OCR-BASED WATER AMR

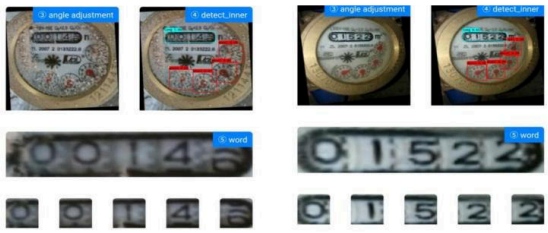
Read every meter, exactly as it shows.

Krionix OCR retrofit captures the certified register digits of existing water meters — no replacement, no opening, no recalibration — with an image behind every reading.

- ✓ Works on multi-brand mechanical meters
- ✓ Image-backed, audit-ready readings
- ✓ 4G LTE · long-life battery · patent pending



AI-OCR · READS THE ACTUAL DIGITS



Krionix™
CONNECTING THE DOTS OF TOMORROW.

PADMASHAKTI IOT TECHNOLOGIES PVT LTD

OCR AMR · **Pulse retrofit AMR** · **Bulk flow metering** · **Akiva™ AI**

www.krionix.in

Designed & manufactured in Harihar, Karnataka · India

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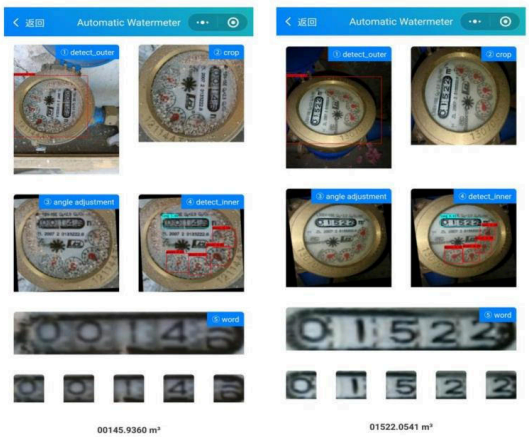
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HOW OCR READS A METER

From a photo of the dial to a verified reading

1. Detect the meter face
2. Crop the register
3. Correct the angle
4. Locate each digit
5. Read the value — with the image kept as proof

AT A GLANCE

An Indian OEM for smart utilities and industry

Padmashakti IoT Technologies Pvt. Ltd., trading as **Krionix**, is an Industrial IoT and smart-monitoring company headquartered in Harihar, Karnataka. We design and manufacture IoT hardware in-house and run it on our own AutoStack™ cloud — so existing meters, transformers and panels can report their condition in real time, without being replaced.

2025
Incorporated; headquartered in Harihar, Karnataka

DPIIT
Recognised Startup India company

3
Indian patent applications filed

100%
In-house R&D, hardware, firmware, cloud and manufacturing

What we do

Transformer health — Krionix THMS
Real-time electrical, thermal and physical monitoring of distribution transformers with early-warning alerts.

Smart metering — energy & water AMR
Retrofit kits that make existing energy and water meters smart and cloud-connected.

Industrial IoT — energy & plant monitoring
Department-wise energy, electrical health and machine condition monitoring for plants.

AutoStack™ cloud & Akiva™ AI
Our own IoT platform: automatic dashboards, alerts, reports and utility integration.

Who we serve

DISCOMs & utilities · Government departments & PSUs · Municipal corporations · Smart city projects · Rural water schemes · Sugar, power & process industries · Manufacturing plants · Commercial buildings · Housing societies · Campuses & institutions

Retrofit first
Upgrade the asset, keep the investment.

Built in India
Designed and manufactured end-to-end in Karnataka.

Government-ready
Multi-level access, audit trail, data stays in India.

Flexible commercials
Pilot-first, with hardware and subscription options.

Abbreviations: AMR automatic meter reading · **IoT** internet of Things · **OEM** original equipment manufacturer · **THMS** transformer health monitoring system

THE WATER CHALLENGE

Too much treated water is never billed

India is connecting crores of homes to piped water. But most meters are still read by hand — so leaks, theft and faulty meters stay hidden, and a large share of treated water earns no revenue.

35–60%
non-revenue water (NRW) in many Indian utilities[1]

15–20%
NRW at well-performing utilities worldwide[1]

15.9 crore
rural households now with tap connections (82%) under Jal Jeevan Mission[2]

2.68 crore
urban tap connections targeted in ~4,700 towns under AMRUT 2.0[3]

Why manual metering falls short

- **Reading errors** and missed visits lead to estimated, delayed bills
- **Faulty or stopped meters** go unnoticed for months
- **Leaks and unauthorised use** cannot be located without data
- **No water balance** — supply and consumption cannot be reconciled
- **High field cost** of reading every meter, every month



The opportunity

Billions of rupees are being invested in new connections under Jal Jeevan Mission (extended to December 2028) and AMRUT 2.0 (₹2.97 lakh crore outlay). Automatic meter reading protects that investment — every connection measured, every litre accounted for.

