

# rMON

## 5G IoT SYSTEM



5G INDUSTRIAL IoT CRITICAL INFRASTRUCTURES INDUSTRY 4.0

### AT A GLANCE

- Automate Industrial IoT systems
- Customisable sensor setups
- Ruggedized design for industrial and outdoor environment
- Modular IoT gateway capabilities (3G, 4G, 5G, Ethernet)
- Flexible data collection support (My/MS SQL and time series DB)
- High-availability based on distributed measurement output streaming
- Centralised cloud-based management with GIS support
- OTA (Over-the-Air) control of IoT gateways and sensor deployments
- Real-time analytics & KPI visualisations with system notifications and alerting
- AI/ML capabilities for automated anomaly & outliers detection



### USE CASES

- Environmental sensing
- Remote object and persons detection
- Video surveillance of critical infrastructures
- Real-time monitoring of infrastructure assets



### SYSTEM COMPONENTS

- rMON Manager – Centralized cloud-based device management
- rMON Collector – Multiple sensor measurements' collectors deployed on premises or in the cloud
- rMON IoT Gateway – Autonomous and distributed Industrial IoT Gateways with sensor agents
- rMON Reporter – Cloud based Real-time monitoring dashboard

## DEVICES

- Mobile M2M: iBASE\*, BeagleBone\*\*
- Fixed M2M: iBASE\*

## ENVIRONMENT

- Industrial -40°C to +60°C \*
- Outdoor IP67+ \*\*

## MANAGEMENT

- All devices managed through cloud-based management (rMON Manager)
- Multiple user profiles available
- GIS based gateway status monitoring

## MEASUREMENT AND KPI

- Multiple KPI collectors (rMON Collector) on premises or in the cloud
- Multiple enterprise and data streaming DB outputs: My/MS-SQL, influxDB, Elastic, Kafka, Prometheus

## ANALYTICS

- Real-time analytics and KPI visualisations
- Flexible cloud-based analytics options
- Alerting and notifications
- AI/ML for automated anomaly & outliers detection and predictions

## PROTOCOLS

- TCP/IP (IPv4 and IPv6)
- HTTP/HTTPS
- Serial data RS-232

## MEASUREMENT DATA ENRICHMENT

- External GIS and context data enrichment

## OVER-THE-AIR (OTA) UPDATES

- "Live" system upgrades
- Autonomous IoT gateway operation with zero data loss

## LOCATION SERVICES

- External industrial GNSS USB module

## TECHNOLOGIES

- Mobile: GPRS, EDGE, WCDMA, HSPA+, LTE, LTE-A, LTE-A Pro, 5G NSA and SA (Cat3 to Cat21)
- Fixed: FE and GE

## SENSORS

- Ultrasonic sensors water/liquid
- Industrial cameras
- Temperature

## PLUG AND MEASURE

- Easy to deploy with zero touch provisioning