radix®

AUTOMATION SOLUTIONS

Process Automation

SCADA

Panels

PLC

Instrumentation

Barcode Systems

Reactor Automation

VFDs

Furnace Control

Automation

Access Control

Wireless

Dataloggers

EMS/BMS

Redundant Systems

www.radix.co.in

Control Panels

- Complete design & assembly capability
- Independent QC department
- In-house automation team
- Site commissioning team
- Schematic & outline drawing
- Completely prewired, for easy installation
- CNC construction

- Safe and reliable operation
- Certified panels from IP42 to Ip65
- Components from Tier - 1 vendors
- Labelled and colour coded wiring
- 3D-CAD (Solid works, E-plan software, Autocad)

PLC PANELS

- SS / MS / FRP / FLP Panels
- Customised as per requirement
- Integrated with PLC, HMI, Barriers, VFD etc.

- HMI's with screen size 3.5" to 15"
- PLC's from AB / Honeywell / Mitsubishi / Siemens / Schneider, etc
- Desk type / Floor standing / Wall mount

INSTRUMENT PANELS

- DG control
- Process monitoring & control
- HVAC control
- Gas & engine monitoring
- Data logger panels

- Free standing / floor mounted
- SS / CRCA 14/16/18 SWG
- Compartmentalised
- Pneumatic panel
- High density cabling

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VFD & STARTER PANELS

- AHU / Chiller control
- Pump / Motor / Blower speed control
- Reactor control
- Conveyor / Crane system

- Star / Delta DOL starters
- Remote / Local / Bypass control options
- 1-400 HP drive panel
- AB / Danfoss / Mitsubishi / ABB / Fuji / Delta

THYRISTOR PANELS

- With communication options
- Bypass facility with safety interlocks
- Universal control input
- Designed for outdoor installations
- Point & profile control
- Single / two / three phase loads

- Phase angle / zero cross over control
- Voltage 220/230/480 V
- Amp Rating : 30-1000 Amps
- Multizone furnace controller
- Star / Delta with neutral
- 0-100% modulated heater output

ANNUNCIATOR PANELS

- MS / SS / FLP
- Process alarms, Safety indications
- Security gate indication
- Process sequence indication
- Generator system

- 24 VDC / 110 V AC, 230 V AC
- Optional RS485 communication
- Operational sequence: Auto, Manual, First-up, Ring back
- Multi-colour windows
- 8/16/24/32/48 Window annunciator

Control Panels

FLAMEPROOF PANELS

- Gas group: I / IIA / IIB / IIC
- Hooter button acknowledgment
- Zone protection : Zone 1 & Zone 2
- IP protection IP65, IP66

LARGE DISPLAY PANELS

- 7-segment display
- Display size 2, 4, 6 ,8"
- Static & scrolling display
- Input type : Universal, RS485

GAS DETECTION PANELS

- SS / MS panel
- CO monitoring and control
- Process alarms
- Optional RS485 communication
- Screen reader support enabled.

HVAC PANELS

- SS/MS/ CRCA 14/16/18 SWG
- IP44, IP52, IP55 and IP65 protection classes
- RAL7032 and RAL7035 paint shades
- Integrated with DDC ontroller, HMI, VFD and SCADA

SS PANELS

- Ideal for Pharma Industry
- 14 SWG (Doors) 16 SWG (Body)
- IP44, IP52, IP55 and IP65 protection classes
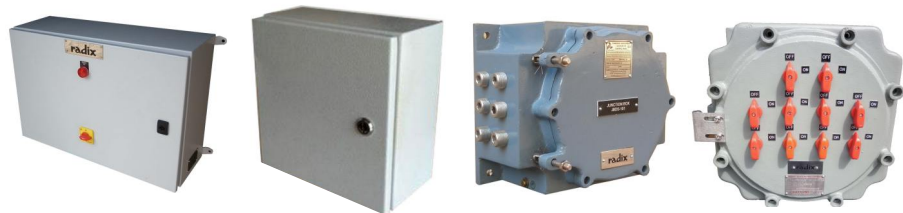- RAL7032 and RAL7035 paint shades

Control Panels

APFC PANELS

- Thyristorised or contactor based
- Modular to upgrade, up to 500 KVAR
- Capacitors : L&T, ABB, Epcos.
- PF controllers : Epcos , L&T, Schneider

JUNCTION BOXES AND PDBs

- SS316 / SS304 / MS JB with gasketed trims
- FLP Junction boxes
- Top / bottom / side cable entry
- Aluminium / copper bus option