Sources: 1. Autodesk & Tata Consulting Engineers, Reducing Non-Revenue Water in Urban Utilities (May 2026). 2. PIB, Ministry of Jal Shakti, 14 Aug 2026. 3. Invest India, AMRUT 2.0.

Abbreviations: AMR automatic meter reading

FOCUS: KARNATAKA

Monitoring is already cutting losses in Karnataka

Karnataka's own experience shows what data does for water losses. Krionix, based in Harihar, brings that capability to every city, town and village scheme in the State.

BENGALURU EXAMPLE

~51% unaccounted-for water, 2013[1] → **26.5%** in 2025[1]

Achieved with SCADA monitoring, pump monitoring, GIS mapping and metering of bulk users — showing that measurement drives loss reduction.

WHERE AMR HELPS NEXT

- City and town corporations under AMRUT 2.0
- Gram panchayat schemes under Jal Jeevan Mission
- Bulk supply points, overhead tanks and pumping mains
- Apartments, layouts and industrial estates
- Institutional campuses and government buildings

What Krionix offers Karnataka

- Retrofit of existing meters — protects past investment
- Daily readings for monthly, accurate billing
- Water balance from source to consumer

Why a Karnataka company

- Designed and manufactured in Harihar
- Local installation teams, Kannada-speaking support
- Quick service across all districts



Source: 1. Construction World, 21 Sep 2026, on Bengaluru's unaccounted-for water.

Abbreviations: AMR automatic meter reading · **SCADA** supervisory control and data acquisition

OUR SOLUTIONS

One platform, four ways to meter water

Choose the right device for each point in the network — from a household tap to a pumping main — and see them all on the same AutoStack™ dashboard.

FLAGSHIP



OCR AMR retrofit

Reads the certified register digits of any existing mechanical meter, with image proof of every reading.



Pulse retrofit AMR

Clips onto existing meters with pulse output. No pipe cutting, no meter replacement.



Smart water meter (full set)

Class B multi-jet meter with AMR module, for new connections and smart-city projects.



Bulk flow metering

Ultrasonic meters for mains, tanks and pumping stations — the basis of water balance.

Which device for which point?

Situation	Recommended	Why
Any existing mechanical meter, multi-brand	**OCR AMR retrofit**	Reads actual digits; image as proof; no pulse mismatch
Existing meter with pulse output	**Pulse retrofit AMR**	Simple counting; no meter change
New connection or meter replacement	**Smart water meter (full set)**	Class B accuracy with AMR built in
Source, tank outlet, main or bulk consumer	**Bulk ultrasonic meter**	No moving parts; basis for water balance

FLAGSHIP PRODUCT · OCR-BASED WATER AMR RETROFIT

Reads the meter exactly as a human reader would

A camera module with controlled illumination captures the meter register; on-device and cloud OCR convert the digits into a reading. The certified meter is never opened, changed or recalibrated.







Why OCR, not pulses

- **Reads the actual digits** — no pulse mismatch or drift
- **Works on multi-brand meters** already installed across India
- **Image behind every reading** — audit-ready, ends billing disputes
- **Non-intrusive** — preserves legal-metrology compliance of the meter
- **No replacement capex** — protects existing meter assets



OCR recognition of meter digits — app view.

Specification	Details
Meter compatibility	Mechanical water meters, multi-brand (15 mm household and above)
Reading method	OCR digit recognition with image capture
Image capture	Camera module with controlled illumination
Communication	4G LTE Cat-1
Protocols	MQTT / HTTP / WebSocket, JSON data
Reporting	1 per day by default; configurable / on demand
Power	12,000 mAh $LiFePO_4$ battery
Battery life	3–5+ years, depending on interval
Enclosure	IP65 weatherproof
Platform	AutoStack™ cloud with Akiva™ AI
IP	Indian patent application 202541076329 (water meter retrofit)

Abbreviations: **AMR** automatic meter reading · **LTE** long-Term Evolution (4G mobile data) · **MQTT** message Queuing Telemetry Transport · **OCR** optical character recognition

PRODUCT · PULSE RETROFIT AMR

For meters with a pulse output

A compact, battery-powered telemetry unit that fits onto existing mechanical or digital water meters, counts their flow pulses and sends readings over 4G to the AutoStack™ cloud.







