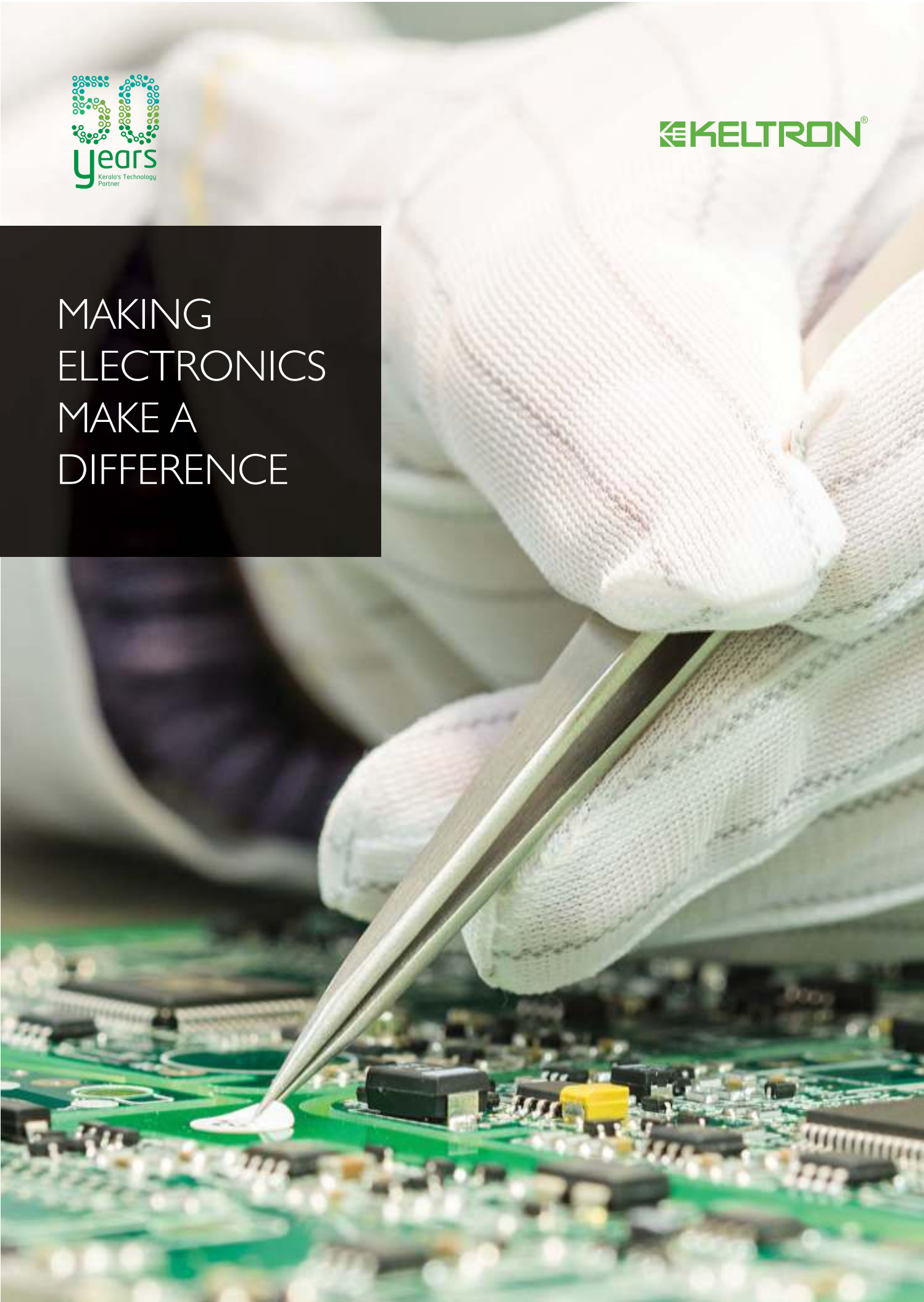




MAKING
ELECTRONICS
MAKE A
DIFFERENCE





Shri K P P Nambiar, the Founder-Chairman of Keltron, is remembered as the architect of the electronics revolution in Kerala.

Understanding the vision of KPP, needs a trip to an era when 'digital' was only a small part of electronics that powered the world. KPP served as the inspiration for many a technocrat and entrepreneur, and soon India was to witness an unprecedented mushrooming of enterprises in the image of Keltron all over the country.

As a 'hands-on' researcher, KPP knew that only original research would pave the way for innovation. The ER&DC, which he conceptualised and founded, and served as the first Chairman, was the arena that molded countless researchers in the field.

At a time when many of the digital evangelists were, so to speak, in their diapers, KPP with great perspicacity, helmed the start of the Technopark at Thiruvananthapuram, a novel initiative that worked the magical synergy of technologies that resulted in the burgeoning of all things digital in this part of the world.



Keltron House, the headquarters of Keltron

SPEARHEADING THE ELECTRONICS REVOLUTION

ADDING VALUE TO LIFE AND INDUSTRY



- Kerala State Electronics Development Corporation, popularly known as KELTRON, is the first State Electronics Development Corporation of India
- Fully owned by Government of Kerala
- Commenced operations in 1973
- A regular supplier of custom build products to the Departments of Defence and Space, Government of India, since 1980
- Manufacturing facilities located in Kerala, India
- **Manufacturing capability:** fully equipped production facilities of over more than 6,00,000sq ft area spread across six strategic locations in Kerala
- **Full-fledged Marketing Offices in Seven metropolitan cities of the country:** Ahmedabad, Bangalore, Chennai, Delhi, Kolkata, Mumbai and Trivandrum
- **Market Segments:** Strategic Electronics Products for Defence, Space Applications, and Aircraft Electronic Systems, Information Technology Products and Custom Solutions, Cyber Security & Data Services, Power Electronics Systems, Security and Surveillance, Solar Projects, Process Automation Systems, Intelligent Traffic Management System, Enforcement Systems, Skill Development and Training Domain, Smart City Projects, Pneumatics, Control & Instrumentation, Medical Aids, Lighting Solutions, Electronics Research & Development

KELTRON's history is a saga of innovation in electronics. From being a pioneer in 1973, to the role of a trend setter today, Keltron has been the catalyst for the development of Electronics Industry in Kerala. Keltron is celebrating its Golden Jubilee in the year 2023 with pride and dignity

Keltron had set up several production centres and engaged more than 2500 people, directly or indirectly, for the manufacture of electronic goods.

