UNIVERSAL LORA
TELEMETRY TRANSCEIVER

otto
WIRELESS SOLUTIONS (Pty) Ltd

COUNT

www.otto.co.za

OLN868-GP

The Universal Lora Telemetry receiver is a base unit, used for creating a final LoRa node solution. The base device is non-useable, and must be configured and integrated into a final Lora node via firmware upload as well as the addition of the applicable sensor.

Being the base unit, it has a standard set of technical specs which are then common to all the LoRa nodes which can be derived from the device.

Common Technical Specifications

Dimension:	130mm x 70mm x 50mm	
Mass:	200g	
Ingress protection:	IP65	
Operating Temperature:	-10 to 50^{0}C	
Battery:	LiOn Li-SOC12 (AA Size) non-rechargeable, 2400mAh, 3,6V	
Battery Life:	> 5 years (1 transmission per day)	
	> 3 years (2 transmissions per day)	
Operating Frequency:	LoRa WAN 868MHz	
Transmit Power:	25mW (14dBm)	
Type Approval:	ICASA TA 2020/5689	
	Radio Frequency	ETSI EN300-220
	EMI/EMC	EN301-489
	Safety	EN90650
Antenna:	Integrated	

Features

- Long Range
- Autonomous Operation
- Long Battery Life
- Battery end-of-life reporting

Configuration into a LoRa Node

By Adding the following hardware options, the Universal LoRa Telemtry Receiver is configured into a LoRa Node:

LoRa Water Metering Probe	LoRa Pressure Probe	LoRa Temperature Probe	LoRa I/O

The final LoRa node is then provided:

LoRa Water Metering Node	LoRa Pressure Node	LoRa Temperature Node	LoRa I/O Node
OLN868-W	**OLN868-P**	**OLN868-T**	**OLN868-I**

LoRa Water Metering Node

The water meter works by counting the pulses from standard domestic / industrial water meters and has been equipped with a pulse output. Sensors are available for the most popular domestic water meters. Industrial meters either have a pulse output which should be wired into the water meter, or a device which has to be fitted in order to provide the pulses. This is dependent on the manufacturer and model of the meter, to which the LoRa Water Metering Node is intended to be fitted. The LoRa Water Metering Node is then pre-programmed for the number of litres per pulse as per the water meter specifications.

When deployed into domestic applications, the LoRa Water Metering Node is able to monitor and alarm under a default condition for detecting a burst pipe, which can also be user defined and is therefore pre-configurable:

