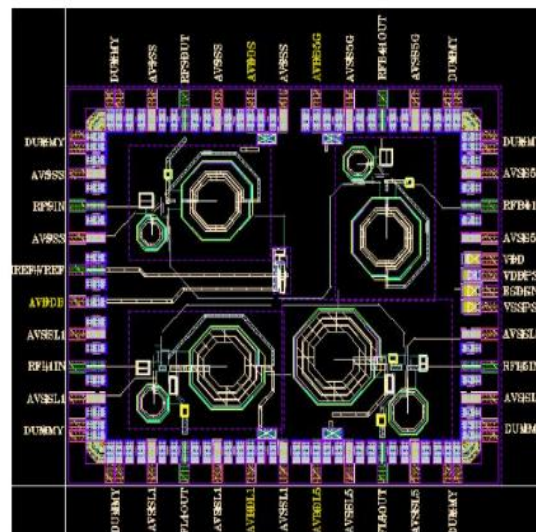
SC2391
GPS/ GLONASS/ BeiDou/ Galileo/ NavIC
Front End Module 1.176GHz-1.227GHz,
1.57GHz and 2.492GHz



Package : 3.5mm x 3.5mm

Key Features

- Low Noise Figure: 1.5dB
- Gain : 18dB
- Operating frequencies : 1.176GHz-1.227GHz, 1.57GHz and 2.492GHz
- Small Package : 3.5mm x 3.5mm
- Power : 6mW



Silizium Circuits is an Analog Radio Frequency Semiconductor IP and Services venture based out of IIT Hyderabad FabCI. The company focuses on developing indigenous IPs for a wide range of wireless applications like 5G, GNSS, IoT, Smart Mobility, AL ML etc.

LNA with integrated S AW, Small Footprint with multiple band support, Less components and cost, Lower BOM, In built filtering, High fidelity reception, One solution catering multiple frequencies and domains

Contact Details

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Email ID: *r.john@siliziumcircuits.com*



Spvss Pvt Ltd



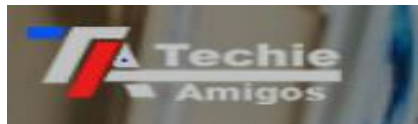
SPVSS, An Innovation Solution Provider technology of using an cutting edge of 5G enabled , IoT solution for private/public/Security Vehicle Security, Smart Parking system , Vehicle Management , Tracing and Monitoring Vehicle. SPVSS the Smart parking and vehicle management solution for Traffic, Transport, Security and Tracking linked with Back office monitoring and individual mobile apps. SPVSS winner of best 5G usecase by DoT in phase 1. Selected “Covidthanon 2020 by Govt of Jharkand “ .

Contact Details

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Techie Amigos



Our blockchain and IoT powered SaaS based platform ProvenienceX helps companies to bring traceability, security, sustainability and efficiency in their supply chain. By deploying ProvenienceX blockchain they can better manage recall, have real time visibility, work on anti-counterfeiting and bring much needed efficiency in their supply chain. IoT powered Blockchain helps in automating critical data collection ensuring there are no manual errors and critical time and money can be saved

Contact Details













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Ushva Clean Technology Pvt Ltd

 AGRICULTURE MANAGEMENT	 ENERGY MANAGEMENT	 SMART METERING	 SOLAR PV PLANT MANAGEMENT	 SUPPLY CHAIN & LOGISTICS	 SMART CITY
 WATER MANAGEMENT	 SMART INFRASTRUCTURE	 AUTOMOTIVE	 FACTORY 4.0	 SMART APPLIANCES	 OIL AND GAS

Flowlinc - Next-generation Industry 4.0 IoT edge device used for remote data control equipped with device management & analytics.

- a) Industry & platform agnostic
- b) Built-in all connectivity
- c) Compact in size
- d) On-device storage
- e) Easy to integrate with all sensors & protocol.

Contact Details

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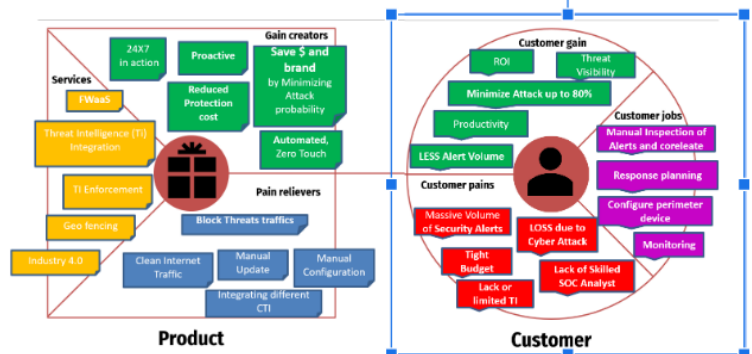
Xten Networks India Pvt. Ltd.

Product Picture



PoC prototype demo has been given to IIT Kanpur

Value proposition



The xTen **CyberGuard™** solution works as a **Front-line defender** of the enterprise data networks and helps to enforce an **Integrated Cyber Defense** mechanism to **minimize cyber risk** with **Zero-Touch** automated **Cyber Threat Intelligence (CTI)**. It **cleans** internet traffic. **Stop threats before they act**. Intervene at earliest stage before threat penetrate deep inside networks. **Enable lowest possible** threat mitigation and response time.

Often organizations identify cyber-attack post facts i.e. after it happened, where threats penetrated deep inside. XTEN cleans Internet Traffic powered by real-time shared Threat Intelligence for those who want to minimize cyber risk and to reduce per Mbps protection cost by providing Next gen Front line Cyber Defense Platform (aka Intelligence Firewall as Service FWaaS) based on SDN approach.