MCC & PCC PANELS

- Available in standard & customized specifications
- Includes all ACBs, MCCB etc
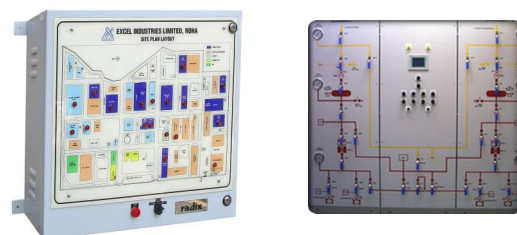- MCC, PCC panels
- Multi compartmental design

CALIBRATION BENCHES

- Temperature, Pressure, Flow
- Completely sofware / SCADA controlled
- Tamperproof reporting
- Modular & ergonomic design

MIMIC PANELS

- Multi-colored LED
- Vinyl board for Mimic
- Protective Acrylic cover
- Annunciation system

LARGE DEVELOPMENT TEAM

- Software development centre of 5000 sq.ft
- In-house control panel manufacturing facility of 7000 sq.ft
- Separate teams for sourcing, stores, QC, logistics
- Experience in PLC, VFD, Servo
- Backed by DSIR approved R&D centre

DEEP DOMAIN EXPERTISE

- Over 40 years of experiment in Pharma, Food, Chemical industries
- Serving 6000+ customers
- Field proven Radix process instruments and communication products
- Market leaders in temperature, level, BMS products

SIMPLIFIED SOURCING & EXEC

Project Management Plan	Basic & Detailed Engineering	System Development
Detailed schedules	Control philosophy & I/O schedule	Panel GA & wiring schedules
Progress reports	Instrument specifications & architecture	Logic development & panel assembly
Procurement plan	Detailed drawing & cable schedules	HMI / SCADA screen development

PAN INDIA SUPPORT

- 60 field engineers, 40 support staff
- Main development centre in Mumbai
- Project execution teams in regional offices - Delhi, Hyderabad, Ahmedabad, Bangalore, Chennai
- Combination of in-house hardware & software skills
- On call support

UTION

- Proven track record of 1000 projects
- Complete turnkey contracts
- Single point source for Instruments, Control Panels & Automation
- Existing relationships with contractors & OEMS

TIME & COST ADVANTAGE

- In-house Radix Instrumentation products
- 40 years of process & instrumentation systems expertise
- Channel partner sourcing from Mitsubishi, Dwyer, Danfoss, Greystone, etc
- Regional execution teams
- Vendor independent, open system design

Installation & Start-up
Factory Acceptance Testing
Field service installation
Cable laying & termination
Cold and hot testing

Commissioning & Qualification
Qualification / Protocols - BQ/IQ/OQ/PQ
As built drawings
SOPs & user manuals

Post Execution Support
O&M, AMCs
Remote support & enhancements
Technical consultancy services

Environmental Monitoring

EMS

Integrated system involving
- Monitoring and logging of environmental data
- All field instrumentation including RH +T Tx, DP Tx, Switches, Clean room indicators
- 21 CFR Part 11 compliant software
- Multiple architectures with and without PLC / DDC
- Logging interval from 1 minute onwards
- Remote PC based viewers
- 100's of successful installations in India & abroad
- Wired & wireless systems
- Optional energy monitoring

EMS Software with features like
- Mimics for instruments & areas
- Real-time / Historic trends / Alarms
- Extensive admin capabilities
- User configurable reports
- High level security features
- SMS & system alert
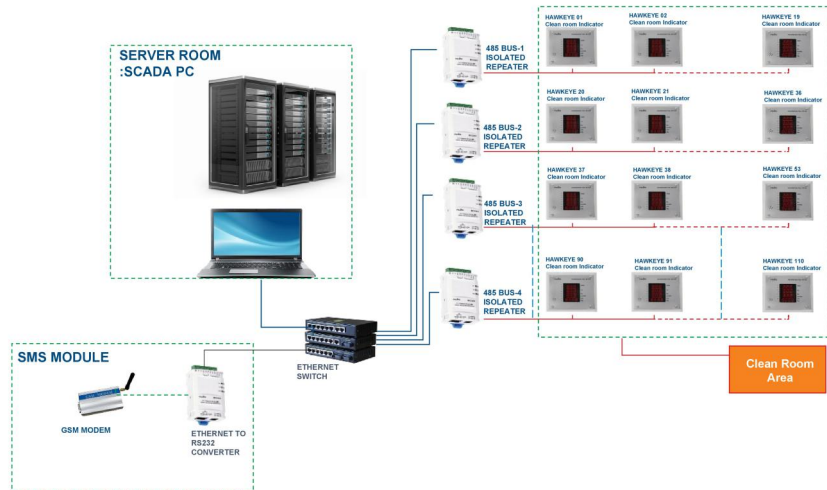
BMS

