



Products & Solutions



SAMA Products	Applications
<p>RT Historian</p> <p>Handle redundant sources Queries, calculations, expression Web & Mobile Apps; query via SMS</p>	<p>Real time web & Mobile visualisation of Plant. Management information systems with calculations. Monitor stability of operation – steady state or not. Optional trends, tables and graphics.</p>
<p>RT Optimiser</p> <p>Calc library, equations solving. Auto build blocks on equations.</p>	<p>Merit order rating & scheduling. Tank farm material balance. Process calculations & conversions.</p>
<p>Alarm Management</p> <p>Logger, handle redundant sources. Search, sort, Logical processing. Analysis, XL reports, soft windows. Rationalisation, Master Alarm DB, Enforcer, secure OPC gateway. Alerts- SMS Out-In, email, IVRS, audio, OPC DA out, Digital outs, Modbus. Statistical Root Cause Analysis. Generate Real time alarms with OPC DA.</p>	<p>Helps in complying to EEUMA 191 & ISA 18.2 standards. Soft annunciation & LVS interface. Helps in consistent operations & online operator help. Discrepancy lists and enforce DCS. Dynamic alarming & parameter scheduling. Timely alerts to prevent accidents and off spec products. Escalate on time in alarm, frequency. RCA based on Decision Tree method, probability.</p>
<p>Interactive Reporter</p> <p>Continuous and batch processes. User comments at each step. Process values & Alarms.</p>	<p>Use XL template or forms for report configuration. Store reports as pdf, html; or csv and view in XL. One software for alarms as well as process data.</p>
<p>Document Manager</p> <p>Manage & maintain plant documents & data Secure storage, access & version control User dashboard, search; find, replace.</p>	<p>Store all documents & data with secure access control viewer, proposer, approver. Query, edit, propose, approve with new version. View of early version possible. Generate drawings. View audit trail.</p>
<p>OPC Products</p> <p>Redundancy switch for DA & AE Secure OPC Gateway OPC server for Modbus, SQL... Inter domain data transfer. ERP-SAP interface</p>	<p>Helps in simplifying connectivity and make it robust. Handle redundant sources Parameter level read & write access control. Mirrors an OPC DA server across firewall. Eliminate Dcom issues and ensure stable connectivity.</p>
<p>OPC Products</p> <p>Campus Utility Management system Industrial remote monitoring, control Alerts Gateway.</p>	<p>Proven products with IIoT technology. Monitor & control motors, levels, flows and other measurables, lighting from anywhere. One alert gateway for SMS, AI/DI/Dos, IVRS.</p>
<p>Enterprise portal</p> <p>Common portal for production & sales data, alarms & events, Documents and much more.</p>	<p>View all plant process & production data, alarms & events, Reports and Documents from a single SAMA portal.</p>



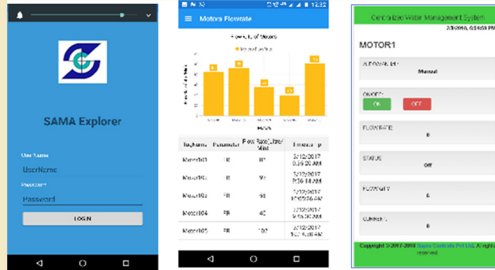
Products & Solutions



SAMA Interactive Alerts, Mobile apps & Web services

Mobile Apps

Process data, reports & alarms, events

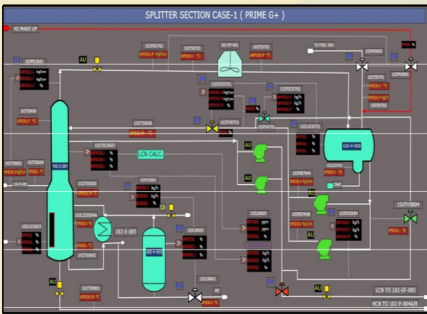


Monitor, operate remotely, securely

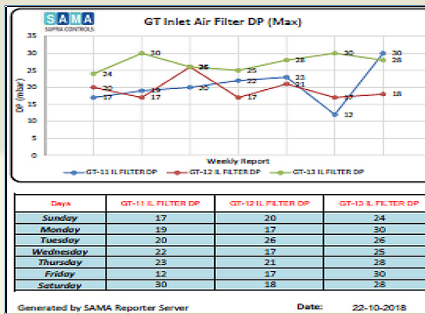
Mobile SMS

SMS OUT upon Value beyond limits, events.
SMS OUT-IN System send SMS- user replies.
SMS-IN-OUT User queries values & receives.