Water Burst: defined as 2,000 pulses (1,000L of water) in a 12 hour period

ULN-W

ULN-W

Water meter

Water meter

GUI

LoRaWAN Gateway

Backend Server
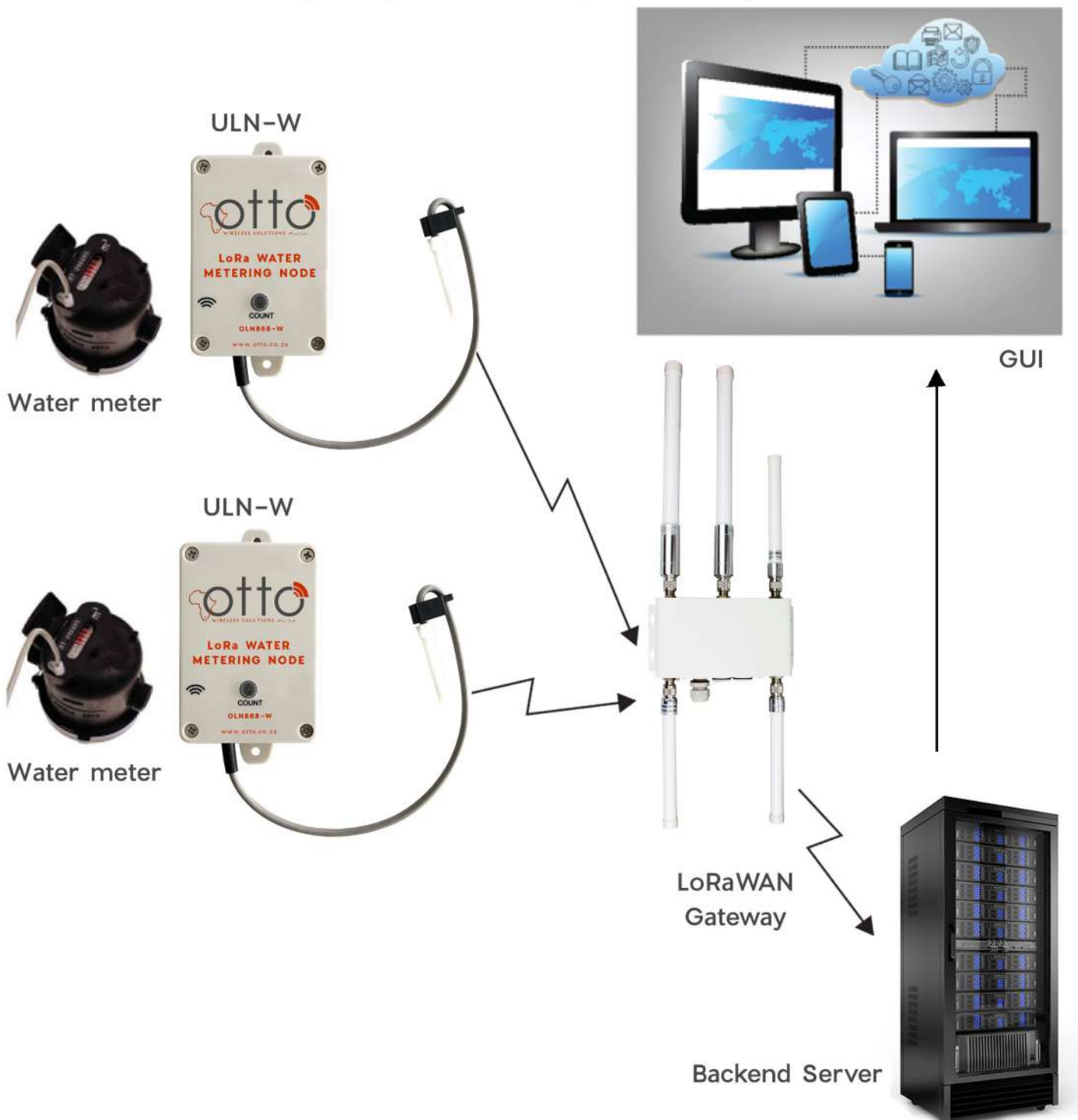
LoRa Pressure Node

The LoRa Pressure Node is commonly used to determine water levels in tanks and boreholes. In order for this to be correctly configured, the user needs to engage with Otto Wireless support staff in advance,   so that the node can correctly accommodate the full, minimum and maximum volume levels as defined by the customer for their specific tank / borehole requirements.