- Precise control of various HVAC Components
- DDC / PLC based systems
- Room level control of RH Temperature & Differential Pressure
- Energy saving through use of VFDs
- Thyristor control for Electrical heaters
- Integration with Chillers, access systems & CCTV.
- 21CFR Part 11 Compliant system
- Turnkey solutions consisting of field instruments, automation and software
- Systems for comfort as well as technical HVAC
- Detailed graphics and reports greatly reduce training requirement
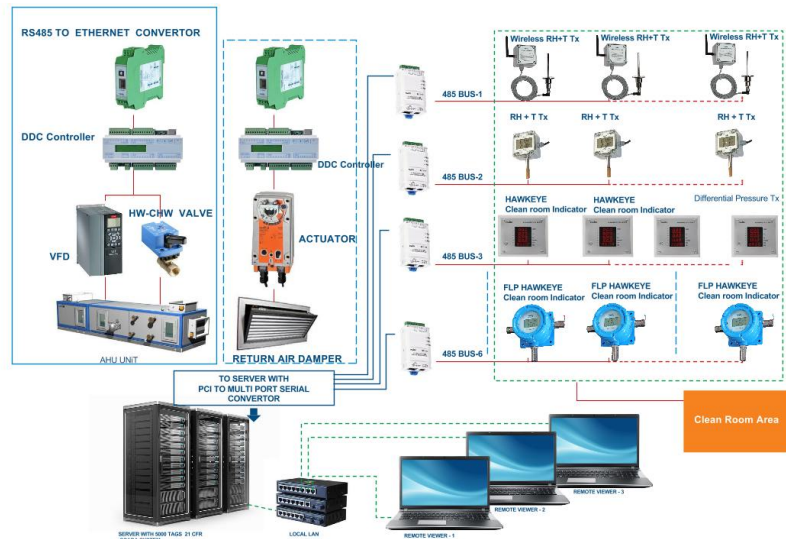
PLANT AUTOMATION

- Development of control philosophy
- Control system based on SCADA, PLC, VFDs etc.
- Hardware supply, programming
- Integration of subsystems like Blower, Pumps, chiller, evaporator, storage tanks etc.
- SCADA system up-to 10000 tags
- Mimics for machine operation
- Real-time / Historic trends / Alarms
- Reports for process parameters
- Remote viewer over LAN/Internet
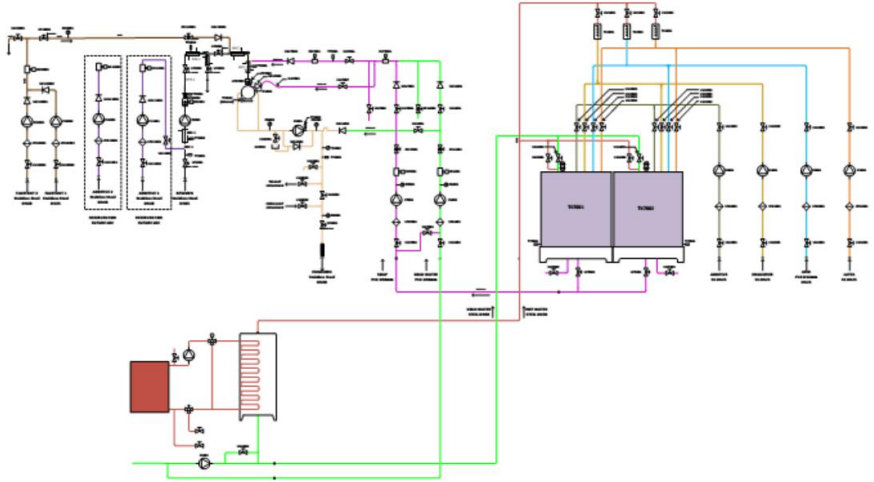
ENERGY MONITORING SYSTEMS