Contact Details

Name of the Project Lead: *Nitish Kundu*

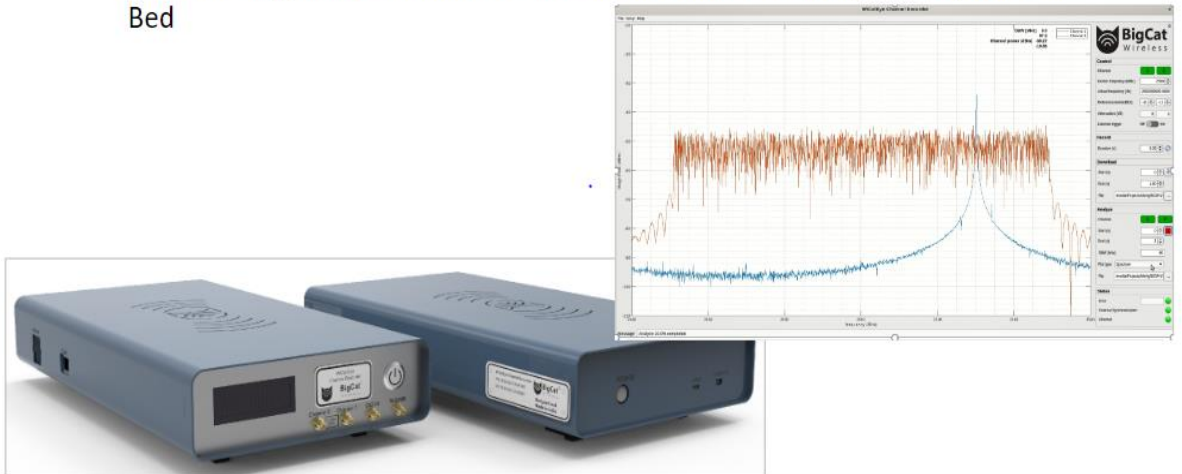
Mobile Number: *9620962511*

Email ID: *nitish@xtennetworks.com*



BigCat Wireless Pvt Ltd

- Prototype of Product developed
- One unit supplied to IIT Madras 5G Test Bed and this is being used by 5G Test Bed



BigCat Wireless focuses on developing innovative solutions in the Wireless space. These innovative solutions are a result of the deep Research focus on advanced Wireless Technologies and pioneering in translating these innovations to solutions using well defined and predictable engineering methods. BigCat Wireless is focusing to develop multiple solutions and products with a **Vision of Design in India and Make in India**. BigCat Wireless has a rich solution portfolio that enable accelerated time to market in the wireless space. Reference Designs are available on request and can be customized for specific market needs. The solutions portfolio includes Algorithms, IPs, solutions and ready to deploy products.

The Wireless Channel Recorder is SDR (Software Defined Radio) based platform that can be adapted to numerous Wireless Standards. The Wireless Channel recorder can be used as a Wireless Test Instrument, as a Wireless recording device or as a Wireless Surveillance device. Various Wireless protocols can be supported through additional SW profiles. The USP is a SDR platform scalable with various SW profiles to support numerous Wireless Standards

Contact Details

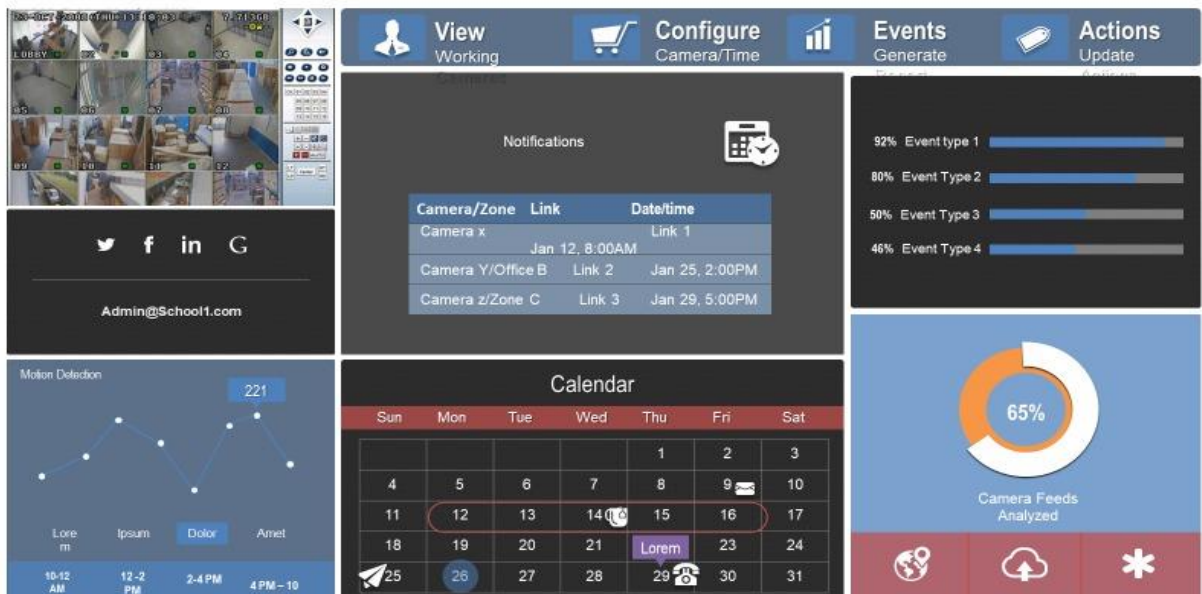
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Email ID: *kannan@bigcatwireless.com*



Calligo Technologies Pvt Ltd



Calligo Technologies is a Bangalore based start-up focused on development of products and solutions serving HPC, BigData and AI/ML segments to global marquee enterprises. The leadership team comes with collective experience in international companies of more than 100+ years with wide exposure to Compute, Storage and Semiconductor Industry

Smart video solutions are expected to have enough intelligence to analyze video in real time and take actions that humans were previously relied upon to do. In some cases, smart cameras may see things a trained human eye cannot easily see. Ultimately, smart video is being sought to deliver critical assistance to help reduce crime, ensure public safety, and improve operational efficiencies. The far more popular choice, outdoor wireless security cameras are one of the first lines of defence again

Contact Details

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Chipspirit Technologies Private Limited



Chipspirit has developed First in the world fully hardware-based encryption platform for High Grade Secure communication. The first product-Abhed1 has commercial applications in finance and critical-data transactions. With our Hardware based encryption solutions the transactions shall be faster, and ultra-secure with Zero backdoors, NIL-Virus/Malwares and No hardware-trojans. The present platform supports USB-3.0 and Ethernet-1G data transfers. We are the iDEX Winners for DISC1.