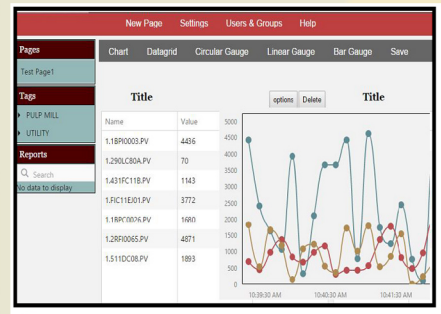
Web Views- Analyse- Single portal for Production data, reports as well as alarms, events; documents.



View Graphics



View Reports



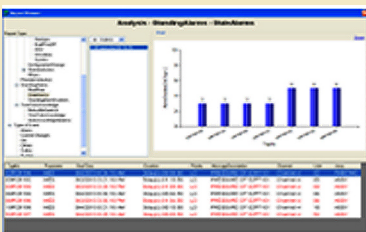
View & trend parameters

Start Time	Top No	Priority	Message Description	Unit	Area	Plant	Channel
2017-07-28T10:46:58	2472-0	HI	TEMPERATURE	1	FCCU	NAK	1000-46-S
2017-07-28T10:46:55	239-0	HI	PRESSURE ON 409225	1	FCCU	NAK	1000-46-S
2017-07-28T10:46:51	238-0	LOW	LEVEL CONTROLLER OF 100020	1	FCCU	NAK	1000-46-S
2017-07-28T10:46:51	19-0	HI	PRESSURE	4	FCCU	NAK	1000-46-S
2017-07-28T10:46:49	138-0	LOW	LEVEL CONTROLLER	4	FCCU	NAK	1000-46-S
2017-07-28T10:46:25	133-0	LOW	LEVEL CONTROLLER	4	FCCU	NAK	1000-46-S
2017-07-28T10:46:20	133-0	LOW	LEVEL CONTROLLER	4	FCCU	NAK	1000-46-S
2017-07-28T10:46:17	133-0	LOW	LEVEL CONTROLLER	7	FCCU	NAK	1000-46-S
2017-07-28T10:46:17	133-0	LOW	LEVEL CONTROLLER	7	FCCU	NAK	1000-46-S
2017-07-28T10:46:15	2-78-0	HI	TEMPERATURE OF 0117C-0	1	FCCU	NAK	1000-46-S
2017-07-28T10:46:12	237-0	LOW	TEMPERATURE	2	FCCU	NAK	1000-46-S

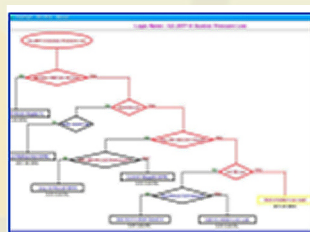
View Documents

Alarm ID	Alarm Name	Unit	Area	Plant	Channel	Priority	Message	Time	Operator	Action
010001	Temperature High	1	FCCU	NAK	1000-46-S	HI	TEMPERATURE	2017-07-28T10:46:58	Operator	Copy
010002	Pressure High	1	FCCU	NAK	1000-46-S	HI	PRESSURE	2017-07-28T10:46:55	Operator	Copy
010003	Level Low	1	FCCU	NAK	1000-46-S	LOW	LEVEL CONTROLLER	2017-07-28T10:46:51	Operator	Copy

View Alarms & events



Manage Alarms



Root Cause Analysis

Tag	Parameter	Process	Upper	Lower	Current	Propose	Alarms
P10001	Flow	Process	100	0	50	OK	OK
P10002	Flow	Process	100	0	100	HI	HI
P10003	Flow	Process	100	0	50	OK	OK
P10004	Flow	Process	100	0	50	OK	OK
P10005	Flow	Process	100	0	50	OK	OK
P10006	Flow	Process	100	0	50	OK	OK
P10007	Flow	Process	100	0	50	OK	OK
P10008	Flow	Process	100	0	50	OK	OK
P10009	Flow	Process	100	0	50	OK	OK
P10010	Flow	Process	100	0	50	OK	OK

Dynamic Alarming- Secure OPC gateway

Optimise the Plant with RT Optimiser

INDEX	LOAD(MW) SCHEDULED	IFC (Rs/kWhr)
Unit-1 Optimum loading	578.99	2072.71
Unit-2 Optimum loading	521.01	
Unit-1 Loading at present	634.93	2131.74
Unit-2 Loading at present	-0.2	1513.91