Water tank

ULN-D

Water tank

ULN-D

GUI

LoRaWAN
Gateway

Backend
Server
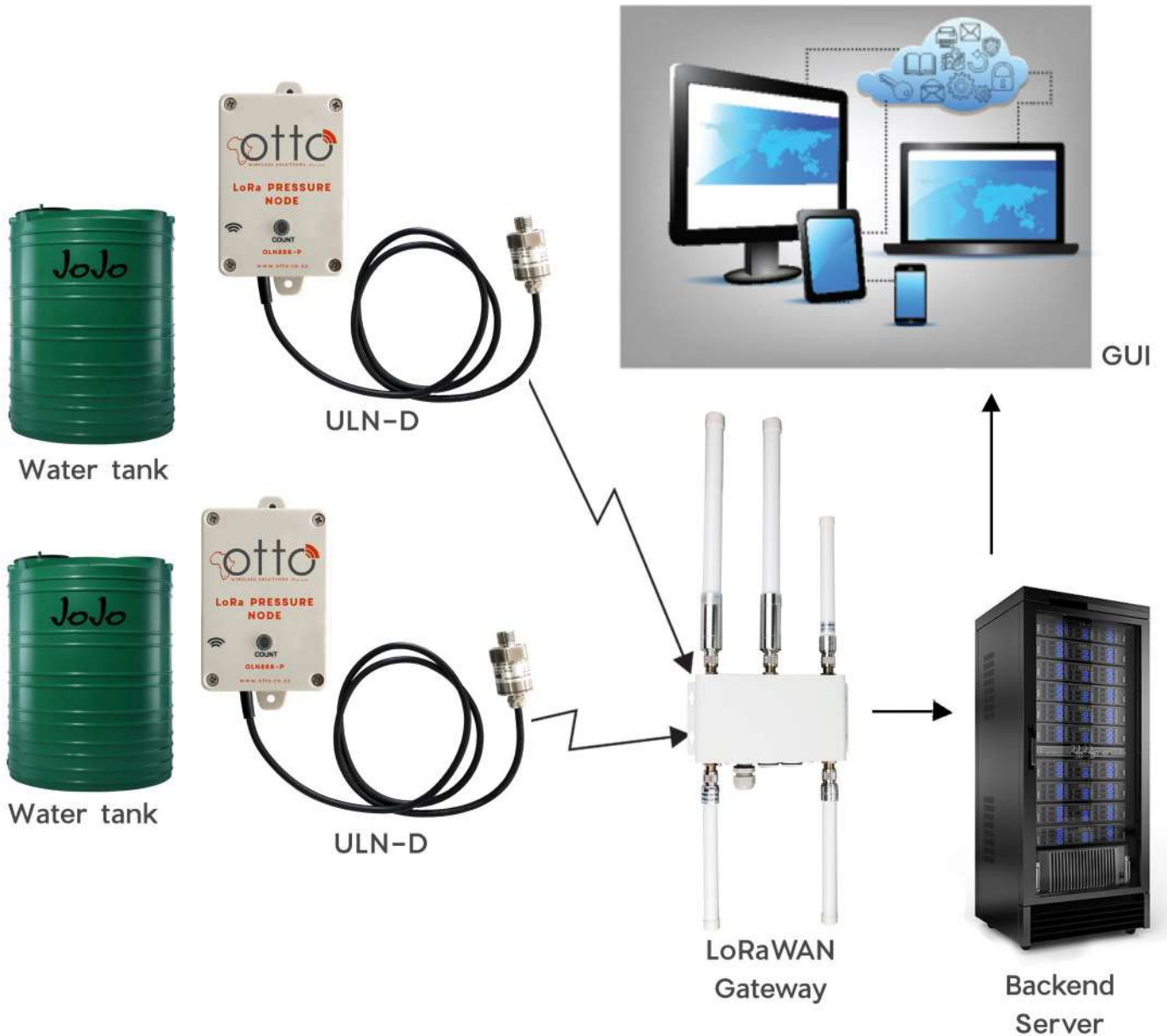
LoRa Temperature Node

The LoRa Temperature Node is used to monitor temperature of liquids or to monitor the ambient temperature. In order for this to be correctly configured, the user needs to engage with Otto Wireless support staff in advance, so that the node can correctly accommodate the minimum and maximum temperature swing levels as defined by the customer in their specific application.