A quarter century later, Keltron set about transforming Thiruvananthapuram, the capital city of Kerala, into one of the major electronics hubs of the country.

Keltron gradually entered into Information Technology domain by providing domain expert solutions products to the customers. Today, the city is home to Technopark, the internationally known technology park where thousands of talented young men and women participate in the development of a burgeoning information technology industry.

Keltron has, in effect, triggered a revolution that still keeps churning out its benefits to individuals and institutions the world over, continuing in its quest to innovate products and processes that would add value to life and to the industry.

As part of the Kerala Government's motto of Industrial Development- 'Responsible Industry-Responsible Investment', Kerala is to be transformed into an ecofriendly, productive and investment friendly destination for industrial development. Thereby it is aimed to create new employment opportunities and to ensure sustainable economic growth of the state. The emphasis of current year will be on industrial infrastructure development, Capital availability, entrepreneurship and use of modern technologies. Being a Government of Kerala Undertaking, Keltron shoulder the responsibility with all the stakeholders for creating an Ecosystem for Electronic Industry Manufacturing and Testing for Kerala- God's Own Country.



MAKING 'MAKE IN INDIA HAPPEN' & INITIATIVE TO 'TRANSFORM KERALA TO AN ELECTRONICS HUB'

Anything is possible. But then, only few things really happen. Keltron has been making things happen since 1973 starting with spearheading an Electronics revolution in the country to being the most sustainable Electronics Corporation in the State Sector.

A strong infrastructure, enterprising team of people, innovative operational methods, accent on quality and customer-orientation are the core competencies of the organization which has made things happen. Keltron is entrusted with the Lead Industry in the Electronics Sector for 'Creating an Electronic Hardware Technologies Hub' in the State of Kerala by the Government of Kerala.

Keltron aims at setting up of the following as pilot initiatives:

- Outsourced Semiconductor Assembly and Test Facility (OSAT)/Assembly, Test, Marking and Packaging (ATMP) Unit
- Semiconductor Design & Training Ecosystem
- PCB Manufacturing Unit
- Electronics Package Test Facility with NABL Accreditation
- New Facilities for the Manufacture of Aircraft Electronics Systems



KELTRON's capabilities lie mainly in the large pool of experienced technical manpower specialized in the assimilation, adoption and integration of technology for creating innovative solutions, its strong infrastructure, and a fierce obsession to quality.

LARGE POOL OF
EXPERIENCED
TECHNICAL
MANPOWER

A STRONG
COMMITMENT
TO QUALITY

CONTINUOUS
PROCESS
IMPROVEMENT

KELTRON's expertise in high quality manufacturing is the direct result of the highly skilled, multi-disciplinary team of graduate engineers, project managers and skilled workforce with a proven track record in complex precision manufacturing and stringent quality standards.

Currently, Keltron employs a work force of over 2,500 of which about 29% are engineers who possess extensive hands-on experience in technology adoption and integration, and in managing high-tech manufacturing operations.

Manpower at Space Electronics section has been specially trained at Indian Space Research Organization (ISRO) in high-reliability soldering, harnessing and QC. Keltron is the only approved training agency of VSSC for the certification in the "High Reliability Soldering, Interconnection & Electronic Fabrication Techniques" and the Training facility is set-up at Keltron Equipment Complex.

ENSURING quality is an on-going process at all production units of Keltron. Each facility has a Quality Department whose business is to see that all quality norms are strictly adhered to in the manufacturing process. Products manufactured by these centres conform to international standards such as IEC 62040 Part 2&3, IEC 146, IEEE 944, IEEE 344 and IS 4540 among several other product- specific standards.

All production centres and business units of Keltron are ISO 9000 certified and the IT business segment is CMMI certified. KELTRON IT division is accredited as an information security auditing organisation by CERT-In.

Inspectorate of Naval Armament (SINA-T) has implemented their customised quality systems at Keltron Equipment Complex, Karakulam, Thiruvananthapuram, Kerala.

Keltron Equipment Complex
Karakulam, Thiruvananthapuram



Keltron Communication Complex
Thiruvananthapuram

Keltron IT facility, Keltron House
Thiruvananthapuram

Keltron Lighting Division
Mudadi, Kozhicode

Keltron Controls
Aroor, Alappuzha



MAKING
MAKE IN
INDIA
HAPPEN



STATE-OF-THE-ART
INFRASTRUCTURE
AND
MANUFACTURING
EXPERIENCE

KELTRON's forte has always been high quality manufacturing of Electronic Products. For more than 49 years, Keltron has been churning out a whole range of electronic products, electro-mechanical and high precision modules and sub assemblies for different industry segments. In the process, Keltron has built up a strong infrastructure spread over 600,000 sq ft of built-up area. Equipped with computer-based system design & engineering facilities and related software development tools, CNC Machine Work Facility & Tool Room Keltron today is fully geared to offer high- end integrated manufacturing solutions.

Recently Keltron has augmented the infrastructure to populate the PCBs in accordance with the Surface Mount Technology (SMT) and has established the facility at two of our divisions at Keltron Lighting Division (KLD), Calicut northern region of Kerala and at Keltron Equipment Complex, Karakulam, southern part of Kerala.

In addition to the manufacturing facilities for critical segments, the following test facilities also complement the production environment.

