

# IRIS BOX SAP



## IIoT Sensor Access Point

**IRIS SAP** (Sensor Access Point) is a stand alone Sensor Access Point node for the deployment of Wireless Sensor Networks (WSN). Thus, user can deploy spatially distributed autonomous **IRIS SAP** nodes using sensors to monitor physical or environmental conditions, states and parameters.

**IRIS SAP** nodes can be easily wireless connected to the **IRIS BOX TRS** IIoT gateway, thus enabling direct access from any smart device to process parameters real time values, logic real time states, field devices control, logged data download and system configuration.

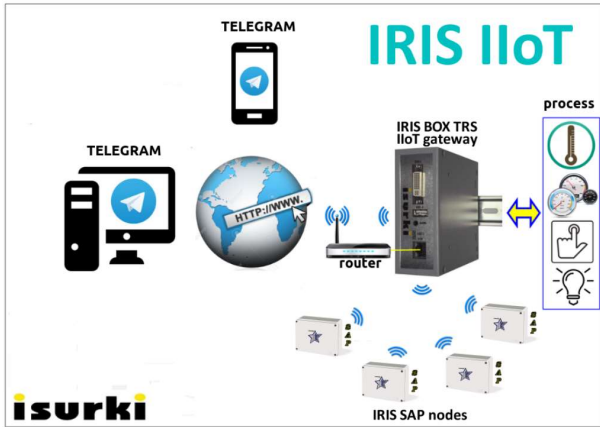
The **IRIS**<sup>1</sup> ecosystem is a state of the art cutting edge telecontrol system, developed by **ISURKI** as the result of more than 25 years of expertise in the design and deployment of industrial telecontrol systems for the management of facilities, services and environmental control networks.

The **IRIS** ecosystem includes different packs of Plug & Sense sensors.

The **IRIS SAP** nodes design is based on the next premises:

- ◆ Embedded sensors.
- ◆ External universal 4-20 mA field sensors input range compatible.
- ◆ External Plug & Sense sensor packs.
- ◆ Wireless.
- ◆ Self powered and ultra low power consumption.
- ◆ Harsh environments.

<sup>1</sup> As a result of a constant evolution, here in stated characteristics can be upgraded and changed without previous notice to customer. Please ask the last data sheet version contacting directly with our company.



IRIS IIoT ecosystem architecture

**OTHER RELATED DEVICES OF THE IRIS IIoT ECOSYSTEM**

- [IRIS BOX TRS](#) IIoT gateway and telecontrol remote server.
- [TESDA](#) embedded industrial input-outputs board, digital & analog, for IRIS BOX TRS and IRIS BOX PC.
- [IRIS BOX PC](#) embedded industrial box PC for developers.
- [CNC4200](#) 4-20 mA water level sensor.
- [Application note](#).

## IRIS SAP: Sensor Access Point for IIoT IRIS ecosystem

**EMBEDDED SENSORS**

temperature  
accelerometer  
relative humidity  
Hall effect

S  
A  
P

**EMBEDDED Wi-Fi**

802.11 b/g/n Radio  
802.11 n (2.4 GHz), up to 150 Mbps  
Station mode  
WMM  
TX/RX A-MPDU, RX A-MSDU  
Immediate block ACK  
TX power for 72.2 Mbps: 14 dBm typ.  
TX power for 11b mode: 20 dBm typ.  
RX sensitivity: -98 dBm at 1 DSSS  
Automatic beacon monitoring (TSF)

**isurki**  
Instrumentation & Control

**BATTERY POWERED**

Ultra low power consumption  
80  $\mu$ A @ 3V7  
2 years autonomy without charging  
1 lithium battery powered  
3.7V / 1500 mA  
remote charge level indication  
energy saving modes:  
- deep sleep  
- sleep  
- idle  
- full

**CPU, MEMORY and RTC**

Xtensa® single-/dual-core  
32-bit LX6  
520 Kb SRAM  
4 Mb Disk on chip  
RTC timer and watchdog

**EXTERNAL SENSORS AND ANALOG/DIGITAL INPUTS**

2 x 4-20mA / 0-1V analog inputs  
4 x digital inputs dry contact  
4 x IRIS' plug & sense sensors  
- water pack: level, temp., flow (open channel)  
- meteo pack: temp, atm.pres., HR, anemo, solar  
- air quality pack: CO, NO2, O3, SO2, NH3, PM, Dust  
- soil and agro pack: available soon

**DIMENSIONS & ENVIRONMENT**

outdoor plastic box IP66  
120x80x56 mm  
UV radiation protected  
self-extinguishing  
flammability according to UL94 V-2  
working temp.: from -20 up to +70 °C

- Unlimited number of nodes.
- Fully user configurable process parameters.
- Configurable latency with IRIS BOX TRS gateway.
- Configurable log interval.
- On site embedded led for node diagnostics.
- Fully remote (over the air) configurable.
- Unlimited after sales support.



Company headquarters in Irun, Spain