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Remote Connectivity Made Easy

RTrU301™

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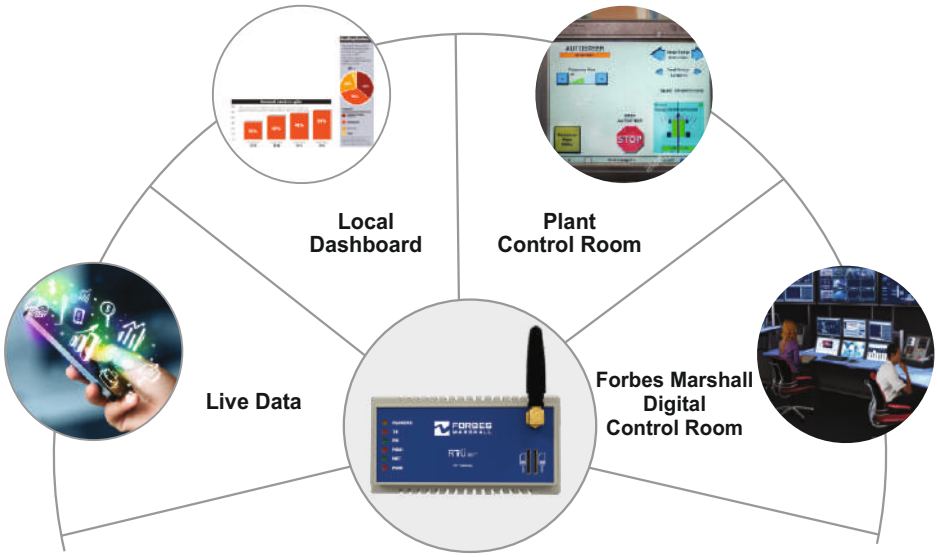
RTru301™

Industry 4.0 demands intelligent plants, capturing field data and translating it into information before connecting to a cloud / central server. Remote access to processes, equipment, and applications from anywhere in the world is becoming the norm, and provides a key advantage in understanding and evaluating plant performance.

For over 75 years Forbes Marshall has been providing innovative solutions to help businesses improve their process and energy efficiency and be more environmentally responsible. Our digital offerings go beyond connectivity and help measure, analyse and sustain key performance indicators.

The Forbes Marshall RTru301™ is a cloud based remote terminal unit (building block) for driving IIoT enabled eco systems required in process plants.

Application Overview



The RTru301™ is a basic building block for single location remote monitoring to complex multiple locations.

The RTru301™ collates field parameters from multiple processes and utilities, derives key performance indicators (KPIs) and key result areas (KRAs) from them, enabling proactive decision making on-the-go. The integrated modem sends the data to a cloud server and establishes connectivity in remote locations. The data can be accessed from the cloud with a click of a button.

Integrated data capturing, computation and transmission capability ensure validated information is passed on to the cloud enabling quick decision making.