Contact Details

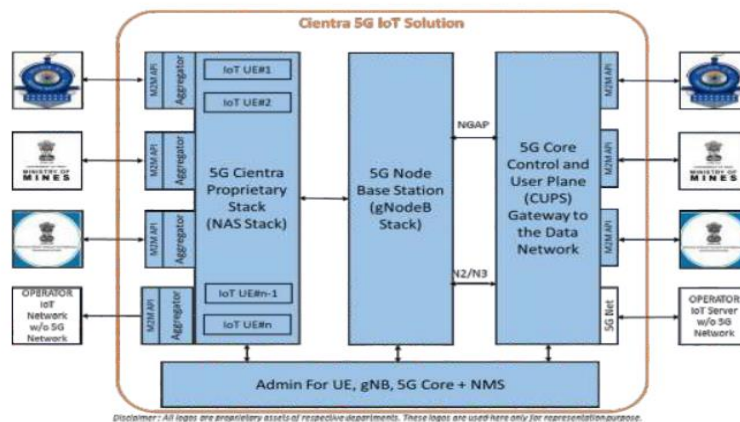
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Mobile Number: *9500093999*

Email ID: *mohan.jindal@chipspirit.com*



Cientra TechSolution Pvt Ltd



IoT Interface
WiFi / Wired,
Websocket/udp/ip,
OneM2M API

5GC Interface
NGAP/SCTP/IP with
3GPP N2 Interface

5GU Interface
GTP/UDP/IP – N3
Interface

IoT Server Interface
OneM2M API

The solution will enable all Government systems and services based on 5G IoT gateway which will standardize the gateway and future 5G / 6G based features like FRMCS, PushToTalk, etc.

Government Departments will be free from being stuck with a specific vendor

Our servers will be located securely within India

We can make a truly Atmanirbhar 5G automated securing signaling system

Contact Details

Name of the Project Lead: *Ganesh R*

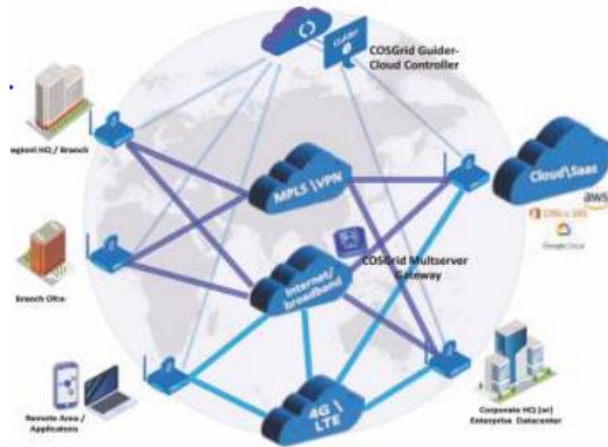
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Email ID: *ganesh.ramalingam@cientra.com*



COSGrid Systems Private Limited

COSGrid Reflex-WAN Architecture



COSGrid Reflex-WAN Models



C-EDGE B4XG

Upto 4 - 4G/5G Radios with 5 Sim Slots | 1 USB Port | 1 SD-Card Slot | Wi-Fi | 5 Gigabit Ethernet Ports | Upto 500Mbps



C-EDGE E2XG

Secure SD-WAN | Dual SIM 4G Slots | 5 Fast Ethernet Ports | Wi-Fi | upto 100Mbps



Data Center SD-WAN

Intel® Atom™ C2558 processor, 2.4GHz, 4GB RAM | 7 Gigabit Ethernet ports including support for SFP/Optical | 1 USB 2.0 | 64GB Storage | Optional 3G, 4G LTE and WiFi connectivity for flexible deployment.

Secure 5G Network, cost effective and flexible Access Networks is a critical a requirement. With the expected massive rollout for 5G cell sites and billions of IoT devices getting connected, there is going to be multi fold increase in threat surface. COSGrid 5G security can protect the network against zero-day attacks and DDoS and can handle IoT attacks at Scale. Delivers a cost effective 5G deployment through converged, container native edge platform and 5G FWA.

Contact Details

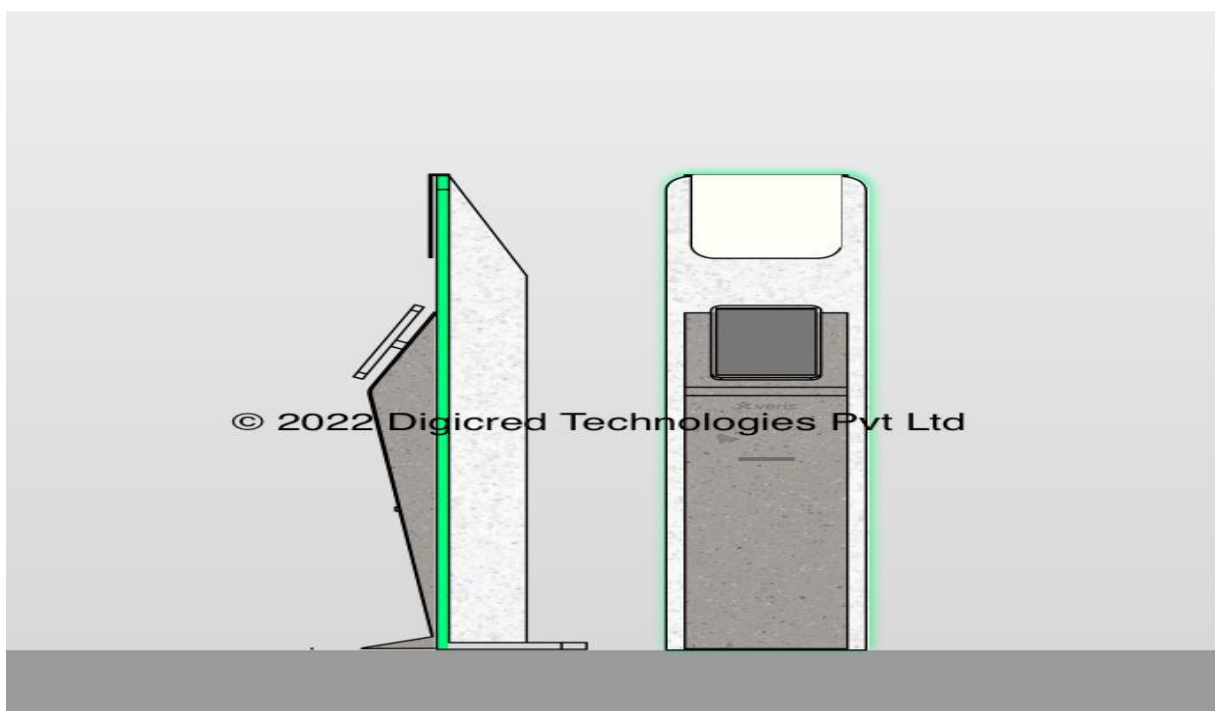
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Digicred Technologies Pvt Ltd



Veris is committed to build a physical verification infrastructure of the future enabling seamless authentication, faster access and elevated experience to billions of people across the globe.