- SCADA based 24 x 7 monitoring system
- Communication using MODBUS or any other communication protocol
- High quality graphics & customised reports
- Voltage, current, KWH, harmonics
- RS485-Ethernet based communication
- SMS alert, auto generated email reports
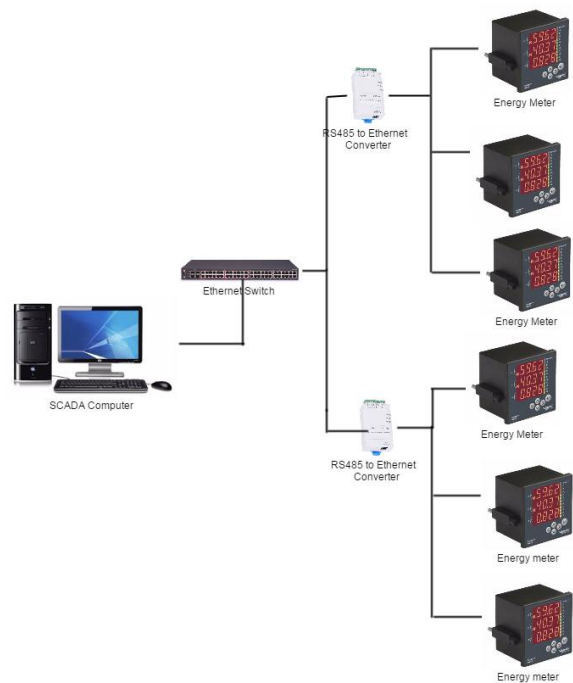
PROCESS MONITORING SYSTEMS

- Full range from simple to complex system
- Stand-alone, networked, redundant architectures
- Turnkey projects consisting of SCADA, PLC, field instruments, control panel, cabling
- PDF, Excel reports for Batch / Shift / Product analysis
- Software / Hooters / SMS based alarms and alerts
- Simple & user friendly to operate
- Local, remote and cloud-based access
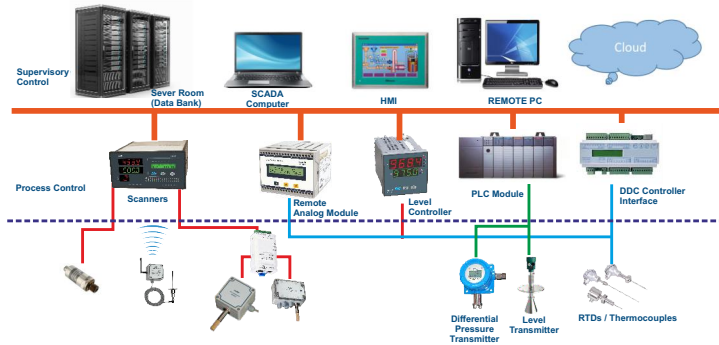
DATA ACQUISITION SYSTEMS

- SCADA / datalogger based systems
- Scalable from less than 10 to few thousand points
- Integration & communication through different technologies like MODBUS, RIOs, Protocol converters, scanners etc.

Examples
- Assembly line batching system
- Barcode reading and recording system
- Multiple scanners and datalogger
- Condition monitoring for engine testing
- Plant utility monitoring systems
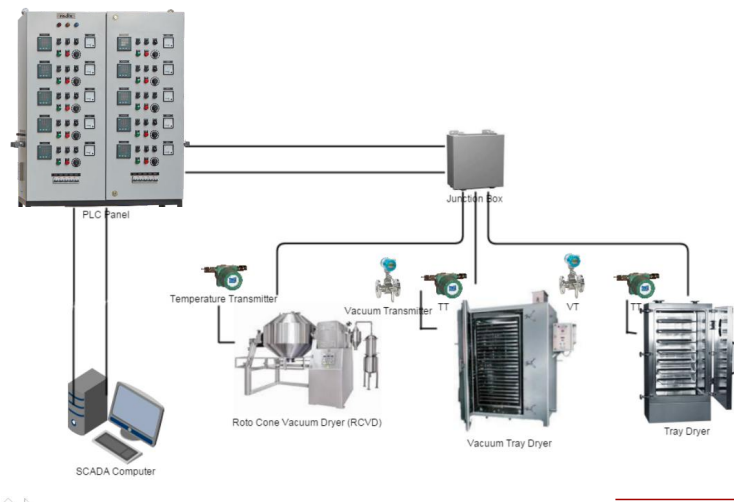
DATALOGGING SYSTEMS

- Radix has a wide range of datalogging equipment, with a mix of standard and custom engineered solutions.
- Dataloggers from 1 to 100s of channels