- Towed array testing facility
- Environmental Test Facility/ Environmental Stress Screening test facility
- Test and Evaluation in adherence with Space quality standards

RESEARCH &
DEVELOPMENT-
TECHNOLOGY
SUPPORT WING

KELTRON's technology base is built up on the foundation of technical collaborations with world leaders like Contrôle Bailey, GEC Alstom, Hitachi, Asea Brown Boveri, and Dassault. Right from the days of its inception, Keltron had a clear vision of the role of technology in the development process and set up infrastructure for this purpose as Electronic Research & Development Centre (ER&DC) at our Karakulam campus.

Being a company focused to deliver products with the latest technology, KELTRON has always made arrangements with Research Institutions like C-DAC, DRDO-DEBEL, Sree Chithira Thirunal Institute of Medical Sciences etc. for technology development and adaptation. Other sources of technology are DRDO labs like NPOL and NSTL for Defence products, NIOT for marine applications and ISRO for aerospace related activities. Need-based foreign tie ups and association with domain expert Private Institutions are also undertaken.

SELLER:
M/S KELTRON
SPECIAL PRODUCTS GROUP,
KELTRON EQUIPMENT
COMPLEX,
KARAKULAM,
TVM 695 564
KERALA

SELLER
M/S/KELTRON SPECIAL
PRODUCT GROUP
KELTRON EQUIPMENT
COMPLEX, KARAKULAM
TVM . 695564.KERALA

CONTRACT NO:
AS/8601/IHQ-M80(NAVY)
DATED 28 APRIL 200

STRATEGIC ELECTRONICS

SIGNIFICANT ACHIEVEMENTS

- Manufactured and supplied over 250 nos. of Processor based Ground Mine (PBGM) for Defence
- Bagged major order from Defence for the Manufacture of Advanced Indigenous Distress Sonar System.
- Secured order for Design & development of Directional Sonobuoy from DRDO lab.
- Successfully undertaken refurbishment work on Sonar staves for the first time onboard Submarine, in a time bound manner.
- As a part of Indigenization efforts, secured order for development of Echosounder for Submarines
- Successfully manufactured and installed Under Water Acoustic Communication System (UWACS) onboard over 20 nos. Naval Ships.
- Successfully manufactured and installed Data Distribution Box (DDU) onboard over 12 nos. Naval Ships.
- Manufactured and supplied 06 sets of Advanced Distress Sonar System for Submarines.
- Manufactured and supplied two sets of Active Towed Array System (ATAS) using DRDO technology.
- Manufactured and supplied Sea Bed Arrays using DRDO technology.
- Manufactured and supplied six sets of Advanced Torpedo Defence System Arrays (ATDS) and installed 2 sets in Naval ships INS Ganga and INS Gomathi.





◀◀ UWACS
◀ Processor Based Ground Mine

PRODUCTS

- Electromagnetic Log (EM Log)
- Re-Transmission Unit (custom built)
- Echo Sounder (ES)
- Data Distribution Unit for Ring Laser Gyro (DDU)
- Advanced Distress Sonar System (ADSS)
- Processor Based Ground Mine (PBGM)
- Under Water Acoustic Communication System (UWACS)
- Retransmission Units (custom built)
- Echosounder (single/dual channel)
- Power Amplifiers for SONARs
- Transmitter-Air Transportation Rack (for Dunking SONAR)
- Directional Sonobuoy
- Towed Array System
- Sonar Simulator
- Own Noise Analysis System (ONA)
- EM Actuator for Low Frequency Dunking Sonar
- Transducers / Hydrophones
- Expendable Bathy Thermograph (XBT)

New Products Planned to Launch:

- NETWORK DATA ANALYSER
- Self Recording Hydrophone
- Advanced Indigenous Distress Sonar System Mk II

Keltron is identified as one of the reliable suppliers of Strategic Electronic Products and system for the Department of Defence, especially for the Indian Navy.

Since the strategic electronic products demand extensive application of a wide range of state of the art technologies, Keltron has built sustainable relationships with DRDO Labs such as NSTL, NPOL, RCI, and other research organisations like WESEE and C-DAC to acquire such technologies. Keltron has augmented its infrastructure and developed local vendors in order to realize the indigenization effort of the Indian Navy for achieving self reliance in Defence production. Keltron is recognised as an approved vendor for manufacture of Navigational equipment and classified items for the Ministry of Defence. For the expansion of defence portfolio and also to adopt new technology Keltron made tie ups with foreign companies.

Keltron maintains water front support, in Mumabi, Vizag, Kochi & Port Blair, (Andaman) for its products and provides support for over 15 years product life cycle.



◀◀ EM Log
◀ Echosounder



POWER ELECTRONICS

SIGNIFICANT ACHIEVEMENTS

- First in the country to design and develop a 90 KVA UPS.
- First in the country to design and develop 600 KVA UPS qualifying seismic parameters for NPCIL.
- Supplied Seismically Qualified Inverters and Battery Chargers to BGR for NPCIL Kudamkulam, Tarapur and Rajasthan Atomic Power Plants
- Completed supply of 200Nos of Commercial Grade UPS (5 KVA) to E-Health – Product of KEC, Karakulam
- Completed 125 Nos of Marine grade All in One Solar Street Light at Valiyazheekkal Bridge Kayamkulam, Alleppey
- Completed 2 MWp off-grid solar projects with battery backup and 1 MWp grid-tie solar projects without battery backup.
- Completed commissioning of 1MWP Solar Power Plant for ANERT at Ramakkalmedu, Idukki.
- Completed commissioning of 250KW grid connected Solar Power Plant at KUHS Thrissur and 500KW grid connected Solar Power Plant at Government goat farm, Agali, Palakkad.