Veris is transforming the manner in which work premises and high security zones are accessed, consumed and experienced through a safe, human-centric and scalable AI-driven approach.

Contact Details

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dspworks

**DSPWorks Automation and Wireless Network solutions Pvt
Ltd**



We are an IoT company with products in home and industrial automation and process improvement. We make Radio modules, applications and manufacture the entire product in India. We are ODM for leading Tier-1 OEMs in India

A home data storage, cloud access and IoT products/ energy analytics. The cloud storage is made affordable with rich set of applications integrated.

Contact Details

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Email ID: *akshay@dspworks.in*

Dweepi Innovations Private Limited



Dweepi Innovations works on solutions for Railways with focus on RailTech, IOT, Robotics and AI/ML technologies.

Portable Track Geometry Measurement System monitors the health of the railway track. It measures railway track parameters under track floating conditions (as specified in RDSO specification) and also records visual inspections for track defects.

* The inspection data is sent to a central server for remote analysis by concerned railway officials. ?

Trolley does not have dependencies on other machines or track schedules that makes it easy to use any time for track monitoring. ?

Value Proposition

- MVP ready
- 1st field testing completed
- Development / Improvements in progress as per results of 1st field testing
- 2nd field testing will start in 2 months

Contact Details

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Echelon Edge Private Limited

ECHELON EDGE

Dive into the journey of
Digital Transformation
powered by **AI & Automation**



PoC Plan

Currently PoC is going on at BSNL for OSS

Based on the roadmap, the BSS application is under development.

PoC for BSS will be planned with TSP/ISP once the product prototype is ready.

Value Proposition

- Multiple Business Lines- Designed for supporting B2C, B2B, Fixed Line, and Cloud Business Lines
- Intuitive, fluid visual interface to build & edit Flows and Rules - your design becomes the actual implementation
- Multi-Tenancy - support multiple operators with distinct verticals within a single BSS platform and Cloud Native
- Faster Time to Market- Echelon Edge BSS gives control to Telcos to

Contact Details

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Elena Geo Systems



Map Software Running in 10', 8', 5' Tabs

Module



• Antenna



Receiver



This is a handheld device that will use the NavIC for navigation and 5G networks for map data transmission

Company working in NavIC based solution. Has end to end presence from NavIC antenna, processor to the full system required for using NavIC

Develop a handheld device that will use NavIC Signals, use Authorised maps of Survey of India and use 5G networks for high data bandwidth operations. The device will be compact, light weight, have battery that works for long duration, easy to carry in field

Contact Details

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KENSTEL NETWORKS LIMITED



Kenstel Networks is a company founded by individuals from IIT Delhi with a passion to manufacture world class wireless products from component level. Company is manufacturing products such as Access Points, Mesh routers, UBR Radios, GPON and repeaters. They are developing three different models of 5G CPE for home and enterprise applications

Unique Cascade Gain antennas for extremely high range on mmwave Inbuilt Gateway with switch to enable Multi subscriber service

Contact Details

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Lekha Wireless Solutions Pvt Ltd



Lekha Wireless Solutions is a Bengaluru based deep tech company in the area of wireless telecom and defence communication space. Started in year 2010, today we are a team of 200+ Engineers with leadership team comprises of telecom experts with 2 to 3 decades of experience in wireless product development and deployment. We are OEM for Telecom infra products, SDR Products and we also License Software Stacks Radio Access Network.

Total design control starting from Low PHY to the passive array antenna design enable quicker design updates for larger product penetration.

There are specific innovation in design that cut down the overall power consumption of the RU. 5G NR – 1 US patent granted, 9 in first stage review

Contact Details


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Email ID: *ramu@lekhawireless.com*



Matrix Shell Technologies Pvt Ltd

		
2G/3G Scanner <ul style="list-style-type: none">• Air Interface• SS7/GTP Scanner• GUI	4G Scanner <ul style="list-style-type: none">• Air Interface• Diameter/GTP Scanner• GUI• VoLTE/VoWiFi	5G Scanner <ul style="list-style-type: none">• Air Interface 10%• HTTP/2 Scanner 50%• VoNR Pending• O-RAN Pending• GUI

Matrix Shell is telecom security services and product company. We provide services to mobile network companies and help them security their network. We have collective experience of More than 20 Years in this field.

We propose Telecom Secure Scanner, a unique solution which will help telecom operator to detect telecom security threats and a platform to maintain security posture and compliance

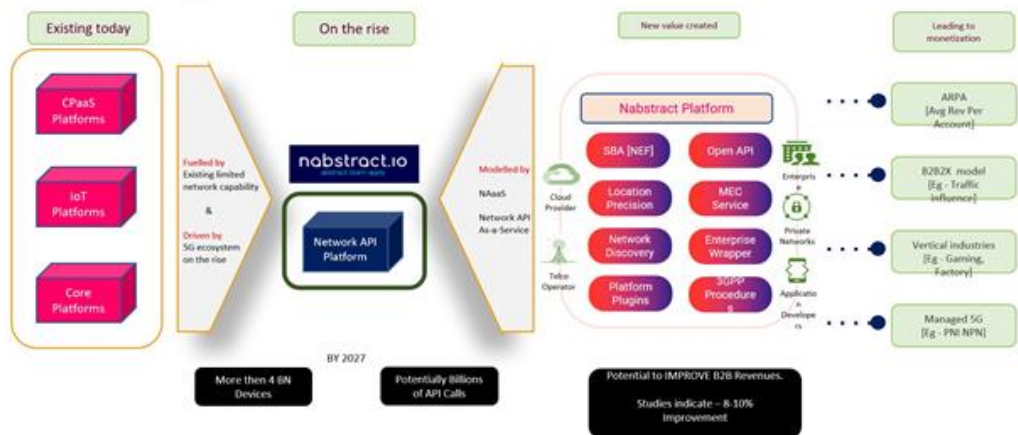
Contact Details

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Nabstract Technologies Private Limited



Nabstract.io is building a portfolio of network applications that provides developers of different industry verticals like gaming & media, industrial IOT, finance, healthcare, V2X platforms to use APIs that expose device, location, network quality, service experience & other network related parameters utilizing the public or private 5G network function capabilities.