Specification	Details
Meter compatibility	Mechanical / digital water meters with pulse output
Pulse input	Reed switch or Hall-effect sensor
Communication	4G LTE Cat-1 (GSM fallback), MQTT with JSON payloads
Reporting	1–2 times a day by default; configurable
Power	9,000 mAh $LiFePO_4$ battery, field-replaceable
Battery life	5+ years typical (up to 10 years, depending on interval)
Enclosure	IP65/IP67 weatherproof, UV-resistant ABS/PC
Operating temperature	–10 °C to +60 °C
Alerts	Tamper, leak/abnormal flow, low battery, error logging

Key advantages

- No meter replacement, no pipe cutting
- Multi-year battery — no wiring or mains power
- Automatic cloud sync; dashboard auto-created
- Rugged and waterproof for outdoor use
- Patent pending (water meter retrofit)
- Make in India; CE/RoHS-ready design

Optional: LoRa / LoRaWAN connectivity for dense deployments such as large apartment complexes, on request.

Abbreviations: AMR automatic meter reading · **LoRa** long-range low-power radio · **LTE** long-Term Evolution (4G mobile data) · **MQTT** message Queuing Telemetry Transport

PRODUCT · SMART WATER METER (FULL SET)

For every new connection

For new connections, meter replacement and smart-city rollouts: an ISO 4064 Class B multi-jet meter with pulse output, supplied with the Krionix AMR module.



Specifications — Class B multi-jet with AMR

Size	15 mm	20 mm	25 mm
Nominal flow Qn (m³/h)	1.5	2.5	3.5
Maximum flow Qmax (m³/h)	3	5	7
Minimum flow Qmin (m³/h)	0.030	0.050	0.070
Thread	G¾	G1	G1¼
Length (mm)	165	190	260

ISO 4064 Class B · IP68 · Cold water up to 45 °C · Working pressure ≤ 1.6 MPa · Pulse output · Reading to 0.0001 m³







Abbreviations: AMR automatic meter reading

PRODUCT · BULK FLOW METERING

Know what enters the network

Non-revenue water can only be measured if the water supplied is measured too. Ultrasonic bulk meters at sources, tanks and mains complete the picture.



Feature	Details
Principle	Full-bore ultrasonic, bidirectional
Sizes	DN50 to DN150 (2"–6"); DN65 (2.5") standard
Accuracy	±1% typical
Moving parts	None — low maintenance, negligible head loss
Output	RS485, Modbus RTU; IP68 meter
Telemetry	Industrial IoT telemetry unit (Hexitronics): 4G LTE Cat-1, MQTT/HTTP, IP65
Installation	Flanged; horizontal or vertical

Water balance: from source to tap

Source / WTP bulk meter → **Tank / zone** bulk meter → **Consumers** retrofit / smart AMR → **NRW = gap** by zone, every day

Comparing bulk supply with the sum of consumer readings, zone by zone, shows exactly where water is lost — leaks, theft or faulty meters — so field teams know where to act.

Dual-level metering: bulk + consumer

- Complete water-balance visibility
- Supports District Metered Area (DMA) set-up
- Validates Jal Jeevan Mission service levels
- Scalable from a village to a city

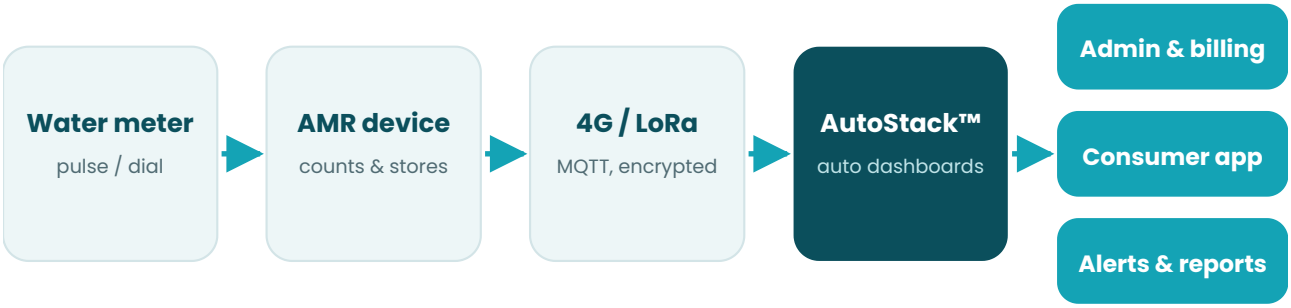
What you get

- Hourly and daily supply by zone
- Night-flow analysis to detect leaks
- Early loss detection and corrective action
- AI-driven NRW analytics with Akiva™

Abbreviations: AMR automatic meter reading · **IoT** internet of Things · **LTE** long-Term Evolution (4G mobile data) · **MQTT** message Queuing Telemetry Transport · **RS485 / Modbus** industrial serial link and protocol used by meters

HOW IT WORKS

From the meter to the bill, automatically



1 · Fit

Device clipped onto the meter and registered by scanning its code — location geotagged.

