



SYSTEM ADVANCETECHNOLOGIES (P) LTD.

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SYSTEM has started his journey to the world of technology in the year 1984, as small family partnership firm with strong entrepreneur attitude for doing challenging jobs in the field of electronics, Instrumentation, Control and Automation. Now the constitution of organization has been converted to Private Limited Company under name and style "**SYSTEM ADVANCE TECHNOLOGIES (P) LTD.**", with improved infrastructure and area of activities. **This unit** is under the Small Scale Industries, Govt. of West Bengal within house R & D facilities. The working activities are manned by highly experience staff totally dedicated to the commitment of quality and standard. Most of the product are import substitute and proven in the plant.

SYSTEM ADVANCE TECHNOLOGIES (P) LTD undertakes installation and commissioning job of various **OEM and own manufactured** products in the field of control and Instrumentation system.

SYSTEMADVANCETECHNOLOGIES (P) LTD is representing as system integrators of M/S. **GE FANUC, USA; Rittal India, Bhartia Industries (BCH) and Endress + Hausers, Germany, Arecont Vision, USA.**

SYSTEM ADVANCE TECHNOLOGIES (P) LTD is specialized in designing, erection, commissioning of the **SCADA system automation, and control and measurement system of a process.**

SYSTEM ADVANCE TECHNOLOGIES (P) LTD is also specialized in designing, erection and commissioning of the **Video Surveillance System for Process and Plant security monitoring.**

The electronic interfacing circuits, PLC integrations and related programming are taken by the expert team. The company undertakes design, supply, installation and commissioning of **SCADA for water treatment plant with complete wide area networking with reliable Radio or Optic fiber communication system using latest technology.**

Fully equipped workshop of **SYSTEM ADVANCE TECHNOLOGIES (P) LTD** is situated in the heart of the city, which is easy to access from any corner.

SYSTEM ADVANCE TECHNOLOGIES (P) LTD is specialized in execution of turnkey project work and undertakes job of design, integration and manufacturing of reliable useful product as per customer needs. The quality performance and user-friendly operation during execution of jobs are the motto of the organization.



List of some turnkey Projects executed

1. Design, Erection, Commissioning of **GE Fanuc Versamax PLC based SCADA System** along with On Line Water Quality parameter measuring equipments installed at Dakshin Raipur, 24Parganas (S), WB, for project "Arsenic free surface water base water treatment plant", **Public Health Engineering Directorate, Govt of West Bengal.**
2. Design, Erection, Commissioning of **PLC & SCADA Based Pressure By Pass system** for Arsenic area affected Water supply project at Dakshin Raipur, 24Parganas (S), WB, under **Public Health Engineering Directorate, Govt of West Bengal.**
3. Design, Erection, commissioning of **Distributed SCADA System with Wireless Data Net-working** for WTP, Booster station -1, and 15 OHR at different locations for Arsenic affected area Rural Water supply Project at Barrackpur, Palta, North 24pgs, WB under **Public Health Engineering Directorate, Govt. of West Bengal.**
4. Design, Erection, commissioning of **Video Surveillance System** for Rural Water supply Project At Mongal Pandey WTP, Barrackpur, Palta, North 24pgs, WB under **Public Health Engineering Directorate, Govt. of West Bengal.**
5. Design, Erection, commissioning of **Video Surveillance System** for Rural Water supply Project at Dakshin Roypur WTP, Dongaria, South 24pgs, WB Under **Public Health Engineering Directorate, Govt. of West Bengal.**
6. Design, Erection, Commission of Laboratory Automation for Automated Data Logging, storing and reporting of Water Test Data from different Level 2 Water Testing Apparatus at **Durgapur Water Supply Division**, under **Public Health Engineering Directorate, Govt. of West Bengal.**
7. Design, Development, commissioning of **Laboratory Data Management Software** for Rural Water supply Project At Mongal Pandey WTP, Barrackpur, Palta, North 24pgs, WB Under **Public Health Engineering Directorate, Govt. of West Bengal.**
8. Design, Development, commissioning of **Laboratory Data Management Software** for Rural Water supply Project At Dakshin Roypur WTP, Dongaria, Nodakhali, South 24pgs, WB Under **Public Health Engineering Directorate, Govt. of West Bengal.**
9. Design, Development, commissioning of **Laboratory Data Management Software** for Rural Water supply Project At Bolpur Water Supply Division, Sreeniketan, Bolpur, WB Under **Public Health Engineering Directorate, Govt. of West Bengal.**
10. Design, Development, commissioning of **Laboratory Data Management Software** for Rural Water supply Project at Purulia Raghunathpur WTP, Purulia, WB under **Public Health Engineering Directorate, and Govt. of West Bengal.**
11. Design, Development, commissioning of **Consumer Data, Water Test Data, and Web based Management Software** for Rural Water supply Project at Mongal Pandey WTP, Barrackpur, Palta, North 24pgs, WB under **Public Health Engineering Directorate, Govt. of West Bengal.**