Value Proposition

- POC has been completed as Part of the Intel Network Builder Program, in the Intel. This Live POC, and is accessible for Demonstration.
- Based on the POC, Nabstrack has been Certified as Intel Gold Network Builder Partner.

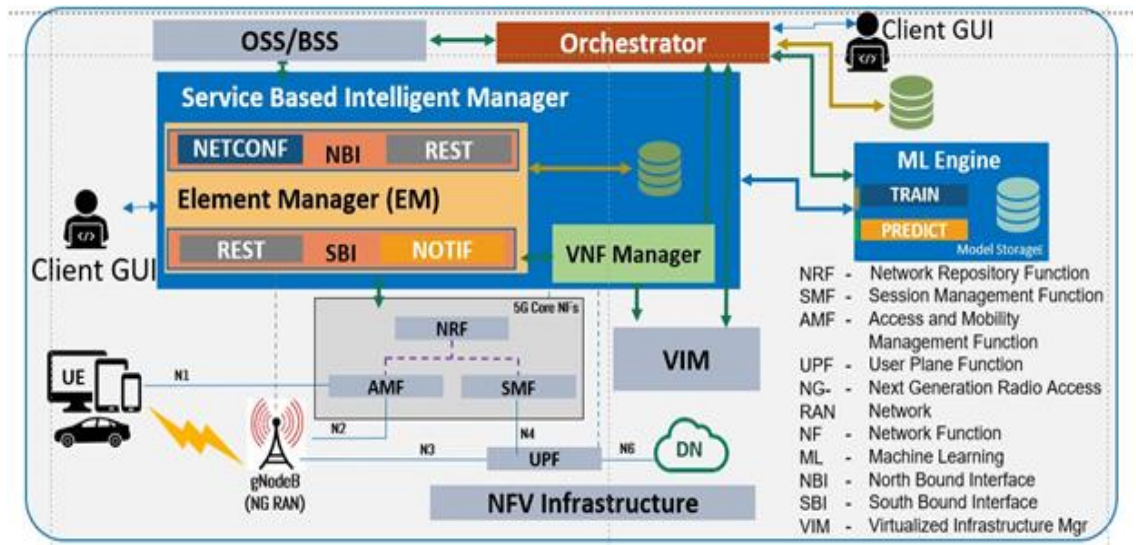
Contact Details

Name of the Project Lead: *Vaibhav Mehta*

Mobile Number: *9820217770*

Email ID: *vaibhav@nabstract.io*

NMSWorks Software Private Limited



The Management and Orchestration product provides comprehensive element and network management with resource and service orchestration capabilities for 5G networks. It supports advanced analytics using machine learning to predict performance degradation, achieve service quality and resource optimization. It complies with global standards and ensures smooth integration with third party systems. It will be a secure and indigenous management system for key government sectors using 5G.

Potential Customers:

- ✓ Government departments and entities like Indian Defense, Railways, Public safety.
- ✓ TSPs in India like BSNL, Bharti Airtel, Reliance Jio, Vodafone Idea or telecom operators outside India
- ✓ 5G Solution providers and OEMs in India like TCS, CDOT, Tejas etc.
- ✓ Enterprise infrastructure providers like L&T, Tata Communications, Sterlite etc ...

Enterprises who deploy 5G in the areas of manufacturing industries like automobile companies.

Contact Details

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OptimusLogic Systems India Private Limited

MUKTH : INDIA'S 1ST INDIGENOUSLY DESIGNED GLOBAL MOBILE COMPUTING FAMILY FOR EDUCATION, SKILL DEVELOPMENT, SECURITY, COMPUTING & BUSINESS is our unique academia-industry joint proposal of OptimusLogic Systems and IIT Hyderabad to design, manufacture, and launch, a complete family (Mobiles, SBC, Tablets, Laptops) of converged open-source mobile computing devices with an open innovative hardware design, with built-in skill development features relevant for India and emerging countries.



Value Preposition

- Place where PoC has been done
 - ✓ Hyderabad @ IIT Hyderabad, Bangalore @ Optimus Office
- Any other information to support your claim
 - ✓ Please refer to Video link above
 - ✓ NxP iMX Platform with stock Android, custom Display, Touch
 - ✓ Demo shown to Bharat Electronics Limited, Bengaluru for possible partnership for product launch (Appreciated and parked)

Contact Details

Name of the Project Lead: *Chandrakumar Chettiar*

Mobile Number: *9866677117*

Email ID: *ck@optimuselectronics.com*

R2E Technologies Private Limited

R2E Technologies, a R&D company focusing on building next generation technologies for commute, human tracking & monitoring. A team of Tech and Research focused mindset people impacting the R&D work culture, by bringing Innovations and helping startups, individuals and enterprises One of core product, RAHI is Hybrid Indigenous IoT enabled Patented Technology (Granted Patent: 343445) which helps to track and monitor the users on real-time, in presence and absence of network.



First Level of Testing Done: in Dehradun Uttarakhand, near hill region of Sudhowala; and also, in Rishikesh

Stage of Product: First level of testing on prototype is done. Patent is granted for technology. SaaS based model is underway of development. With 25L of STPI Fund, product development is underway.