◀ Solar Power Conditioning Units

CAPABILITIES

- Design, manufacturing and installation of seismic qualified UPS Systems of up to 1000 KVA capacity
- Design and execution of solar power projects. Includes site survey, project design and sizing to suit customer needs.
- Design of grid-tied / off-grid systems or a combination of both.
- MNRE approved Channel Partner and empanelled manufacturer of Solar PCU.
- Nodal agency for implementation of solar power projects of the Government of Kerala

PRODUCTS

- Industrial UPS Systems & Inverters
- Ruggedized UPS systems for Naval Applications
- Battery Chargers & Rectifiers
- Active Filters
- Voltage Stabilizers
- Frequency Converters
- Solar Power Conditioning Units
- Regenerative Battery Discharge System

THE Power Electronics Group (PEG) of Keltron is a pioneer in the field of UPS Systems in the country, designing and manufacturing for a diverse range of applications. Keltron provides seismic qualified UPS Systems of up to 1000 KVA capacity based on state-of-the-art technology and also supplying High Power Battery Chargers / Various capacities of Invertors (113 No.s) to various Nuclear Power Plants in India..

Bolstered by the immense success in Power Electronics during the past 40 years in the design, manufacture, testing, installation, commissioning and maintenance of UPS Systems, Battery Chargers, and related power equipment, Keltron has now embarked into the renewable energy sector.

PEG has designed, supplied, installed, tested and commissioned more than three MWp Solar PV power plants all over Kerala. Keltron has also been maintaining these projects for the last 9 years. The Solar Power Conditioning Unit (PCU) developed by PEG has undergone successful testing and approval at TUV, Bangalore.

ALSO, PEG TEAM IS GEARED TO LAUNCH NEW PRODUCTS LIKE

- IKVA Transformer less online UPS
- Electric Vehicle Chargers
- Grid tied solar micro inverter with MPPT
- BLDC based 5HP Solar Water Pump
- Solar Pump Controller for ac Motors (1hp to 10hp) for PM-KSUM program
- Battery Management System (BMS)



SPACE ELECTRONICS

KELTRON has proudly partnered ISRO right from the early SLV/ASLV missions, the successful PSLV and GSLV launch vehicles, and the historic Chandrayan mission - up to the present time through the development of the heavy GSLV Mark III to launch the more than 4- tonne satellites into geostationary transfer orbits.

Keltron's contribution is present in all the critical sub-assemblies and their testing which includes launch vehicle navigation and guidance computers, stage processing modules, control electronics modules, inertial sensing unit's power module, DC-DC converters, resin electronic module, to mention a few. The participation extends to the family of ISRO satellites as well.

Dedicated facilities such as SMT Reflow System, ESD protected Clean room facility established to meet the specialized and sophisticated requirements of ISRO. Installed X-Ray Inspection Machine in the SMT Reflow Facility for the detection of errors in fabrication of BGA type packages. Received certification from Atomic Energy Regulation Board (AERB), Radiological Safety Division for X-Ray Facility for the Operation of PCB Analyzers. In addition to that technical services for the harnessing, testing and fabrication of electronic packages are also provided on-site to the various units of ISRO. Keltron in association with ISRO commences training classes for providing industry oriented training to technicians on 'High Reliability Soldering/Inter connection' which is the most integral part in Avionics Package fabrication.

Space Electronics Group (SEG) has commenced the Avionics Packages Production for ISRO's prestigious mission for Human Rated Launch Vehicle, "GAGANYAAN" Mission. SEG bagged order from Advanced Naval Systems Programme (ANSP), DRDL (Ministry of Defense) for Missile Sub Assembly Fabrication.

SECURITY & SURVEILLANCE

ELECTRONIC security leverages technology in safeguarding assets by preventing unauthorised access to people and property. Keltron offers Security and Surveillance solutions that detect and deter security threats from thieves, militants and extremists. The Security and Surveillance Group (SSG) of Keltron is fully geared to address the present needs of the security systems market as well as those of the Government and Para-military institutions.

The integrated security solutions incorporate the most advanced imaging and recording technologies, networking cameras, recorders, displays, control softwares, peripheral system products and infrastructure to deliver the performance and reliability that the customer can count on.

Extending the security solutions to fishermen, Keltron with the technology from ISRO manufactures the NavIC which provides accurate real-time positioning and messaging services. Successfully completed supply and installation of CCTV system at 3 Fishing harbors. Received Order from Kerala High Court for installation of CCTVs and Order for Attendance Management Systems across all depots in Kerala of Kerala State Road Transport Corporation.

PRODUCTS & SERVICES

- Closed Circuit Television (CCTV) System
- Biometric Attendance Management System (BAMS)
- Access Control System (ACS)
- Integrated Security System (ISS)
- GPS based Vehicle Tracking System
- Security Equipment
- Public Address System
- Emergency Operation Centre: Solution for the effective management of resources during disaster and emergency
- RFID Based solutions
- NavIC system



INTELLIGENT TRAFFIC SYSTEM

The Traffic Signals Division of KELTRON provides state-of-the-art traffic controllers and offer Intelligent Traffic Management (ITMS) solutions. During the past 30 years, the Traffic Signals Division has executed several turn-key projects in major cities of the country. Keltron is the nodal agency for implementing the modernized Traffic Signaling System in Kerala.

This group has tie-up with German OEM for assembling and manufacturing of Automated Vehicle Testing Track and has Developed and Deployed Automatic Driving Testing Track in association with a Startup company. This group has completed IP 65 and IEC standards Product certification of Traffic Products. Keltron has successfully executed the Development, Customization, Deployment and Management of State-wide Vehicle Tracking Platform for Safety and Enforcement as per AIS 140 specification under Nirbhaya project for Sikkim Transport Department.