List of some turnkey Projects executed

12. Design, Development, commissioning of **Consumer Data, Water Test Data, and Web based Management Software** for Rural Water supply Project at Dakshin Roypur WTP, Dongaria, Nodakhali, South 24pgs, WB under **Public Health Engineering Directorate, Govt. of West Bengal.**
13. Design, Development, commissioning of **Plant Inventory Web based Management Software** for Rural Water supply Project at Dakshin Roypur WTP, Dongaria, Nodakhali, South 24pgs, WB under **Public Health Engineering Directorate, and Govt. of West Bengal.**
14. Design, Development, commissioning of **Plant Inventory Web based Management Software** for Rural Water supply Project at Mongal Pandey WTP, Barrackpur, Palta, North 24pgs, WB under **Public Health Engineering Directorate, Govt. of West Bengal.**
15. Design, Erection, Commissioning of **ECR Zone monitoring cum protection** using Passive Infra-ray detection and monitoring through Micro processor based programmable Zone control Panel, installed at VECC, Bhaba Atomic Research Centre, Kolkata.
16. Development and execution of **Siemens BMS Static Logic Cards** (19 varieties), **BHEL Hall probe speed pick- up** and signal conditioner card for turbine RPM measurement, **Babcock system 9000 scanner** to restore automated BMS operation in the captive Power plant at Heavy Water Project Manuguru, department of Atomic Energy, Govt. of India.
17. Development and execution of **DC to DC converter** type Power Supply for WBSEB (T) under State Electricity Board, Govt. of West Bengal
18. Development, installation and commissioning of **ID Fan annunciation system, K2 Controller for coal feeder drive, Precision temperature sensor calibrator** were success fully executed at Bandel Thermal power Station.
19. Development and execution of control card for **Electromagnetic vibrating feeder** unit at Kolaghat Thermal Power Station, WBPDC
20. Development, installation and commissioning of **Temperature control** cards for high temperature **MF Furnace and its hydraulic control systems** at Aurora Methy Pvt. Ltd. Kolkata.
21. Development, installation and commissioning of **GE Fanuc PLC based Truck alignment and automatic coal loading system** for F6 Blast furnace at Tisco, Jamshedpur. Bihar.
22. Development, installation and commissioning of **PLC based total instrumentation and control of 40 / 60TPH Hot Mix plant using GE Fanuc series 90-30 PLC and HMI package** for Madhumita Construction Pvt. Ltd.,
23. Design, installation and commissioning of **PLC based Supervisory, Control , Data acquisition and on line measurement of process parameter for Miniature Steam Generation Plant** at Dept. of Applied Physics, Kolkata.
24. Development, design, manufacturing, installation and commissioning of **PLC compatible**



Digital Energy meter, Electronic Sine wave Power generator, Coal Flow Indicator, Coal Flow Integrator, HFO-LFO Integrator for "Power Station Simulator" at Bakreswar ThermaPower Plant, W. B