Funds from another Agency:

STPI Ministry of Electronics and Information Technology

Purpose: Under Chnauti 2.0 for technology development, equity-based SEED fund of 25 Lakh is sanctioned to the R2E Technologies Private Limited, (managed by PONTAQ)

Contact Details

Name of the Project Lead: *Renu Thapliyal*

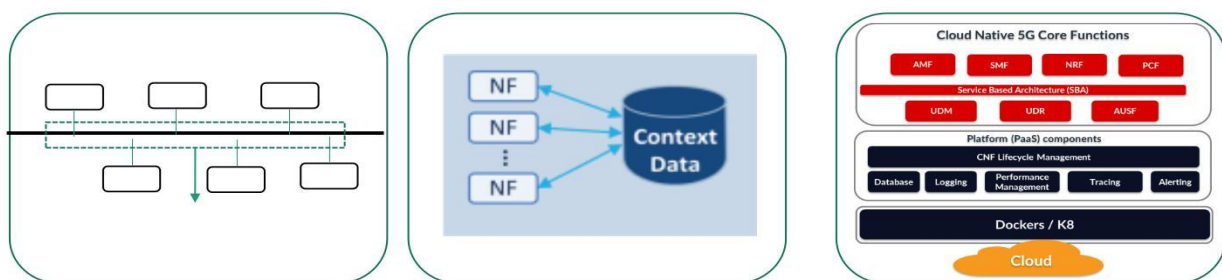
Mobile Number: *8126501009*

Email ID: *techcounsellors@gmail.com*



Resonous Technologies Pvt.Ltd

4G & 5G RADIO NETWORK, CORE NETWORK, MANAGEMENT SYSTEM



PoC with Indian RAN

Market Potential: The 5G core market revenues are expected to reach a market size of US\$ 14.7 Bn by 2032. (Estimated at US\$ 1.1 Bn in 2021)

Addressable Market: 2.94 Bn by 2032 [MNO & Enterprises/Verticals]

Contact Details

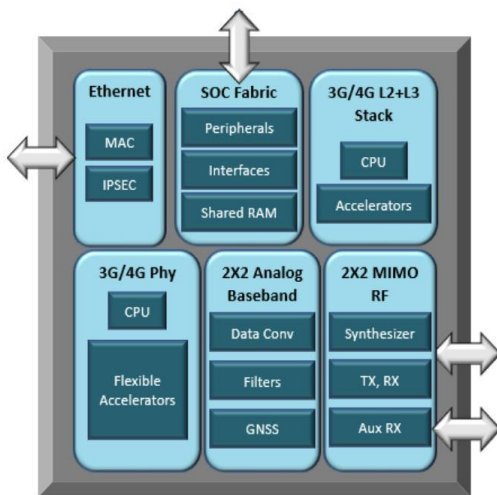
Name of the Project Lead: *Subbaiah*

Mobile Number: *7022859850*

Email ID: *subbaiah@resonous.com*



Signalchip Innovations Private Limited



- Implements all functions of a 2x2 dual carrier MIMO LTE and 3G base station in a single chip.

Amongst the most integrated chips for base-station functionalities in the world

- Covers all LTE bands up to 6GHz.
- Enables ultra-compact indoor small cells with minimal external components.
- Inbuilt GNSS including Indian NavIC!

Signalchip has designed and developed 4G/3G Baseband, Ethernet MAC, Packet processing accelerators and a host of IPs required for SoC. Agumbe chipsets targeting wireless networking equipment has been taped-out, engineering samples, development boards and reference designs are available.

Signalchip is developing/enhancing 5G chipset IPs and corresponding software for its next generation chipset offering with high capacity, high throughput solutions. The development of IPs typically includes system-architecture, C/Octave modeling, micro-architecture, coding, schematic creation, simulation, synthesis and layout. These IPs will be demonstrated in simulations, FPGA and/or (shuttle) test chips as suitable.

Contact Details

Name of the Project Lead: *Himamshu G kahsnis*

Mobile Number: *9880222731*

Email ID: *corp@signalchip.com*

Signaltron

Signaltron Systems Pvt limited

5G/4G BBU, RRH, DU and RU System development based on Indian Chipsets



- LTE Macro Base Station;
 - FDD and TDD;
 - 400 Mbps DL and 75 Mbps UL throughput
- Upto 4x4 MIMO; Power : Upto 40W
Available in all sub 6GHz bands; Bandwidth (MHz): 1.4, 3, 5, 10, 15, 20
Upgradable to 5G NR

SIGNALTRON OUTDOOR SMALL CELLS



- Outdoor small cell base station;
 - Output Power : 4W ;
 - FDD and TDD;
 - Bandwidth (MHz): 1.4, 3, 5, 10, 15, 20
- 2x2 MIMO
2W per antenna
Available in all sub 6GHz bands

SIGNALTRON COMPACT INDOOR SMALL CELLS



- Suitable for small office, malls and enterprises; Smallest footprint compact base station
 - 2x2 MIMO;
 - 125mW per antenna
 - Available in all sub 6GHz bands;
- Ethernet interface (Optical and Copper)
- Output Power : 250mW
FDD and TDD
Bandwidth (MHz): 1.4, 3, 5, 10, 15, 20 Gigabit

1.5G/4G, RRH/RU

2.5G/4G, BBU/DU

3.5G Massive MIMO RU.

Signal Tron systems are built using Signal chip's Agumbe series of chipsets for Radio Access networks and is focusing on developing fully indigenous wireless systems.

Domain Thrust Area:

Radio Access Network solutions

Signaltron Systems Pvt Ltd is a Bengaluru based wireless communications solutions provider focusing on full system solutions for customers making available indigenously built systems in a ready to deploy form factors.

Contact Details

Name of the Project Lead: *Himamshu Khasnis*

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Sooktha Consulting Pvt Ltd



Enterprise
Femto



Residential
Femto



NB-IoT
Network-In-a-Box



Enterprise
Pico

M/s Sooktha provide Layer 2 and Layer 3 software for 5G NR gNB. Our software runs on standard hardware. It is easily portable to multiple processor architectures. Our software supports multiple Layer 1 implementations via a standard interface. Their software can be deployed with the Layer 1 and RF module integrated or with a part of the Layer 1 and the RF module in a separate Radio Unit (RU). This allows our end-customers the choice of hardware platform, Layer 1, and deployment.