2 · Connect

Readings sent automatically over the mobile network, buffered if coverage drops.

3 · Use

Dashboards, bills, leak alerts and reports are created automatically — no manual setup.

AutoStack™ — the dashboard is ready when the device powers on

Every device that connects is automatically provisioned with its database tables and a live dashboard. Rollouts that once took weeks of backend work take hours — and every user gets the same consistent experience.

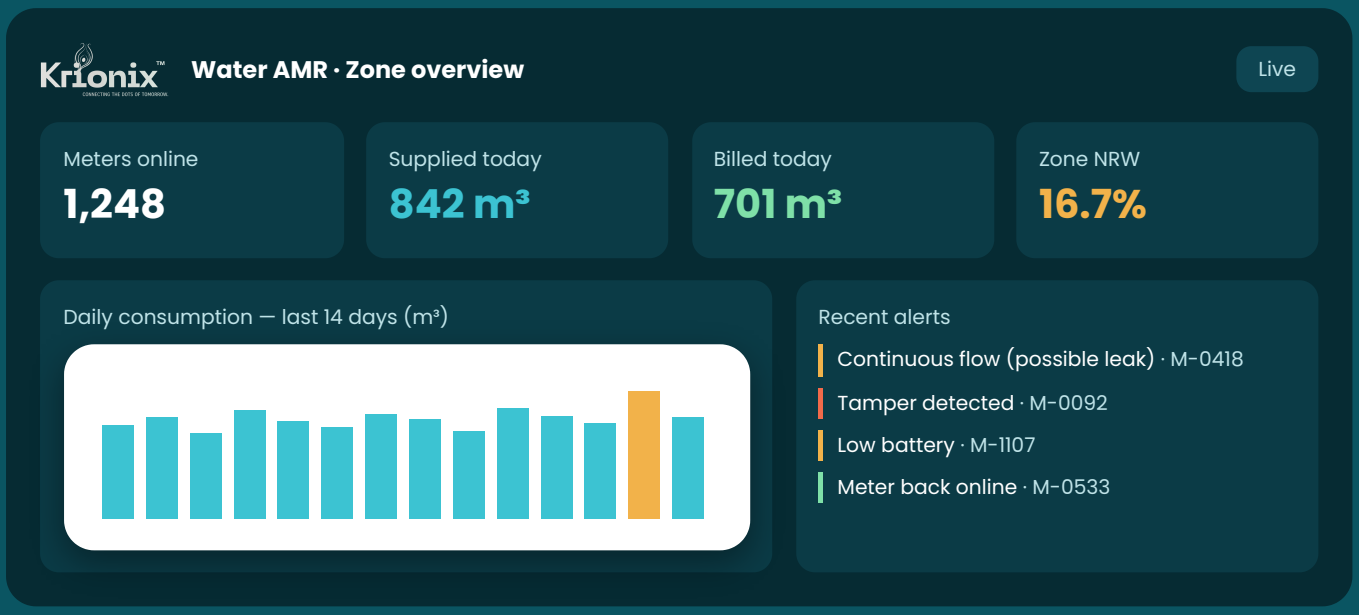
Data captured from every meter

Data	Use
Cumulative reading (totaliser)	Billing and consumption history
Daily / interval consumption	Demand patterns, peak hours, zone balance
Continuous or reverse flow events	Leak and tamper detection
Battery and signal status	Preventive maintenance of devices
Location and consumer mapping	Map views, zone and ward reports

Abbreviations: AMR automatic meter reading

THE PLATFORM

One view for the board, one for every consumer



Illustrative dashboard view; figures are sample data.

For water boards & administrators

- Manage devices, zones and consumers
- Zone-wise supply, consumption and NRW
- Billing reports and exports
- Configurable alerts with escalation

For consumers

- Own consumption, daily and monthly
- History and comparison
- Leak and abnormal-use notifications
- Transparent, reading-based bills

Multi-level access · **Consumer mapping & geotagging** · **HES / MDMS & billing APIs** · **Cloud or on-premise** · **AES-256 encryption** · **Akiva™ AI insights**

Standard reports

Monthly billing register
Reading-based, per consumer

Zone water balance
Supply vs billed, daily NRW

Exceptions
No-flow, tamper, leak, offline meters

Abbreviations: **AES-256** advanced Encryption Standard, 256-bit · **AMR** automatic meter reading

AI-ENABLED WATER MANAGEMENT

Akiva™ AI agent: ask the network a question

Akiva™ is Krionix's AI agent running on top of AutoStack™. Officials can ask questions in plain language and receive advisory alerts — with every decision left to the designated authority.