The Keltron Intelligent Traffic Management System (ITS) Solutions include:

- Area Traffic Control System
- Wireless Traffic Control System
- Pedestrian Actuated Controllers for Road Crossing Model-(Peltrac)
- Fully Solar Powered Traffic Signal System
- Fixed Time Traffic Signal System
- Vehicle Actuated Traffic Signal System
- Solar Powered LED based Street Lighting
- Solar Powered Road Warning Blinkers
- Computerised Vehicle Fitness Testing Station
- Computerised Driving Testing Station

New Products Planned include:

- AI based Vehicle Detection Camera Module for Adaptive Traffic Control System
- Traffic Command Control Dashboard (Smartcities & ITMS project)
- Automatic Driving Testing Track

ENFORCEMENT SYSTEM

Keltron widely supports by providing technical solutions to the Government's attempt to effectuate successful implementation of policies by enforcing laws and regulations. One of our major project is Traffic enforcement system, which have been effectively implemented in all major cities of Kerala resulting in substantial reduction in the number of accidents and traffic violations. This has also helped revenue generation to the State in the form of penalties paid by the offenders, since the entire process from the recording of the incidents of violation to the generation of payment challans for penalties is fully automated and managed by the system.

The large Turn key projects of the group includes Traffic Surveillance, Traffic Enforcement, Crime and Criminal Tracking Network Solutions (CCTNS), Distress Call Response Management System (DCRMS).

New Product Planned include:

- Vehicle Speed Measurement system using video analytics for Smart City Projects.

Our solutions include

- Integrated Vehicle Accident Reduction Program
- Central Intrusion Monitoring System to safeguard individuals and high value assets
- RADAR based Automated Enforcement System and Garbage Management system
- Geographic Information System (GIS) based solutions
- Red Light Violation Detection System
- Speed Limit Violation Detection System
- Vehicle Tracking and Fleet Monitoring System
- Passenger Information System for Buses
- Distress Call Management System
- Automatic Fare Collection System

MAJOR INSTALLATIONS

- Safe Kerala Project – Successfully Completed the manufacturing of 726 Systems (700 Nos of AI Camera System, 04 Nos of Speed Violation Detection System, 04 Nos of Mobile Speed Violation Detection System, 18 Nos of Red Light Violation Detection System) and installed on various sites across Kerala.
- Implementation of City CCTV Security Solution in Thiruvananthapuram, Kochi, Kozhikode, Thrissur and Kollam linking more than 500 cameras through a dedicated OFC laid for the Police Department.

Smart Garbage Monitoring System

KELTRON developed the Harithamithram Smart Garbage Management System in cooperation with the Haritha Kerala Mission and Suchitwa Mission. The application will work as a complaint redressal mechanism and aims to make the public a part of waste management efforts.





CONTROL & INSTRUMENTATION

SERVICES

- Execution of Turn-Key C&I Projects
- System Design and Engineering
- Development of Application Software
- Integration and Testing
- Pre commissioning and Commissioning Assistance
- Field Erection, Pre-commissioning & Commissioning
- Annual Maintenance Contract for C&I Systems
- Technical manpower supply in India and abroad
- Fabrication / Hot works, Cabling and Termination works at Shipyard

PRODUCTS

- Modules for Control System
- EP Convertors
- Wired control panels/desks with racks and accessories
- Field instrument enclosures and racks
- Analog Control Systems (ACS)
- Sequential Events Recorder (SER) System
- Annunciation Systems
- Air Lock Relay
- Fire Alarm System, Electrical Systems
- Customised Panels
- Ambient Air Monitoring Systems
- Embedded system Projects
- Agriculture automation and Instrumentation
- Local weather monitoring stations

CAPABILITIES

- Expertise in Process Control systems & Plant Automation Systems.
- Total capability to execute C&I and Automation projects on Turnkey basis.
- Infrastructure to handle large projects including manufacturing facilities.
- Experienced & trained System Design, Software and Application engineers.
- Design & Mechanical fabrication of Control Panels & System Cabinets.
- Integration of subsystems & System simulation and testing.
- E&C set up comprising of competent Installation & Commissioning Engineers.

KELTRON has proven capabilities and experience for providing Instrumentation solutions for various applications. Since 1979, Keltron has executed C&I packages for more than 50 Power Plants in the range of 60MW to 500MW on turnkey basis.

Several plant automation projects for coal-fired, oil & gas, and petrochemical Power Plants have also been undertaken. The Keltron product portfolio includes Analog Control System, DCS, PLC, SCADA, Data Acquisition Systems, analysers and all types of field instrumentation.

The Keltron Analog control systems manufactured in technical collaboration with Contrôle Bailey, France, and installed at several power plants continue to work flawlessly for more than 35 years after installation.

PNEUMATICS

Keltron has expertise in the field of Pneumatics over the decades in the manufacture/assembly and installation of pneumatically operated field instruments at power plants and various industries. The Keltron Controls Unit has a well-equipped infrastructure for the manufacture and assembly of Pneumatic products. The pneumatic actuators mainly consist of a double acting power cylinder in which a piston slides and through which the necessary force is transmitted to the final control element. Actuator without positioner is used for ON / OFF control of a regulating device in which air supply is given to the cylinder through a solenoid / pilot operated valve. Actuator with positioner can establish any desired relationship between pneumatic input signal and piston displacement. The Pneumatic Products Group (PNG) has indigenized SADC (Secondary Air Damper Control) for Class I Positioner to make our actuators more prices competitive. Also, PNG has achieved major orders from customers like NTPC, IREL Kochi and Orissa, ISRO, NPOL, CPRI Bangalore, BHEL, Torrent Power etc.



PRODUCTS

- Pneumatic Actuator Models – 02 x 05 to 22 x 14 (A type and C type)
- Specific design for Burner Tilt, SADC, FAN control PA/FD/ID, Scoop control applications
- Pneumatic Positioner
- Position Feedback Transmitter
- Electro-Pneumatic (E/P) Converter
- Limit switch
- Junction box- 24 way & 36 way
- Air Filter Pressure Regulator (AFR)
- Airlock Relay
- Volume booster
- Smart Positioners for Pneumatic Actuator

INFRASTRUCTURE

- Machine Shop and Assembly Shop with all Testing Apparatus.
- Fabrication and Painting Shop.