Value proposition

- gNB SA L2/L3 software integrated with L1/RU from partner for full gNB soln.
- gNB tested with partner 5G core and commercial phones (Samsung, OnePlus)
- Campus trials in Q3 22
- Key feature set:
 - 3GPP Release 15 Compliant
 - Single Sector, up to 100 MHz Operating Bandwidth
 - Up to 128 active/connected users, 16 users per slot
 - Downlink 4 layers and Uplink 2 layers
 - QoS Aware Scheduler

Contact Details

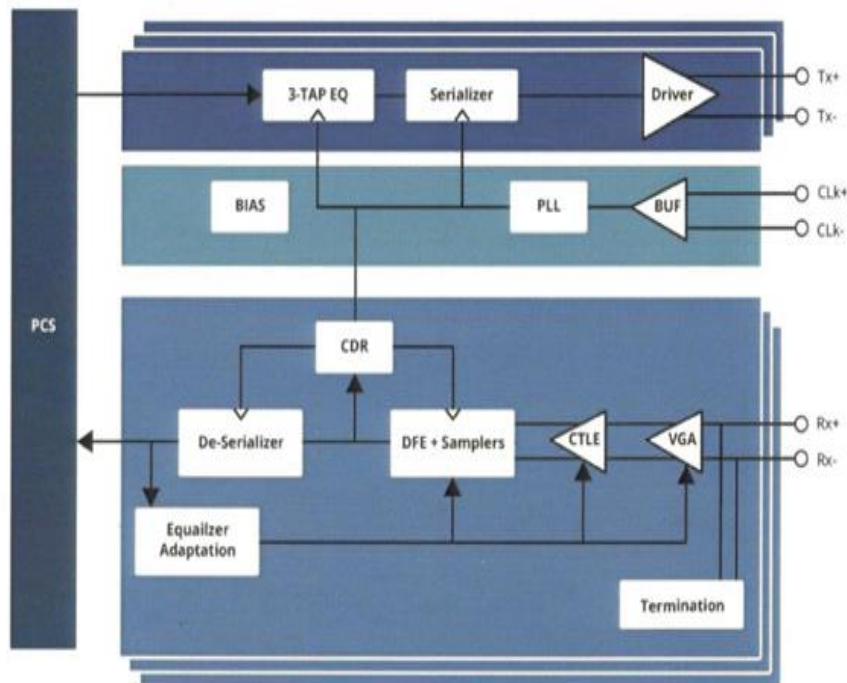
Name of the Project Lead: *Ambarish Anjaneyareddy*

Mobile Number: *9900576979*

Email ID: *ambarish.a@sooktha.com*



Terminus Circuits is into design & development of High Speed Serial Links, which are corner stone IPs for building the High Performance Computing systems. We have our flagship products/IPs of USB, PCIe, MIPI, ethernet, Multi-std SerDes. We are providing our solutions at ASIC level to the OEM's who are into HPC, AI, SSD-Storage, 5G and Network_On_Chip (NOC) application.



Product Development Stages-

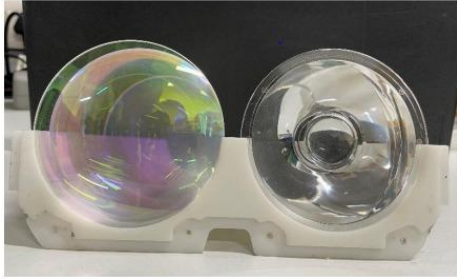
1. Tape out Ready Database*
2. Marketing Ready Product

Contact Details

Name of the Project Lead: *Dr. Sankar Reddy*

Mobile Number: *9845244392*

Email ID: *kssreddy@terminuscircuits.com*

Velmenni R&D Pvt Ltd

They have worked upon Li-Fi technology to provide seamless wireless connectivity in Indoor environment. LiFi uses light as a medium to transmit data wirelessly. It's a fully networked indoor wireless technology. Using the visible/invisible part of the light spectrum it transmits data, unlike WiFi which operates on radio frequencies. Simple to connect, smooth run, secure function, and interference-free data transfer are the key USPs of our LiFi product.

Value Proposition

Currently they have designed prototypes & solutions of Li-Fi Access Points, Dongle. We have been putting continuous efforts directed towards miniaturization & performance upgradation of their products.

LED light to User connectivity of 400 Mbps throughput High speed & secured bidirectional communication in Defence Offices, Industrial, Medical & Enterprise.

Multiple User Access & Mobility

- PoC has been done at the followings:
 - ✓ CME Pune
 - ✓ DIT, Sena Bhawan
 - ✓ Naval Dockyard, Vizag
 - ✓ CRL, BEL

We have received the PO from Bharat Electronics Limited, CME Pune, Indian Navy and successfully delivered the POC. Our current system is still deployed at mentioned places. We can provide a reference if required.

Contact Details

Name of the Project Lead: *Deepak Solanki*

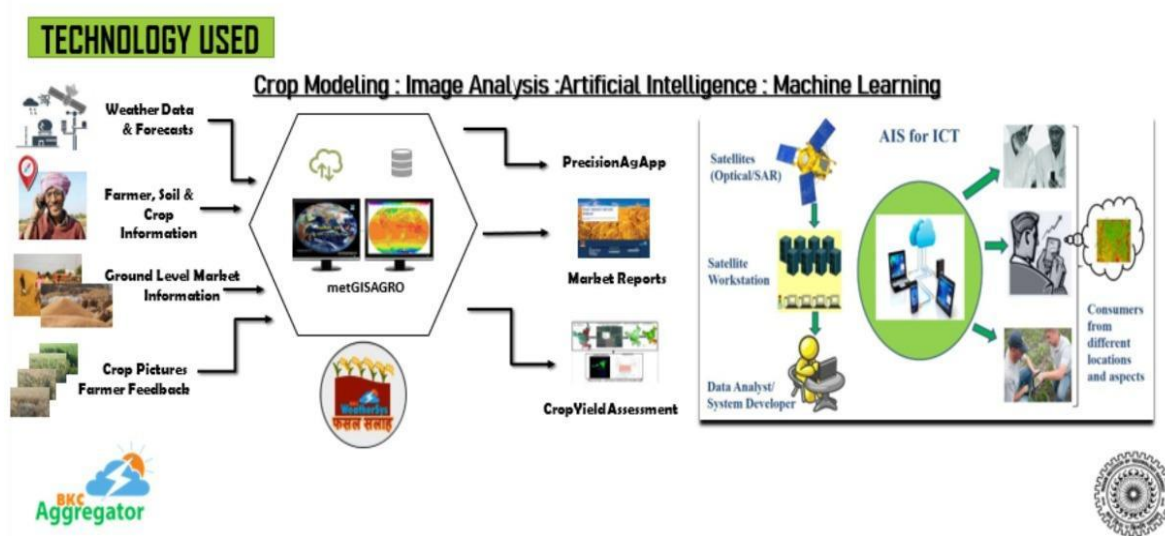
Mobile Number: *8800968965*

Email ID: *deepak@velmenni.com*



BKC Aggregators Pvt Ltd and Dirgadhi Technologies Pvt Ltd.