Consumption intelligence

Automatic detection of abnormal use, continuous night flow and probable leaks.

Plain-language queries

Ward, zone and utility-level questions answered from live data.

Predictive analytics

Demand and risk forecasting, enabled in phases.

Human in the loop

Advisory only; no action without approval. Data sovereignty and governance built in.

Example

Officer: Show water connections with abnormal consumption in Ward 12 during the last 7 days.

Akiva™: In Ward 12, 18 connections show consumption more than 40% above their historical average. 6 of these have continuous flow patterns indicating possible leakage. Would you like a location-wise list or a summary report?

Advisory alerts, by channel

Channel	Recipient	Example
Dashboard	Utility administrator	Abnormal consumption, Ward 12: 5 connections with continuous overnight flow. Field inspection may be prioritised.
Email	Officials / operations	Usage above historical norms for 14 connections; meter images and locations on the dashboard.
SMS	Ward engineer / field supervisor	5 connections show continuous night-time flow. Possible leakage. Review inspection list.

Illustrative examples. Indian patent application 202541094317 (Akiva™ AI).

Abbreviations: AMR automatic meter reading

SECURITY & DATA GOVERNANCE

Built for public infrastructure

Utility and government data needs to be secure, auditable and under the owner's control. AutoStack™ is designed with that in mind from the start.

Encryption
AES-256 encryption for data in transit and at rest.

Secure login
Multi-factor authentication and role-based access control.

Role-based views
Each user sees only their area — from technician to state authority.

Audit trail
Complete log of who viewed or changed data and settings.

Hosting choice
Hosted cloud, or on-premise inside the utility's own data centre.

Data in India
Indian-designed platform; data stays in India and belongs to the client.

Reliable in the field

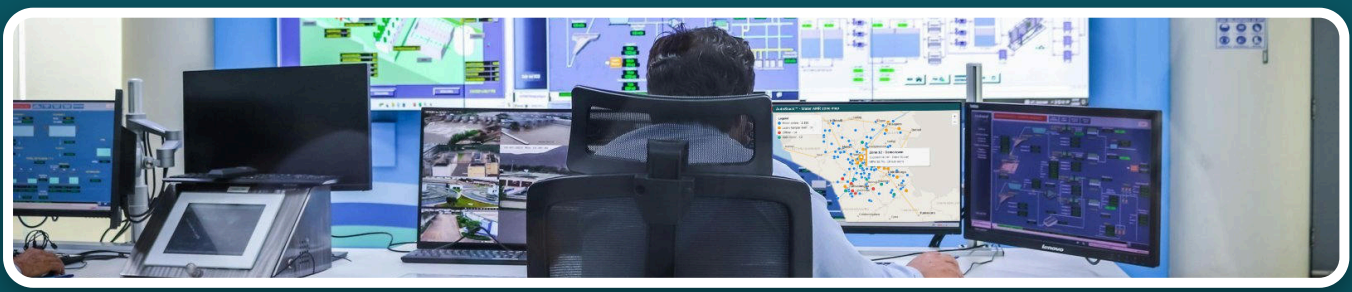
Edge buffering
Data is stored on the device during network outages and synced automatically.

OTA updates
Firmware is updated remotely — no site visit for software fixes.

Device health
Unit-offline and communication alerts flag any monitoring gap.

Integration with utility systems

- REST and MQTT APIs, with a standard data contract
- Adapters for head-end (HES) and meter data management (MDMS) systems
- Scheduled PDF, Excel and CSV exports for audits and reviews
- Data retention of 5+ years for trend analysis and regulatory needs



Abbreviations: AES-256 advanced Encryption Standard, 256-bit · **AMR** automatic meter reading · **MQTT** message Queuing Telemetry Transport

BENEFITS

What changes with automatic meter reading

Area	Manual reading	With Krionix Water AMR
Readings	Monthly or quarterly visits; human error	Daily digital readings, error-free
Billing	Delayed and often estimated	Regular, reading-based bills; better cash flow
Faulty meters	Found by chance	Flagged automatically (no flow, tamper, offline)
Leaks & theft	Invisible until reported	Continuous-flow and abnormal-use alerts; zone NRW
Field cost	Recurring labour for every reading	One-time device plus minimal data charges
Planning	Estimated demand	Measured demand by zone and time of day
Scale	Difficult to expand	Thousands of meters, no backend work per device

AN ILLUSTRATION

For a town supplying 10 MLD, every 5-point cut in non-revenue water recovers about 5 lakh litres a day — water for roughly 3,700 more people at 135 litres per person.

10 MLD × 5% = 0.5 MLD = 5,00,000 litres/day; ÷ 135 lpcd (urban norm) ≈ 3,700 people.

More revenue

Accurate bills for all water supplied and used.

