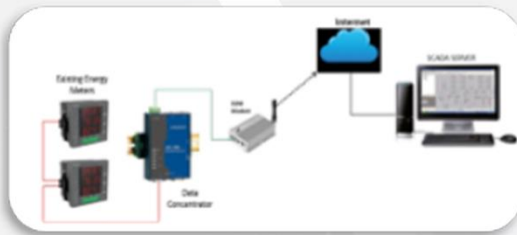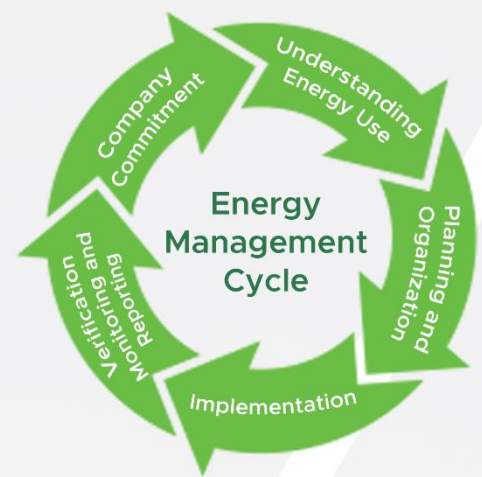**X-Force**
Energy Management System

X-Force Energy Management System

X-Force Energy Management System consolidates energy related data (sources, costs, control and monitoring points) into a data warehouse, and provides a platform for tools to easily access of data and obtain actionable information. The EMS makes data-driven information available so that the end user is able to perform in-depth diagnostics, engineering analysis, and monitoring in a small fraction of the time compared to time it took with earlier methods.

By publishing information for consumption outside the traditional facilities, management area, an EMS supplies critical information to department heads, financial staff, and executive management as well.

Various utilities are integrated as a part of energy management to provide overall energy efficiency and equipment monitoring.

Various Energy Sources can be integrated at one location

Web client with graphics, trends and alarms.

User served analytics, dashboard and reports

SMS and Email alerts

Rollover counter for meter readings

Efficiency Calculations and Condition Monitoring.

Alarms/Alerts and Control Output for MD/PF Control.

Virtualization support for HA and DA.

Integrated drivers for 30+ meter models.

Energy Management Cycle

- Company Commitment
- Understanding Energy Use
- Planning and Organization
- Implementation
- Verification and Monitoring and Reporting

3 tier Architecture, Cloud or Hybrid architecture.

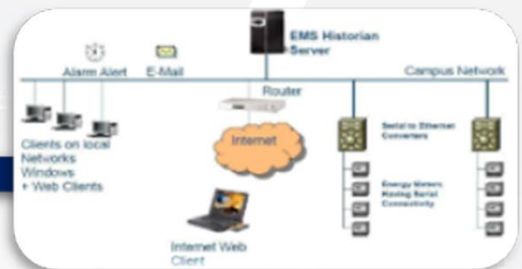Web based access to configuration

Modbus TCP Support OPC Support

GPRS based Wireless communication

Real Time Trending and Graphing

Alarms and Events Logging

Role based security and AD Integration

Emailing and SMS alerts on Event

Energy Billing and Cost Allocation

Web Client includes Graphics, Trends, Reports, Alarms, KPI Dashboards

Read Load survey data from meter to reconnect

Manual Entry screen for off-line data

Redundancy at Server and communication level supported

Customized user definable reporting

Our Solution Complies to Industry 4.0

Interoperability: The ability of cyber-physical systems (i.e. work piece carriers, assembly stations and products), humans and Smart Factories to connect and communicate with each other via the Internet of Things and the Internet of Services
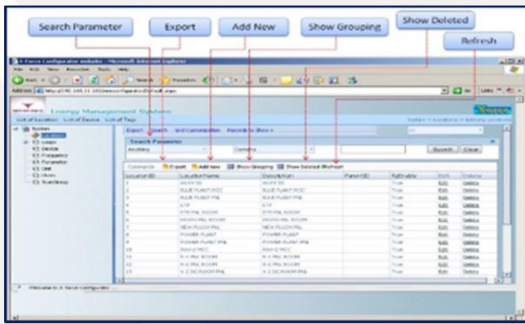
Connectivity: The ability to capture the data by connecting nodes with GPRS communication from any remote location

Real-Time Capability: The capability to collect and analyze data and provide the insights immediately

Modularity: Flexible adaptation of Smart Factories for changing requirements of individual modules

Analytics: Generates insights and knowledge in form of trends, dashboards and various reports.