The main objective is towards maximising production & minimizing wasteful expenditure/Losses in farming through Technology: This project envisages to use digital technology in various forms to aid farmers reduce wasteful expenditure and increase their yield. An ECONOMIC IMPACT ASSESSMENT OF AGRO-METEOROLOGICAL ADVISORY SERVICE by the National Centre for Medium Range Weather Forecasting has suggested that there is a significant improvement in yield if knowledge-based services are used for farming



Value Proposition

- service through an APP (Already operational countrywide- 6 languages)
- [PoC has been done countrywide.](#)

Won Agril Grand Challenge 2019 & COAI For best Agril App

Contact Details

Name of the Project Lead: *Dr B K Singh Weather Systems*

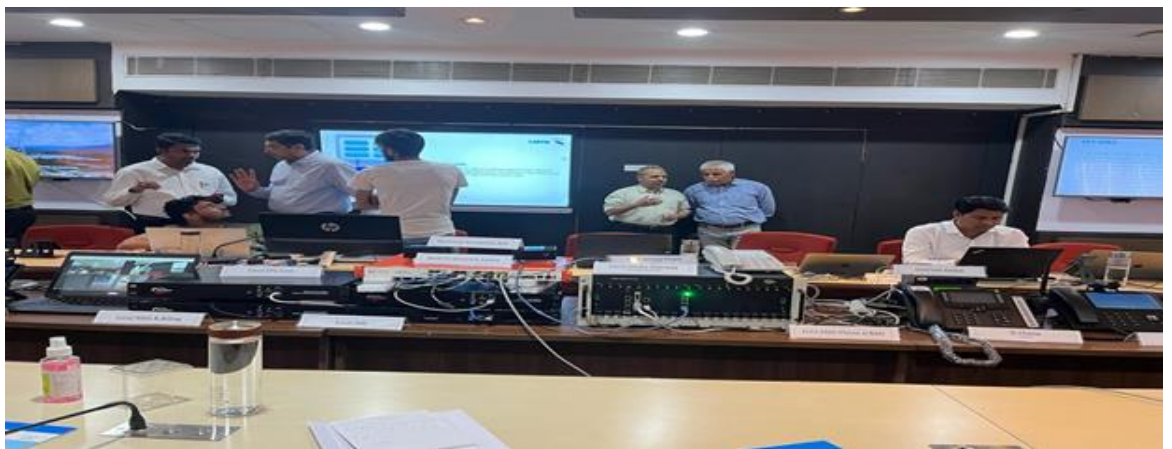
Mobile Number: 9810062673

Email ID: *bk@weathersysbkc.com*



Coral Telecom Ltd

Private 5G would be a high bandwidth low latency wireless network that will become the backbone for Industry 4.0. It would find applications in almost every segment and will have innumerable use cases in Ships, Submarines, Disaster management, Railways etc.



Value Proposition

- PoC has been done at 13th Floor, Sanchar Bhawan, Delhi, in between: 15th to 18th May, 2022
- End customers don't buy RAN or EPC or IMS or NMS they buy a solution and the objective under the project is to create integrated solution for customer needs.

Contact Details

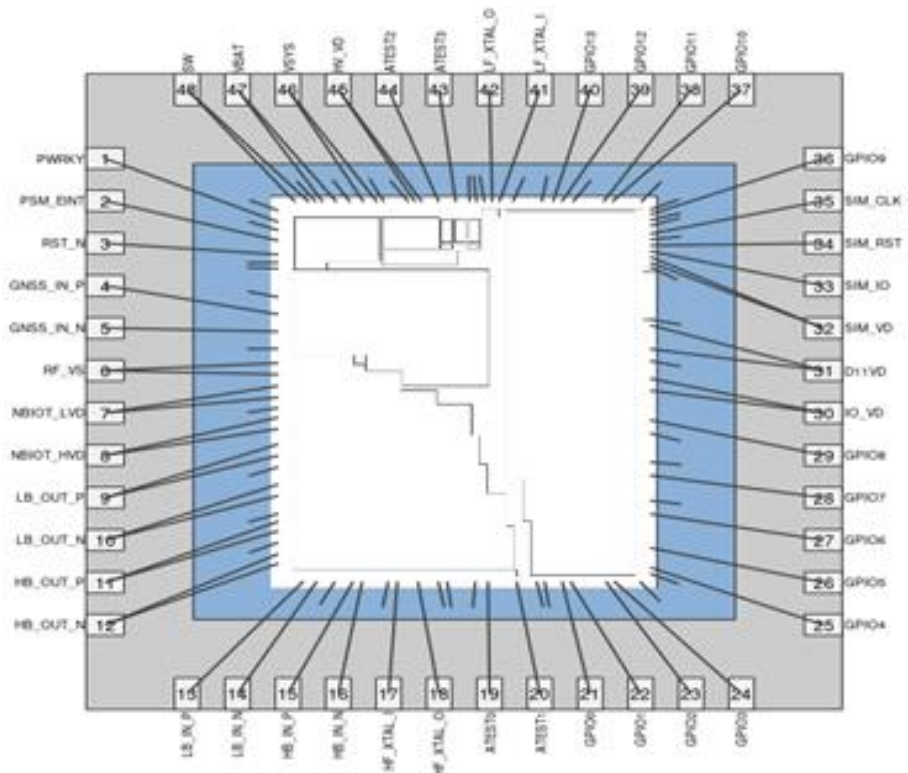
Name of the Project Lead: *Coral Telecom Ltd*

Mobile Number: *9891499300*

Email ID: *rajeshtuli@coraltele.com*

Wisig Networks Private Limited and IIT Hyderabad

NB-IoT SoC



Value Proposition

- A custom silicon for NB-IoT+GNSS
- Very small foot print
- <10 sqmm including radios
- Very low power – years of battery life
- SoC architecture with several functional power islands
- ROM based very small foot print for stack
- NB-IoT and GNSS time shared using a single DSP
- Differentiated PHY and stack patented algorithms
- Strong patent portfolio

Contact Details

Name of the Project Lead: *Naresh Vattikuti*

Mobile Number: 9676584422

Email ID: *contactus@wisig.com*