Less wastage

Leaks found early; demand managed with data.

Transparency

Consumers and authorities see the same data.

Abbreviations: AMR automatic meter reading

USE CASES

Built for every kind of water user

Municipal corporations & water boards
Reduce NRW by locating leaks and unauthorised use; move to regular, reading-based billing.

Rural water schemes (Jal Jeevan Mission)
Measure supply and use per village and household; prove service levels and plan sustainably.

Smart city & AMRUT 2.0 projects
Digital, transparent consumption data for city-wide water management and reporting.

Apartments & housing societies
Fair, consumption-based billing per flat; separate water from general maintenance charges.

Industrial estates & plants
Track process water, prevent misuse and support sustainability audits.

Commercial buildings & campuses
Per-tenant or per-block metering for billing and sustainability reporting.



Abbreviations: AMR automatic meter reading

WORKING WITH US

Start with a pilot, scale with confidence

Step	Stage	What happens
1	Survey	Meter types, sizes and pulse outputs checked; network coverage confirmed
2	Pilot	A few hundred meters in one zone, with a bulk meter at the zone inlet
3	Review	Reading accuracy, uptime, alerts acted on and zone NRW reported
4	Rollout	Zone by zone across the city or scheme, integrated with billing

Flexible commercial models

Capex (purchase)

One-time hardware purchase with platform licence. Suited to municipalities and large utilities.

Opex (subscription)

Monthly or annual fee covering device, cloud software and support. Suited to societies, small towns and industry.

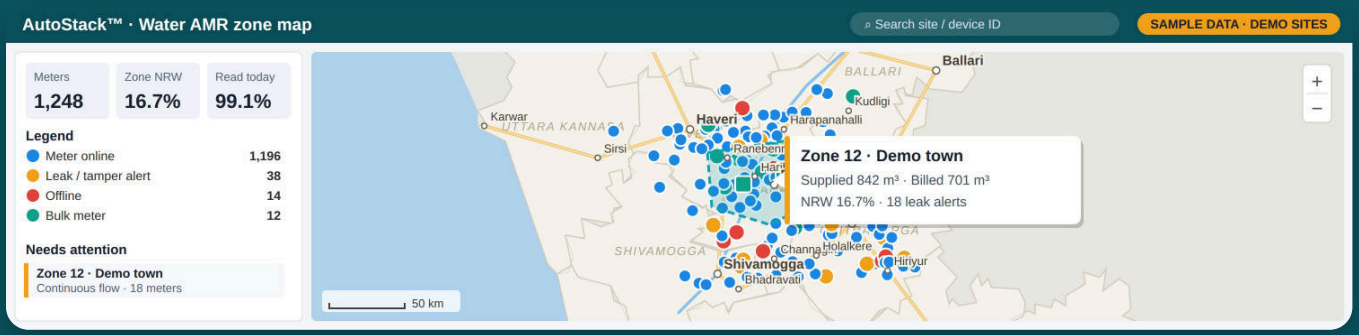
AMC & support

Annual maintenance covering device servicing, battery replacement and platform upgrades.

Shared responsibilities

Party	Responsible for
Krionix	AMR devices, retrofit installation, commissioning, AutoStack™ dashboards and consumer app, alerts, reports and technical support
Client	Site access, meter details and consumer data for mapping; any plumbing, civil work or meter replacement where required

All data belongs to the client. Commercial terms are agreed through mutual discussion.



Abbreviations: AMR automatic meter reading

ABOUT US

Padmashakti IoT Technologies Pvt. Ltd.

An Industrial IoT and smart-monitoring company headquartered in Harihar, Karnataka, trading as **Krionix**. Incorporated in 2025, we design and manufacture IoT hardware in-house and run it on our own AutoStack™ cloud — *connecting one device at a time.*

2025	DPIIT	3	100%
Incorporated in Harihar, Karnataka	Recognised Startup India company	Indian patent applications filed	In-house hardware, firmware and cloud

Mission

To develop IoT hardware and software end-to-end in-house, delivering real-time insight and efficiency for utilities, industries and infrastructure.

Vision

To become a leading IoT provider for smart utilities and infrastructure, driving efficiency, sustainability and digital transformation.

Leadership



Shri Gulab Chand D. Jain
Managing Director
40+ years in electrical equipment and manufacturing.



Shri Kiran S. Kulkarni
Director
Hexitronics Automation LLP; formerly with BARC (Trombay). IoT and large-scale infrastructure.



Shri Basavaraj M. S.
Director
Founder, Universal Electricals; 30+ years in electrical supervision, LT panels and transformer yards.