SOFTWARE DEVELOPMENT

KELTRON started its software development business in 1999 to develop bespoke software solutions. Drawing inspiration from the success of over four decades of expertise as a pioneer in Control and Instrumentation techniques and Embedded Systems programming, KELTRON's Software Group is now fully geared up to meet the challenges and demands of today's IT industry.

Keltron is fully equipped to deliver end-to-end solutions to discerning customers. The nimble organizational structure of KELTRON provides for a flexible and accommodating environment which makes customer engagement synergetic and productive, and ensure total customer satisfaction.

This group is geared up for envisaging the following:

- Setting up of a state of the art facility for Software Development with AI Lab
- Setting up of exclusive lab for GIS information service related to Land use, Mining, Disaster Management including drone based survey

WHY KELTRON

- ISO 9001:2015 Certified for Quality Management System
- ISO/IEC 27001:2013
- ISO/IEC 20000-1:2011
- CMMI certified
- Expertise in e-Governance
- Software as Service Model Operations
- Integrated solution and Mobile applications

IT INFRA STRUCTURE & PRODUCTS

KELTRON entered the IT arena way back in the late 70s with the manufacture of computers and accessories, and microprocessor based products such as attendance monitoring and recording systems. Today, Keltron has widened its IT horizon by entering other IT domains such as software development, data security, cloud services, training and support services. Being a Public Sector organization Keltron has a focused interest in catering to the IT needs of the Government of Kerala, configuring solutions for all the key departments of the State administration. The entire IT infrastructure of the Government Secretariat is planned, implemented and maintained by Keltron.

PRODUCTS

- IT Hardware: Servers, PCs, laptops and peripherals
- IT Infrastructure Services : Networking solutions, technical support for high-end servers and projects, Facility management services, AMC, Document Management Services
- Smart Class rooms to education sector
- Video Conferencing
- Data Center Management, Technical solution provider for Hyper converged infra
- Advanced ICT services: Cloud Hosting, Security Auditing etc.
- System Integration

AS TOTAL SOLUTION PROVIDER

- State Rate Contract: Service Provider for the supply and installation of major ICT hardware equipments through a Centralized Procurement portal for Government Departments across Kerala
- Ambitious project of Kerala Government - To connect 470 locations (87Nos. of Jails and 383 Nos. of Courts) all over Kerala with Video Conferencing.
- Completed setting up of Data Center Infrastructure with state-of-the-art Building Management System (BMS) having Server farm area of 600 Square feet, NOC Room of 260 Square feet. Redundant ISP links with primary link having 500Mbps and Secondary link having 100Mbps bandwidth. Cloud Infrastructure for hosting in house and customer Services. Total Capacity 50TBytes.
- E-health Hardware / networking at 212 hospitals including 32 Hospitals under CSML / Treasury WAN2.0 upgradation.
- Successfully completed Network revamping and hardware supply for Cochin Shipyard
- Successfully executed the work of providing Software and cloud solution for Election Webcasting covering over 20,000 booths for the Kerala Assembly elections held in April 2021.
- Envisages for the Implementation of OUTPOSTS facility for Amazon Web Services for regional cloud infra with scope for future expansion – First of it's kind in PSUs
- Also, to tie up with major Cyber Security companies to position Keltron in the area of Cyber Security implementation for all industrial establishments and implementation of a Training Lab (Auditing, SoC, CyberLAB).



SMART CITY PROJECTS

The Smart City Mission, an urban renewal and retrofitting program by the Government of India with the mission to develop 100 smart cities across the country. Keltron being a diversified company, provides multiple solutions/products to this venture of Government of India's Smart Cities Mission. From the initial phase of roll out of Smart City Mission itself Keltron secured orders for contributing expertise solutions and they are:

- Integrated Traffic Management System to the Nagpur City, Maharashtra.
- System Integrator for Implementation of (Design, Supply, Implement, Commission, Operate & Manage) Command & Control Centre for Chennai Smart City, Tamilnadu
- At Kochi, one of the prestigious project of Kerala also Keltron provides Integrated Traffic Management System solutions

Keltron prowess in multitudinous domain, experience in execution of turnkey projects, business network all over India makes the company to become competent in the delivering Smart City solutions and also to gather more opportunities in the upcoming Smart City missions.

LED LIGHTING

KELTRON presents a range of LED lighting systems for various applications. These lighting systems are manufactured by Keltron Lighting Division, a state-of-the-art facility at Mudadi, Kozhikode, that integrates advanced LED sources, driver technologies, optics and design to produce world-class luminaries. The R&D effort has been focused on reducing energy consumption, extending life and maximizing illumination performance. Keltron LED aspects are EN- 12368-2000 Certified. Keltron Lighting solutions comprises Street Lights (20W-150W), High Mast/Mini Mast/Low Mast (6 Mt- 12Mt Height), All In One Solar Lights (AIO), LED Bulbs, LED Tube Lights, Emergency Lanterns etc.

Bulbs



Tube Lights
Retrofit Tubelights



Down Lights



Street Lights



Lanterns





HEARING AID

Keltron continuing the saga of developing quality products for the consumers at an affordable cost, started 100% in house manufacturing of the Digital Programming Hearing Aid at Keltron Lighting Division. KELTRON has taken the technology from C-DAC for the manufacture of Behind The Ear (BTE) hearing aids.