Web Configurator

Web based configuration with wizards to configure devices including direct selection of make and model for single step configuration.

Development of graphics, SLD and dashboards.

Multi-site role based security model

Support multi-vendor devices including more than 30+ predefined make and model for meters.

Predefined Meter Templates makes easy configuration in just few clicks
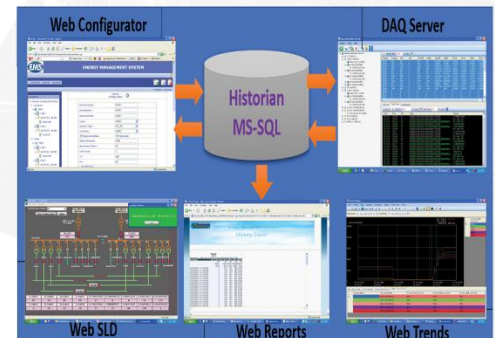

Aquisition Server

Acquires data from almost any source i.e. Ethernet, Serial, OPC-DA/UA, ODBC, GPRS etc.

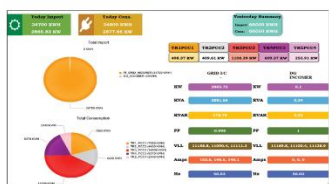Smart Parallel processing of data connections.

Redundant Architecture supported.

Collector with store forward.

Complex formula calculation on source data.

User Interface

Web-Graphics

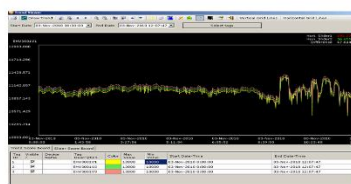Supports all major Internet Browsers with user authentication.

Displays all parameters as per user preference and selection.

Display Device and fault status dynamically.

Can Display Process Graphics Display.

Process Graphics Display.

Display Data by Meter ID, Area, Panel, Function etc.

Trend Client

Desktop or Web based App.
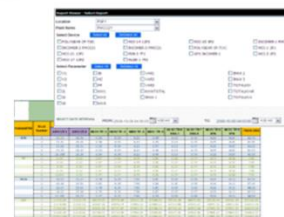
Real Time and Historical Data Mode.

Individual & Group Parameter Display.

Zoom In-Out, Rubber Band Zoom features.

Data Export in Excel & HTML.

Instant Comparison.

Configurable Trend Layout

Reports

Built-In Standard 20+ Report Formats to satisfy most of the user requirements

Tabular and graphical reports

Scheduled Reports

Trigger based Reports.

Manual Data entry screens for contextual information like production, In-charge name etc.

Dashboard & Mobile App

User configured self served analytics and dashboard client in web and mobile

Widgets including Bar, Line, Pie, Map, Radar, OEE, Pareto, sunburn, KPI table, Scatter, Treemap, bubble, polar, histogram, pivot grid, Box Plot, X-Y plot.
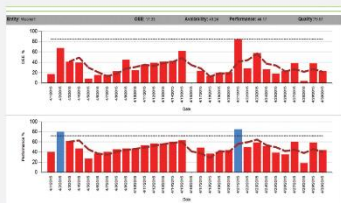
Advance Modules / Apps

Alarm/Alerts

Alarms & Alerts based on Standard Setpoints.

Rule based alarms for multiple conditions or site/Equipment status.

Messaging using Mobile, Email or Mobile App.

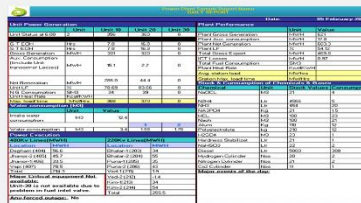Predictive warnings based on history data trends.

OEE Calculator

Integrates Process data i.e. Production, Transfer Flow, etc.