Our partners: Krionix is a newly formed company in which we are all partners — together with Ashwin G Jain (Krionix), Ananth and Vaman (Hexitronics Automation LLP, ISO 9001:2015) and Nikhil M B (Universal Electricals · UEIOT).

Also from Krionix

Transformer Health Monitoring (THMS) · **Energy-meter AMR retrofit** · **Industrial energy & plant monitoring** · **4G IoT gateways & data loggers** · **Custom IoT development**

Credentials: DPIIT-recognised startup · Udyam MSME · Patent applications 202541076329 (water meter retrofit), 202541062777 (AutoStack™), 202541094317 (Akiva™ AI) · Make in India · CIN U62013KA2025PTC207648

Abbreviations: AMR automatic meter reading · **HT / LT** high tension / low tension (voltage) · **IoT** internet of Things · **THMS** transformer health monitoring system

ALSO FROM KRIONIX · TRANSFORMER HEALTH MONITORING

Krionix THMS: an early warning on every transformer

India loses about 13 lakh distribution transformers a year — a national failure rate of around 10%. Krionix THMS monitors each transformer's electrical and physical health around the clock and alerts engineers before it fails.



What it monitors

- Phase voltages and currents, unbalance, kW/kVA/kVAr, energy, power factor, frequency, harmonics
- Oil and winding temperature, oil level, body cavity pressure, vibration, tap position

How it works

- One weatherproof unit per transformer, with its own 4G SIM
- Live dashboard, map view and alerts on AutoStack™
- Packages for 25 kVA to 1250 kVA transformers

Fewer failures

Overload, oil loss and overheating caught while there is time to act.

Shorter outages

Crews go straight to the right transformer.

Planning data

Measured loading of every transformer for upgrades and rebalancing.

A separate Krionix THMS company profile with full details is available on request.

Source: Distribution Transformer Standardisation Cell, reported by PTI / Business Standard, 17 Nov 2025.

Abbreviations: **AMR** automatic meter reading · **kVA** kilovolt-ampere (apparent power) · **kVAr** kilovolt-ampere reactive · **kW** kilowatt (real power) · **THMS** transformer health monitoring system

INDUSTRIAL IOT

Smart real-time energy & plant monitoring

For sugar, power, manufacturing and infrastructure plants: complete visibility of energy use, electrical health and machine condition — *from energy to efficiency, we monitor, you grow.*



Why monitoring matters

- **Unexpected breakdowns** of motors, transformers and panels halt production
- **High maintenance costs** from repair-after-failure
- **Energy wastage** from unmanaged and unbalanced loads
- **Production downtime** during critical seasons such as crushing

Real-time energy monitoring

kWh, kVA and power factor by department, machine and process.

Electrical health

Abnormal load, phase imbalance, voltage fluctuation and power-quality alerts.

Machine condition

Vibration and temperature on motors, bearings, pumps and gearboxes.

Department-wise load

Boiler, turbine, mill, processing, utilities and DG — compared and costed.

Predictive maintenance

Historical trends forecast failures so maintenance is planned, not forced.

Fits what you have

Works with existing LT/HT panels, CT/PT and most Class-1 energy meters.

Connectivity & integration

- Modbus RTU/TCP, MQTT, LoRa/LoRaWAN, Ethernet, Wi-Fi and 4G
- Edge gateway buffers data during network outages and syncs later
- REST/MQTT APIs for ERP, SCADA and maintenance systems

Benefits to industries

- Reduced downtime and smoother production
- Lower energy bills through department-wise control
- Longer life for motors, transformers and panels
- Data-driven operational and financial decisions

Abbreviations: AMR automatic meter reading · **CT** current transformer · **DG** diesel generator · **ERP** enterprise resource planning · **HT / LT** high tension / low tension (voltage) · **IoT** internet of Things · **kVA** kilovolt-ampere (apparent power) · **kWh** kilowatt-hour (one unit of energy) · **LoRa** long-range low-power radio · **MQTT** message Queuing Telemetry Transport · **RS485 / Modbus** industrial serial link and protocol used by meters · **SCADA** supervisory control and data acquisition