We undertake following jobs

- Design, engineering, integration, installation and commissioning of Supervisory Control and Data Acquisition system (SCADA) for Water Supply project, Power Generation project, Steel ,Cement Industry Oil and natural gas industries.
- Development of Automation and Supervisory user friendly customized software.
- Design of process & control loop, monitoring of process variables, data logging and Designing of Control Panel using Programmable Logic Controller (PLC). Design, fabrication and erection commissioning of MCC panel, Float Battery charger panel, Control deck of any type of Industrial system.
- Fabrication and installation of Industrial pilot plants including mechanical, civil, electrical and instrumentation job on turnkey basis.
- Repairing and after sales service of our manufactured products.
- Indigenization, development and manufacturing of imported electronic control cards keeping in the view of one to one replacement with pin to pin compatibility.
- Repairing of microprocessor based or PC based instruments and control system, subjected to the availability of components or substitutes.
- Maintenance Job on yearly contract basis on process equipment , Instrumentation system, Computer and SCADA systems, and Plant as a whole.
- Industrial and office automation and communication system using optical fiber and wireless Data network.
- Design and fabrication of laboratory setup for electrical, electronics, computer, and process control system on turnkey basis.
- Electronic control station of hot mix plant, All electrical type, electronics or **PC / PLC based system on turnkey basis.**
- Software development related plant automation, Laboratory Automation, Web based software for data management, Data capturing, Data analysis and storing and management software, software related to water supply project and laboratory.
- Local and wide area networking by Copper, OFC and radio for industrial , SCADA system and computer application.
- Design and engineering of custom specific application



LIST OF MANUFACTURED PRODUCTS (Import substitute)

1. Vibration proof **Duplex RTD (PT100)** for Turbine thrust bearing temperature measurement, E.R.T.L approved and equivalent to BHEL.
2. **RTD signal conditioner** with built in lineariser, Euro card type or modular type, isolated and non-isolated type with sensor.
3. **Thermocouple signal conditioner** with built in Lineariser, Euro card type / modular type, current or voltage output, and isolated or non-isolated with sensor element.
4. **Dual Signal Flame sighting head, equivalent to SYSTEM 9000** of BABCOCK POWER LTD., UK.
5. **Hall Speed Pickup and Signal conditioner for turbine RPM** measurement, Euro card type and equivalent to BHEL.
6. Electronic cards for **Burner Management System (BMS)**, Euro card type with 48 way F type connector, 19 varieties equivalent to SEMATIC C1, S.L.C electronic cards equivalent to M/S. SIEMENS.
7. **Heavy-duty solid state regulated Power Supply** units with all protections, redundant and non-redundant with custom specification and sizes. Modular or Euro card types are also manufactured. We also undertake fixed or variable, regulated or unregulated power supply unit.
8. **Float cum boost, single phase or three-phase battery charger**, transistorized or S.C.R type, electronically regulated and non-regulated type. Designed for any voltage and current combination for heavy duty and continuous charging purpose. The chargers are protected from over voltage, overload and short circuit.
9. **Position transmitter** and signal conditioner for Motorised Valve.
10. **Thyristorised adjustable speed drives** for coal feeder which replacing conventional imported Thyretron tube based K2 controller manufactured by M/S. Allis Louis of U.S.A.
11. **Isolated current multiplier cards**, Input: 0-20mA, 4-20mA and output 0-20mA or 4-20mA dc, multiplication 1:1, 1:2, 1:4, 1:8.
12. **DC-DC converter type Power Supply** (220V, DC input and isolated +/- 12V, +/- 14V, 2A dc output).
14. Control card of **Electromagnetic vibrating feeder**, Type THB equivalent to BHEL.



LIST OF MANUFACTURED PRODUCTS --- CONTD.

15. **Pulse Transformer card for Electromagnetic vibrating feeder.** Equivalent to BHEL.
16. **Precision Thermocouple / RTD Temperature calibrator**, range 700 degree Centigrade, built in furnace and oil bath.
17. **Speed switch and alarm annunciator** for ID Fan of Boiler.
18. **Digital Flow Indicator** with Bar graph for RCU Water Flow measuring system.
19. **Digital Ultrasonic level display.**
20. PLC compatible **Total Digital Coal Flow Integrator** suitable for power station simulator.
21. PLC compatible **Digital Integrator for HFO and LFO**, suitable for power station simulator
22. PLC compatible **Digital Static Energy meter**, suitable for power station simulator
23. PLC compatible **Synchroscope**, suitable for power station simulator
24. Digital **Loop powered Process Indicator**, bar graph with high intensity LED, large display board for analog or digital signal.
25. **Digital Flow Meter and integrator**, panel mount instrument type, portable or laboratory type.
26. **Portable digital process calibrator** for temperature controller, lineariser, signal conditioner.
27. **PC based Data acquisition, control and monitoring system (DCS)** with dynamic graphics; and ICON based easy programmable software.
28. **Laboratory setup** for Teaching Institution, Industry workshop on turnkey basis in the field of test and measurement.
29. **Instrumentation Laboratory setup.**
30. **Electrical & Electronics Laboratory setup.**