The main product SHRAVAN is a 10 Channel hearing aid with 64 band filters and priced very aggressively and this product is widely accepted among all age group customers not only in India but also across the globe due to its rich features. The small size fully digital SHRAVAN mini 107 was also developed by KELTRON, which uses indigenously designed and developed NAADA Application Specific Integration Circuit which integrates in-house developed IPs, sophisticated Digital Signal Processing (DSP) blocks and volatile and non-volatile memories, thus offering superior and stable characteristics. SHRAVANMINI 107LT – is a low power Behind-the-Ear hearing aids which can be used for moderate to severe category of Hearing impaired patients

The production floor equipped with fully air conditioned SMT Line consisting of high speed SMT Machines, separate assembly & exclusive testing area. The supply, service for the Hearing aids all over Kerala has been managed through our centers across Kerala and the demand from other states met by the marketing

KLD Unit is geared up with the following new initiatives:

- Upgraded Sharavan Mini Hearing Aid 107LT – Frequency selective amplification with additional facilities to reduce background noise and Bluetooth/Wi-fi Capability. (ToT from C-DAC)
- Completion of medical Certification and commercial launch of Infant Warming Bassinet and Infant Warming Wrapper for preterm babies (ToT from Sree Chithra Institute of Medical Sciences)
- Completion of First Phase Cochlear Implant System for DEBEL. Joint development with C-DAC.

KNOWLEDGE SERVICES

KELTRON Knowledge Service Group (KSG) are 'Centres of Excellence' in Information Technology, created with the specific intention of bridging the huge gap between Academic Institutions and the Industry.

These Centres churn out batches of industry-ready professionals every year who are prepped up to take on jobs the moment they are inducted by organizations. The career-oriented courses are delivered through Keltron Knowledge Centres, Keltron Authorised Training Centres, Keltron Certified Vocational Training Centres & Keltron Advanced Study Centres located at important towns throughout Kerala.

Over the years, KSG has churned out thousands of professionals who excel in their respective fields. Since its inception, a number of courses have been added to the portfolio, taking the total tally of courses to more than 400. KSG now conducts training through 35 direct centers and more than 200 Authorized Training Centres. Keltron's most demanding 25 courses are recognized and approved by the Government of Kerala and students pursuing these courses shall equip themselves with the right skills to 'make them

WHY CHOOSE KELTRON COURSES

Keltron, with its strong industry roots, has the right feel of the requirements of the industry and has used this knowledge in designing courses that suit the industry needs.

- Keltron continually upgrades its Knowledge Centres to provide Knowledge Services in all the relevant fields.
- Keltron offers a wide range of Industry Recognized Certificate, Diploma, Advanced Diploma, Post- Graduate Diploma through the Knowledge Centres & Skill Development Courses as Add-on Courses through selected Government/Aided/Private Colleges across the State of Kerala.

MAJOR AREAS OF TRAINING

- Augmented Reality(AR)/Virtual Reality(VR)
- IoT, Machine Learning, Block Chain
- VSSC-KELTRON SOLDERING SCHOOL
- Artificial Intelligence, Cyber Security
- Cloud & Edge Computing
- Data Science & Mining, Android
- Hardware & Networking, e-Gadget
- PGDCA, DCA, WP&DE, CFA & OA
- C/C++/.NET/j2se/j2ee/python/PHP & MYSQL
- Web Design & Development
- Animation, Digital Film Making
- PPTTC, Fire & Safety, CCTV, Fibre Optics
- Logistics & Supply Chain Management
- Academic Projects, Internship, OJT

Web: ksg.keltron.in

Facebook:
<https://www.facebook.com/KeltronKnowledgeServices/>

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ER&DC

ELECTRONICS RESEARCH & DEVELOPMENT CENTRE



Some achievements of ER&DC are given below:

- Designed, tested and make ready for production of different LiFePo4 battery packs for Safe Kerala project and other UPS applications.
- Developed prototype Battery Management System (BMS) for 12.8V, 50AH, 24V, 50AH and 36V, 50AH and tested in the lab.
- Completed the design and testing of IoT based Water Level Controller and the same is ready for production.
- Completed the design and produced 1,000 numbers of Pulse Oximeter through SSG group of KEC.
- 5KVA Online UPS made ready for production and 200 numbers already supplied for E-Health project. The production is carried out by the Power Electronics Group (PEG) of KEC.
- Home UPS (offline) from 500VA to 3000VA production has been initiated at Keltron Electro Ceramics Limited, Kuttippuram. The same UPS can be used as Solar PCU with addition of MPPT hardware.
- Solar Pump Controller from 1HP to 10HP made ready for production.

ELECTRONICS RESEARCH & DEVELOPMENT CENTRE

KELTRON established Electronic, Mechanical and Software based state-of-the-art Research and Development facility as per the standards laid down by the DEPARTMENT OF SCIENTIFIC & INDUSTRIAL RESEARCH (DSIR) to support the existing product improvement and new product development. Along with creating new and innovative products and adding features to old ones, R&D connects various parts of KSEDC strategy and business plan, such as marketing and cost reduction.

The core operations of R&D centre are:

- New Product development for future requirements of KELTRON
- Product development based on orders from external agencies
- Tie up with leading R&D organizations such as DRDO, BARC, ISRO, CDAC etc
- Collaboration with leading academic institutions such as IISC, IITs, Technical universities and colleges.
- Collaborative R&D with public and private companies.
- Coordinate internal and external development projects
- Solution provider for technical problems and product failures and project evaluation.
- Technology provider for KELTRON subunits
- Incubation and Mentoring facility for start-up companies.



KTTC - KUTTIPPURAM

KELTRON TOOL ROOM CUM TRAINING CENTRE, Kuttippuram is having fully equipped facility to offer training in Hi-tech machines such as CNC Lathes, High precision and high speed Vertical Machining Centres, CNC wire EDM, Jig Grinder, Lathe and Milling Trainers; Precision conventional and all-purpose machines; Test and metrology equipment including CNC 3D CMM; PCs and software for CAD/CAM design, modelling, programming, analysis and manufacturing.

In addition to the Production Works, KTTC offers Skill Development / Job Oriented Courses and Short-term Courses in Tool and Die Making & CNC operations in association with Knowledge Services Group (KSG). KTTC is the approved training partner of National Skill Qualification Framework courses in association with National Skill Development Corporation (NSDC).