PRODUCT CATALOGUE

Products at a glance

Product	Brand	Description
Transformer Health Monitoring (THMS)	Krionix	Real-time electrical, thermal and physical monitoring of transformers with early-warning alerts
Energy Meter AMR Retrofit	Krionix	Non-invasive smart upgrade for existing energy meters; 4G LTE, 30 A relay
Energy AMR Meter	Krionix	Single-phase static meter with built-in AMR (IS 13779, Class 1)
Energy AMR Device	Krionix	Standalone RS485 AMR unit with local display and external 4G antenna
OCR Water AMR Retrofit	Krionix	OCR reading of certified register digits on multi-brand meters, with image proof
Smart Water Meter + IoT	Krionix	High-accuracy smart meter with leak detection for new connections and smart cities
Bulk Water Metering (DN65)	Krionix & Hexitronics	Ultrasonic bulk meter (±1%) feeding live water-balance analytics
4G MQTT / Industrial Cloud Gateways	Krionix × Hexitronics	Plug-and-play analog and sensor gateways, 1/2/4/8 channels, 2 kV ESD-protected inputs
Smart Energy Meter / Energy Monitoring Device	UEIoT	Real-time energy monitoring with RS485/Modbus for easy integration
Panel Energy Monitor & Power Analyser	UEIoT	Three-phase multi-feeder monitoring, power-quality analysis and reports
Electrical Data Recorder	UEIoT	High-precision recording of electrical parameters for analysis and troubleshooting
Cloud Data Logger	UEIoT	Remote logging with analog and digital inputs; historical trend analysis
APFC Monitoring	UEIoT	Real-time power factor and per-capacitor-step health in LT and HT panels
Motor Vibration Monitoring	UEIoT	Continuous vibration and temperature monitoring with predictive alerts
Induction Motor Testing Kit	UEIoT	Portable testing and diagnostics for induction motors
Custom IoT Development	Krionix	Custom hardware, firmware and cloud — BMS, ETP/STP/WTP, Edge-PLC and more
AutoStack™ Platform & Akiva™ AI	Krionix	IoT cloud with automatic dashboards, alerts, reports, integration and AI insights

Our services

Real-time energy monitoring · **Plant & equipment health monitoring** · **Predictive maintenance** · **IoT dashboards & analytics** · **System integration & automation** · **Custom IoT development & support**

Abbreviations: **AMR** automatic meter reading · **APFC** automatic power factor correction · **ESD** electrostatic discharge · **HT / LT** high tension / low tension (voltage) · **IoT** internet of Things · **kV** kilovolt · **LTE** long-Term Evolution (4G mobile data) · **MQTT** message Queuing Telemetry Transport · **OCR** optical character recognition · **RS485 / Modbus** industrial serial link and protocol used by meters · **THMS** transformer health monitoring system

WHY KRIONIX

Upgrade the asset. Keep the investment.

Today	Conventional approach	With Krionix
Finding problems	Periodic rounds and consumer complaints	Continuous monitoring with automatic alerts
Maintenance	Fixed schedule or after failure	Condition-based, guided by readings
Upgrading meters	Replace existing meters	Retrofit existing meters
Data	Paper logs, scattered spreadsheets	One platform with history, reports and APIs
Planning	Estimates of loading	Measured loading of every asset
Supply chain	Imported or assembled systems	Designed and manufactured in India

Engagement models

Pilot

A short pilot to prove value on the client's own meters and assets.

Purchase + subscription

One-time hardware cost with a small monthly platform subscription per unit.

Managed service

Krionix installs, monitors and reports, with the client paying for outcomes.

What sets us apart

- **Indian OEM, not a trader** — hardware, firmware and cloud built in-house
- **Retrofit-first** design that protects existing investment
- **Patent-pending** retrofit technology
- **One platform** for transformers, meters, water and plants
- **Government-ready** multi-level access and audit trail
- **Local support** from Karnataka for faster response

Abbreviations: AMR automatic meter reading · **OEM** original equipment manufacturer

FREQUENTLY ASKED QUESTIONS

Questions we are often asked

Do we need to replace our meters?

No. The retrofit device fits existing meters with pulse output; the OCR device reads meters that have none.

Is any plumbing work needed?

Not for retrofits — there is no pipe cutting. New smart meters and bulk meters are installed inline.

How long does the battery last?

Five years or more at typical reporting intervals. The battery is field-replaceable.

What if the network is weak?

Readings are stored on the device and sent when coverage returns. LoRa is available for dense sites.

Can it detect tampering?

Yes. Tamper events, removal and abnormal readings raise alerts on the dashboard.

Can it connect to our billing system?

Yes, through APIs and scheduled exports from AutoStack™.

Can consumers see their own usage?

Yes. Each consumer can log in to see consumption, history and alerts.

Who owns the data?

The client. Data can be hosted on Krionix cloud or on-premise.

Is the product made in India?

Yes. It is designed and manufactured by Krionix in Harihar, Karnataka, and is patent pending.

Do you support all of Karnataka?

Yes. Our teams can survey, install and service across the State, with Kannada-speaking support.



Abbreviations: AMR automatic meter reading · **LoRa** long-range low-power radio · **OCR** optical character recognition



Krionix™

CONNECTING THE DOTS OF TOMORROW.

Let's measure every drop together

We would be glad to arrange a live demonstration and a pilot tailored to your city, scheme or campus.

GET IN TOUCH

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