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31. **Auto manual station** with 4-20mA output
32. **Thermal calibrator** (Furnace and oil temperature bath) for calibration of thermocouple, RTD, or any temperature sensor 50°C to 650°C
33. **ID Fan annunciator**, (magnetic pick and speed switch)
34. **Opto isolated DC / AC, 400V to 50V** input to 24V TTL logic converter.
35. **Temperature transmitter of range 0-1000°C** .
36. **Precision Wave formGenerator** (Sine, Cosine, Triangular, Sawtooth, Square).
37. Precision **0-20mA current simulator**.
38. **Solid state switch** up to 150A.
39. **Variable Speed DC Drive** up to 20KW.
40. **Isolated SMPS redundant DC Power** supply 0-30V, 20A.
41. High Isolation, programmable DC / AC, high gain **Instrumentation amplifier** for process interface.



Process solution

1. All type of Smart transducer for **Process control and on line monitoring system.**
2. **Liquid Flow rate** transducer, like **Orifice, Venturis, Vortex, Magnetic, Coriolis** type of different make E+H, Rose Mount, ABB, Emersion, Burkert
3. **Mass Flow transducer** for gas and liquid of different make E+H, ABB, Rose Mount, Burkert make
4. **pH sensor and transmitter** of E+H, ABB, Burkert make
5. **Turbidity sensor and analyzer** of E+H, Omega and ABB make
6. **Dissolved Oxygen transmitter** of Omega, E+H, Burkert make
7. **Conductivity transmitter** of Omega, Burkert, E+H make
8. **Free Chlorine analyzer** of make Hach, E+H, ALDOS
9. **Hardness Monitor** of make Hach, USA
10. **Fluoride Analyzer** of make Hach, E+H
11. **Differential Pressure transmitter** (HART) of ABB,E+H, Rose Mount make
12. Piezo resistive **Pressure sensor and transmitter** of ABB, E+H, WIKA, Burkert
13. **Ultrasonic Level, Volume, Flow transducer and transmitter** of make E+H, Germany, Burkert
14. **Capacitance smart Level, Volume transducer and transmitter** of make E+H, ABB, Miltronics,
15. **Load cell and transmitter** for batch weighing application
16. **Smart Process Indicator** of various ranges and cut out sizes from E+H, ABB, TATA Honeywell, YBL, Burkert
17. **Stand alone Data logger** of make ORION Group, U.K
18. **Lux sensor** and transmitter



Process solution

19. **GE Fanuc PLC 90-70, PLC 90-30, PLC Versa-Max CPU controller, PLC Rx 3i redundant** or non redundant type, Power supply, Discrete I/O, Analog I/O, Eathernet TCP/IP, Modbus, Profibus, Device-net communication module and fully integrated in IP60 Standard professional Panel with power supply system and accessories.
20. **Genius Field bus controller and Filed I/Os** are used for distributed process control and measurement application from GE Fanuc USA
21. **Industrial Server computer with or without, hot stanby backup server system for SCADA** using GE Fanuc Cimplicity software and dedicated run time process software development for specific application
22. **Industrial data entry and LCD display terminal** of make GE Fanuc USA
23. **Industrial Viewer computer with Web View** or Cimplicity Viewer software of make GE Fanuc USA
24. **Low-cost PC based Data acquisition**, Parallel / serial port plug instrument with Pico scope, Pico log software.
25. All types of **Temperature sensors bare and thermowel** type of different length, termination and insulation.
26. Low cost reliable **Temperature controller** of various ranges and cutout sizes.
27. **Auto tuned P.I.D Controller and Process Indicator** of various ranges and cut out sizes from E+H, ABB, TATA Honeywell, YBL
28. **Laser site Temperature sensor**
29. **Infrared Temperature sensor**
30. Piezo type **vibration sensor** and transmitter and digital Vibration analyzer.
31. **R.P.M measurement** using Laser or Infra-ray sensor and transmitter
32. **Proximity switches** of different range of make P+F, Germany