Deliverables

Plant uptime >90%

Best operating points considering safety and efficiency

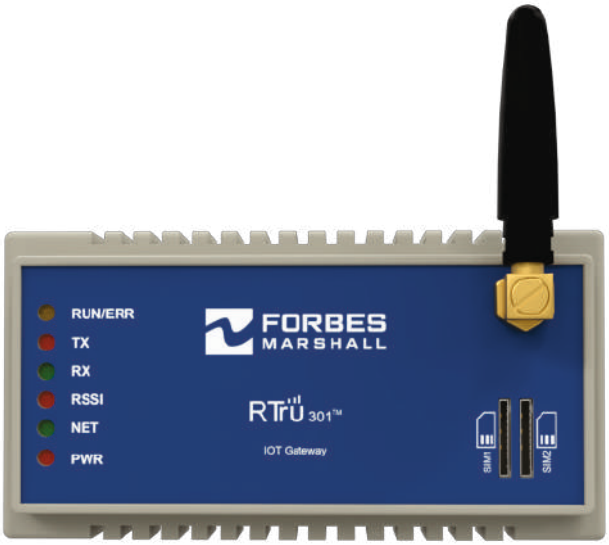
Enables water and energy savings of 20%

Reduced cost of operations

Remote dashboards for quick response time

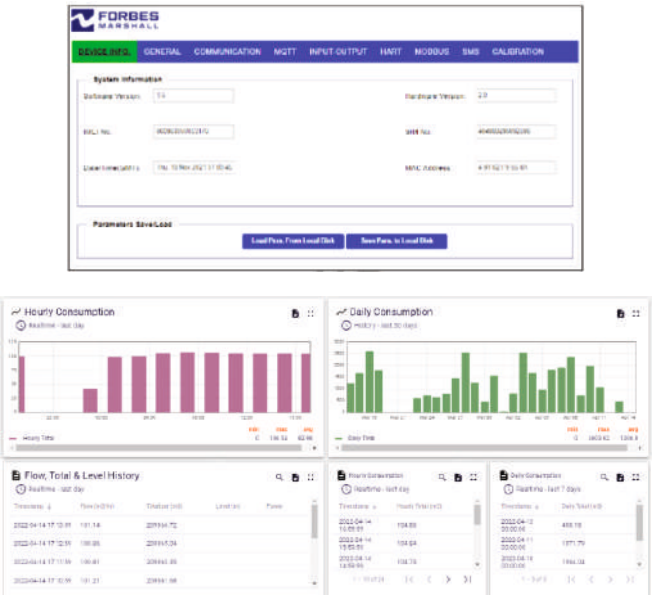
Building the IIoT Environment

Remote Terminal Unit RTru301™



Event based secure protocol connects clients (publisher and subscribers) to live data connections. The dedicated protocol ensures optimal latency with lowest possible traffic even on mobile networks and narrow band IoT.

Web Interface



Users can access projects and programme basic functionalities like mapping, setting alarms, and customising user dashboards. It is simple to use, with even a single device. It can also configure and upgrade all RTru301™ devices with detailed diagnostics like signal strength, IMEI number, etc., remotely.

Technical Specifications	
Input Power Supply	24VDC +/- 10%, <250mA
Communication Protocol	Modbus over RS485 for field devices
I/Os	1. AI I/p (HART) & O/p 2. DI I/p & O/p
Connectivity	Dual 4G, Cloud connectivity
Functionalities	a) Integrated modem with capability of transmitting data to cloud servers and establishing connectivity in remote locations b) Clock synchronisation through SNTP c) LED indication on front panel for status and activity d) SMS facility for alerts
Cyber Security	Integrated, configurable firewall

Basic Architecture For Plant Instrumentation

Reports and Alerts

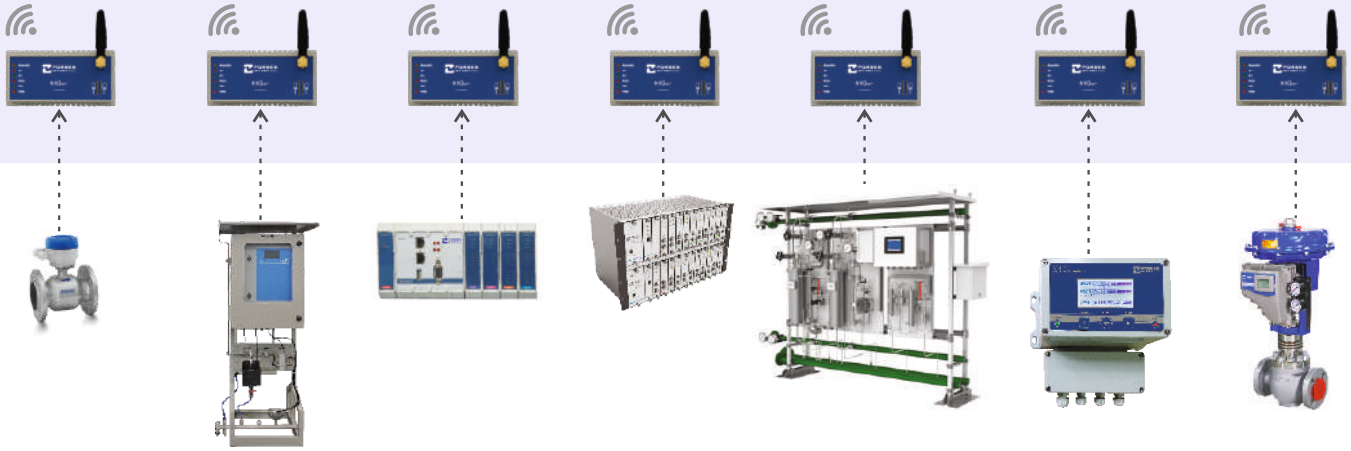
Mobile Apps

Web Apps

Forbes Marshall Expert Digital Control Room

Factory Manager Utility and Production Line

Forbes Marshall Cloud



Accurate flow measurement

Detailed analysis of effluent

Complete plant KPI monitoring

Remote monitoring of rotating machines

Monitoring uptime of SWAS

Monitor Condensate Recovery Factor

Leakage detection and reduction

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Krohne Marshall
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Codel International
Forbes Vyncke
Forbes Marshall Steam Systems

Opp 106th Milestone, CTS No. 2220, Mumbai-Pune Road,
Kasarwadi, Pune- 411034 INDIA
Tel: +91(0)20-68138555 Fax: +91(0)20-68138402

CIN No.: U28996PN1985PTC037806

Email : mvyas@forbesmarshall.com, ccmidc@forbesmarshall.com www.forbesmarshall.com

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