Integrates Pump Data i.e. Flow, Pressure, Vibration, Run Hours etc.

Calculates Energy/ Unit Production

Pump Efficiency Calculations using Energy, Flow, Pressure Data.

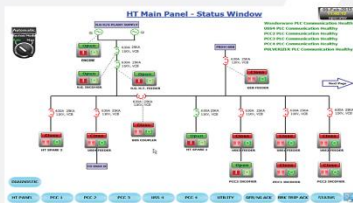Equipment Condition Monitoring in Real Time.

Energy Audit

Benchmarking and deviations.

Asset database and specific energy consumption calculation and comparison with actuals.

Audit reports for consistency, reliability and quality of utility generation and usage.

Capacity management

Preventive Maintenance

Asset and equipment database integrated with ERP or central system.

Scheduled / Usage bases or Predictive Maintenance order generation

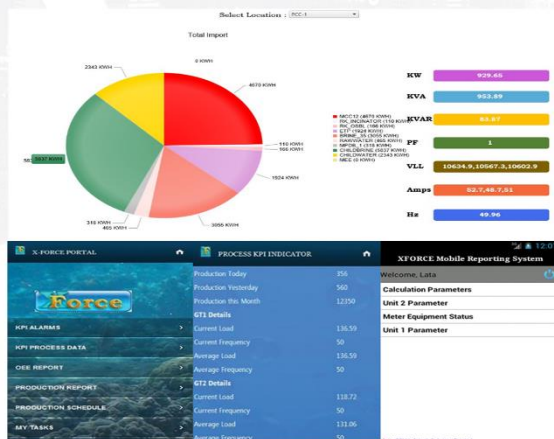PM Job history with Manpower and spares usage.

Notification on different channels like email and mobile.

Analytics

KPI to take decision based on knowledge generated

High level recommended actions based on history and current status

Prediction of equipment failure and early warning system based on interpolation and regression methods

Integration

ERP / Central system integration using SAP-RFC / MII / Shared database / XML / Flat files

ICCC Integration over OPC-DA, HDA, UA

Rest API for data collection from system.

Cloud ready with MQTT publisher module.

Our Customers

SSM InfoTech Solutions Pvt. Ltd   X-Force Energy Management System

Select Your X-Force EMS Package

	Lite	Standard	Professional	XL	AIO (All-in-one)
No. of Devices Supported	Lite-10 Lite-20	50 – 100	100-500	1000	Unlimited
Multi Vendor Meter Support	No	Yes	Yes	Yes	Yes
Trend Client	Single User	2 User	5 User	15 User	Unlimited
Graphics/Dashbaords	5	10	50	100	Unlimited
Reports	3	10	50	Unlimited	
Data Export	CSV	CSV, Excel, ODBC, XML, Flat File.			
Communication	Serial	Serial /Ethernet /OPC-DA	Serial / Ethernet / OPC DA or UA / ODBC	Serial /Ethernet / OPC DA or UA / ODBC / IEC	Serial / Ethernet / OPC DA or UA / ODBC / IEC
Protocols	Modbus RTU	Modbus RTU, TCP/IP,	Modbus RTU, TCP/IP, EthenetI/P, ProfiNET.	Modbus RTU, TCP/IP, EthenetI/P, IEC, ProfiNET.	All Available
Database Support	Local DB / MS SQL Express	Local DB / MS SQL Express	Local DB / MS SQL Express	Local DB / MS SQL Express / Standard	Local DB / MS SQL Express / Standard / Enterprise
Operating System	Win10	Win10	Win10 / Server 2016 Std	Win10 / Server 2016 Std	Win10 / Server 2016 Std / Enterprise
Analytics Module	-	-	Optional	Built-In	Built-In
Energy Source Support	Electrical	Electrical	Electrical, GAS, Water and other Energy Source, Process Data Equipment Data.		
Hardware Requirement	2.2 GHz, 2 Core, 4 GB, 100 GB	2.2 GHz, 4 Core, 8 GB, 500 GB	2.2 GHz, 4 Core, 16 GB or higher, 500 GB or higher		

X-Force
Energy Management System

SSM

An ISO 9001:2015 Certified Company

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