Cold storage fridge

ULN-T

GUI

Chicken coup

ULN-T

LoRaWAN Gateway

Backend Server
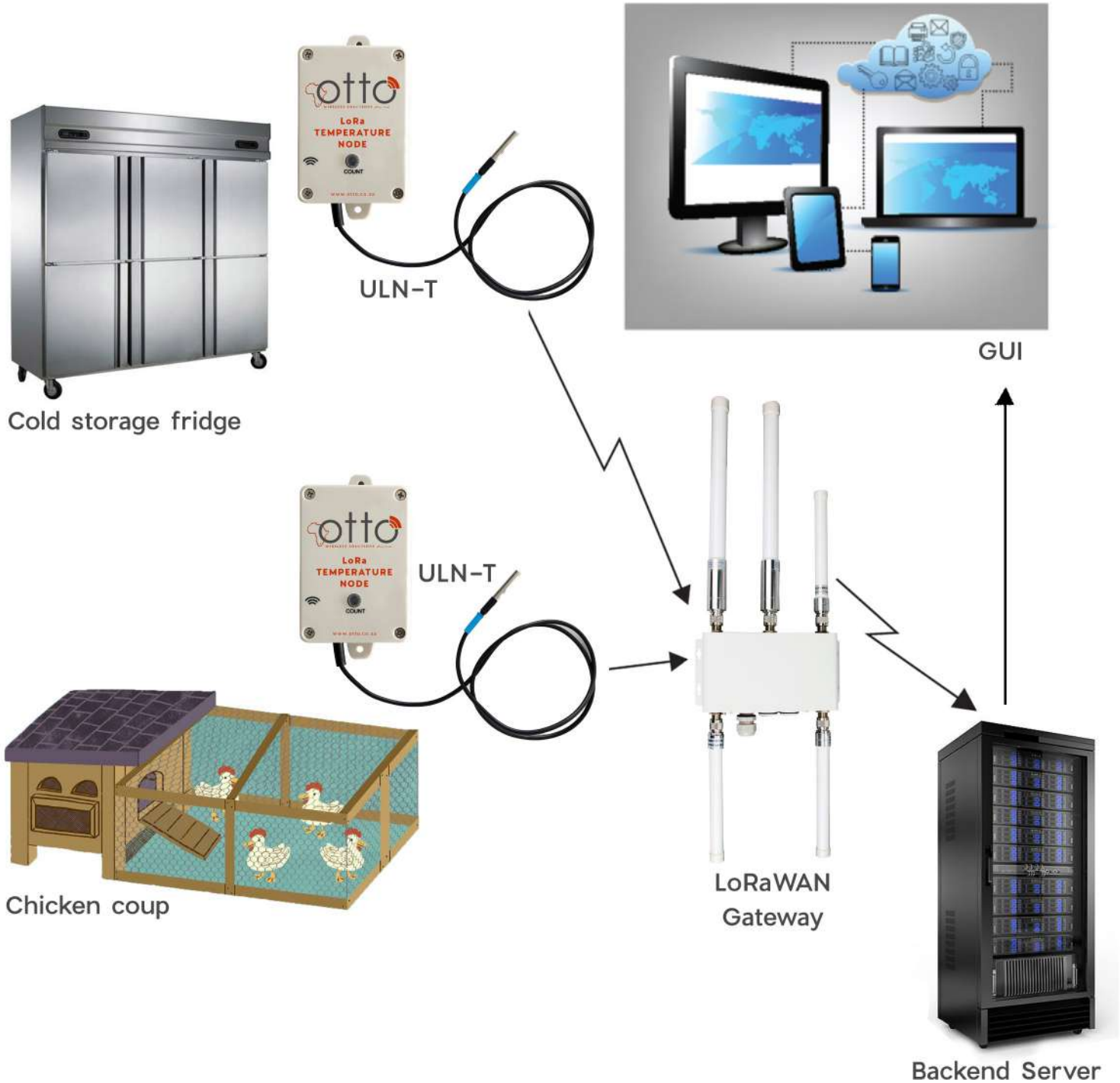
LoRa I/O Node

The LoRa I/O Node is used to send basic control signal to and from equipment in the field. When used in conjunction with a relay board, the node can accommodate switching devices like irrigation pumps on / off, as well as controlling automatic gates.

Automatic gate

Industrial farm sprinkler

ULN-I

ULN-I

GUI

LoRaWAN Gateway

Backend Server