Process solutions

33. **AC Voltage, Current, Frequency, KW, KVA, Max Demand, Energy (KWH) transmitter** for measurement of 1 ph / 3ph on line parameters.
34. **Optical Encoder** for measurement of movement of machine bed of make P+F / Omran and interface module for PLC.
35. **Sound Level** Sensor and transmitter.
36. Thyristorised **Heat controller** with 4-20mA control input
37. **Hand held or panel type AC/DC Watt meter using Hall sensors.**
38. **Soft starters** AC 3ph 400 /440 volt upto 100HP, with PLC interface
39. **DC motor speed controller with** all protection for DC motor from FHP motor to 25 HP motor with 4-20mA Control input
40. Complete IP based Color **Mega Pixel Surveillance Camera** System for production and security control and interface with SCADA platform., Make: Arecont Vision LLC, USA
41. **Injection break** module for AC motors with PLC interface.
42. **Snatch free module for AC** motors with PLC interface.
43. **Industrial ACmotor speed** controller upto 7.5 KW. 1 ph / 3ph with PLC interface.
44. **Zener barriers, Galvanic isolation** unit for hazardous place of make P+F.
45. **Pressure switches** of various range of make WICA, Burkert
46. Vacuum swatches of various range of make WICA
47. Various type and shape of RTD temperature sensor transmitter for surface temperature, Bearing temperature, Liquid temperature, Air temperature measurement.
48. Hall effect current transducers (AC/DC) , split core, solid core and PCB mount type, with PLC interface.
49. Hall effect voltage transducers AC/DC with PLC interface.



LIST OF OUR SOME ESTEEMED CUSTOMERS

1. Public Health Engineering Directorate, Govt. of West Bengal
2. Petron Civil Engineering (P) Ltd
3. H.R.P.U, Department of Atomic Energy, Govt. of India.
4. Heavy Water Plant Manuguru, Department of Atomic Energy, Govt. of India.
5. Kolaghat Thermal Power Station, W.B.P.D.C.L
6. West Bengal State Electricity Board, Vidyut Bhavan, Kolkata
7. Central Testing Department, W.B.S.E.B, Aviskhan, Salt Lake, Kolkata
8. Bandel Thermal Power Station, WBPDC, Tribeni, Hoogly, WB.
9. Santaldih Thermal Power Station, WBPDC, Santaldih, Purulia, WB.
10. Siemens Ltd., Salt Lake Electronics Complex, Kolkata.
11. Directorate of Quality Assurance, Ministry of Defence, Govt. of India.
12. Eastern Regional Test Laboratory (East), Kolkata
13. ABB ABL Projects Ltd., Kolkata
14. Eastern Railways, Govt. of India, Kolkata
15. G.E.C Electronics Unit, Salt Lake, Kolkata
16. Infar (1) Ltd, Ganganagar, North 24 Parganas.
17. S.D Hardson & Co.
18. Gramophone Company (1) Ltd. Kolkata
19. Instrument Research Associate, Bangalore
20. Pepprel + Fuchs (India) Ltd. Bangalore
21. ALCOA ACC Industrial Chemicals Ltd., Kolkata
22. Instrumentation Ltd. Kota, Govt. of India.
23. Hindustan Fertilizer, Durgapur and, Haldia Unit
24. Macmet India Ltd., Kolkata
25. CIVTECT(INDIA) Pvt. Ltd., Kolkata
26. Madhumita Construction (P) Ltd., Kolkata
27. Radon House Pvt. Ltd., Kolkata
28. C.M.E.R.I, Durgapore
29. Beekey Enterprises, Kolkata
30. Indian Railways, Jamalpur, Bihar, Govt. of India.
31. P.S.C Engineers Pvt. Ltd., Kolkata
32. Bakreswar Thermal Power Station, Birbhum, WBPDC
33. Variable Energy Cyclotron Centre, B.A.R.C., Salt Lake, Kolkata