KELTRAC - AROOR

KELTRON TOOL ROOM RESEARCH & TRAINING CENTRE, Aroor is having fully equipped facility to offer training in Hi-tech machines such as CNC Lathes, High precision and high-speed Vertical Machining Centres, CNC wire EDM, Jig Grinder, Lathe and Milling Trainers and software for CAD/CAM design, modelling, programming, analysis and manufacturing.

Keltron Component Complex Limited

(KCCL), Kalliasseri, Kannur

KELTRON entered the electronic components industry by setting up India's largest Aluminium Electrolytic Capacitor plant in technical collaboration with Sprague Electromag, Belgium, in 1976 at Kannur, Kerala. Over the years, Keltron has added on several other types of components, enlarging its range to cater to the needs of the Indian market. Street Lights Today, Keltron is identified as a reputed supplier of electronic components for professional, industrial and consumer electronics applications.

KCCL, has State of the art manufacturing facility with more than 300 automatic and semi-automatic machines, imported from Japan, Taiwan, Italy etc. Also have in-house developed Forming Plant for Low Voltage and High Voltage Foils.

PRODUCTS

The current range of components manufactured by Keltron includes:

- Aluminium DC Electrolytic Capacitors
- Motor Start Capacitors
- Motor Run (SH) Capacitors
- MPP Capacitors
- KVR Power Capacitors
- Carbon / Metal Film Resistors
- High CV large Can Capacitors

The Super Capacitor production facility is being established with ISRO technology and expected to be ready by April 2023.

Keltron Electro Ceramics Limited

(KECL), Kuttippuram, Malappuram

KECL, an ISO certified industrial unit, situated in Malappuram District, Kerala. The land holding of about 10 acres offers excellent scope for further development and setting up of manufacturing facilities and presently offer product to defence industry. Lab facility is available for the students to do projects for students and professionals.

The unit supplies Hydrophones for all under water projects to KEC, KCA, NPOL and BEL.

PRODUCTS

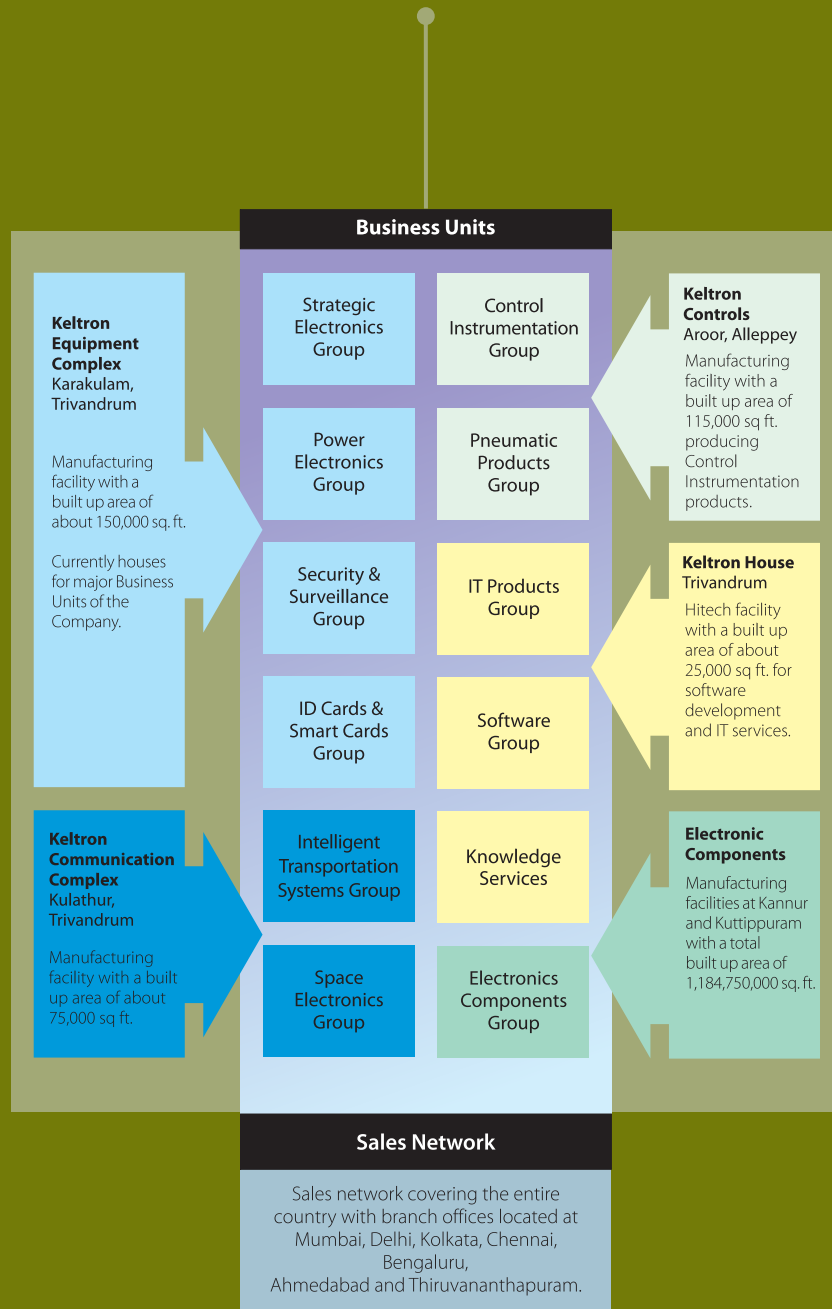
- Transducer/hydrophones
- Electronic Queue Management Systems
- Smart Bell & Public Address System



SUBSIDIARY COMPANIES



ORGANOGRAM





Kerala State Electronics Development Corporation Limited

A Government of Kerala Undertaking

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