Products
- Paper & Paperless chart recorders
- Modules with communication interfaces - Touch screen type
- Multi instrument/scalable systems - rSCADA/Ellipse
- Wireless system - where cabling etc. is difficult or very fast installation is required
- PLC/Scanner based systems for extremely fast datalogging
- Autonomous battery operated GPRS/Cloud based systems for remote locations
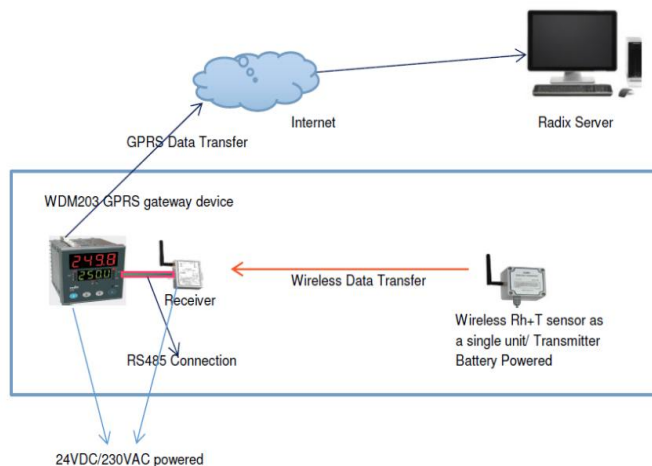
ONLINE-OFFLINE REDUNDANT SYSTEMS

- Redundant system to ensure zero data loss
- Radix multi master device transmits data to offline & SCADA system
- HMI based offline system will store transient data
- Offline system will seamlessly upload transient data when SCADA is online again
- Up-to 1 GB of transient data
- Multiple viewer for simultaneous remote viewing
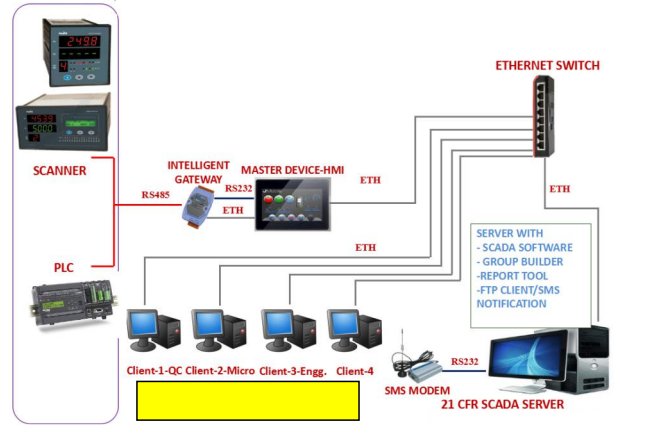
MATERIAL HANDLING SYSTEMS

- RFID and Barcode based system
- Asset tracking, real time location and management features
- PLC based control systems with SCADA interface
- Complete solution including readers, tags and mobile computers and software
- Option of multiple standards like EN14803, DIN30745, ISO15693

Applications :
- Bin management
- Asset tracking
- QC process tracking
- Ware house management
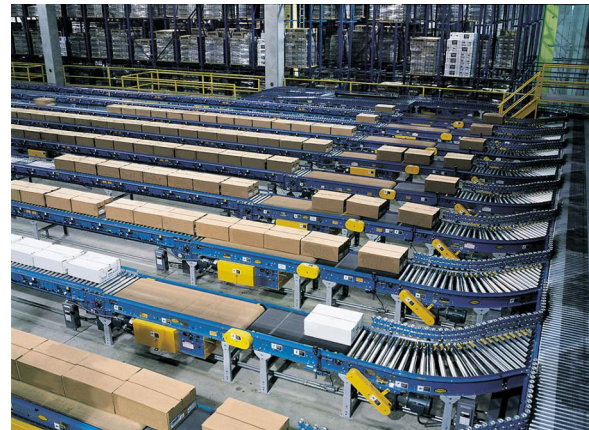
DOOR INTERLOCK SYSTEMS

- Powerful Radix controller for interlocking upto 2/4/6 doors
- Field programmable, through software
- Audio / Visual indication
- Multiple options for Bio-metric system, Card readers
- MODBUS communication
- Provision for emergency exit
- PC configurable parameters
- Interfaces for fire detection etc.
- FLP construction
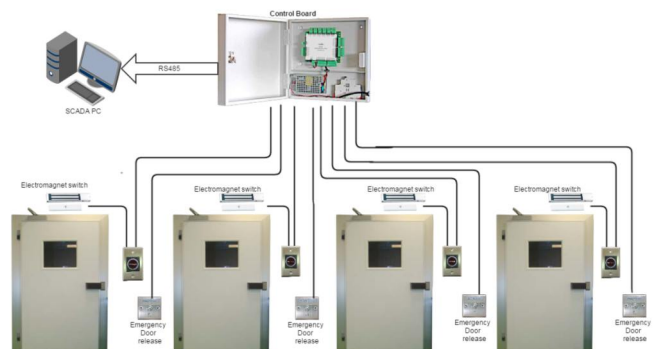
Other Products

INSTRUMENTS

SCR POWER REGULATORS

LEVEL & FLOW PRODUCTS

INTERNATIONAL PARTNERS

RTDs & THERMOCOUPLES

BMS PRODUCTS

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