SBC
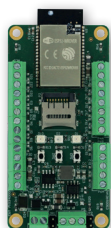
SENSE-ESP32
IoT Sensor to Cloud with ESP32-D0WDQ6 Processor

From sensors to Cloud in a single step

HIGHLIGHTS

CPU
ESP32-D0WD processor

CONNECTIVITY
Programmable expansion connectors, with up to 15 GPIOs multiplexed with other communication interfaces

NETWORKING
WiFi 802.11b/g/n + BT 4.2

MEMORY
Internal 520KB SRAM + 16KB SRAM in RTC

Available in Industrial Temperature Range

ESPRESSIF

MAIN FIELDS OF APPLICATION
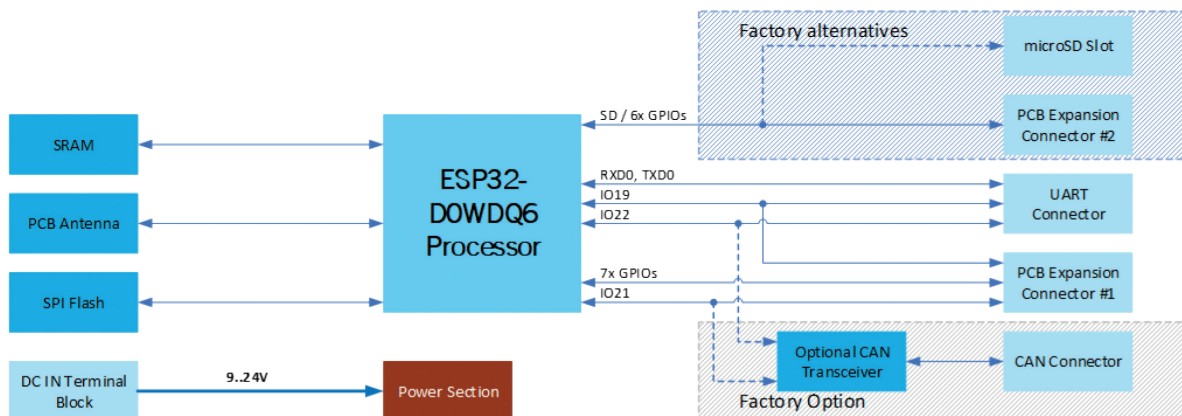
Coffee & Vending

Transportation

Industrial Automation

Smart Devices

FEATURES

Processor	ESP32-D0WDQ6 processor, Dual Core Xtensa® 32-bit LX6 Microprocessor	
Memory	Internal 520KB SRAM + 16KB SRAM in RTC	
Graphics	N.A.	
Mass Storage	4MB SPI Flash 8MB PSRAM Optional microSD slot (alternative to Expansion PCB-terminal block #2)	
Networking	Embedded WiFi (802.11 b/g/n) + BT 4.2/BT LE module with PCB antenna	
Serial Ports	Optional 4-wire TTL port on 5-pin dedicated PCB Terminal Block	
CAN	Optional CAN Port on 3-pin dedicated PCB Terminal Block	

Other Interfaces	Expansion 10-/11-pin PCB terminal block #1, able to manage:
	    Up to 9 digital GPIOs (5 managed in UltraLow Power States too)
	    Up to 5x analog Inputs
	    Up to 2x DAC outputs
	SPI interface
	Expansion 8-pin PCB terminal block #2 (alternative to microSD Slot), able to manage:
	    Up to 6x digital GPIOs, all managed in UltraLow Power States too
	    Up to 6x analog Inputs
	    Up to 6x Capacitive Sensing GPIOs
	    SPI
	    JTAG interface
	    SD Host interface
	    SD Slave interface
	3x Pushbuttons
	Green LED for Power On Signaling
	Blue LED for Edgehog network connection signaling
	Yellow LED for WiFi/BT activity or other signaling

Power Supply	PCB Terminal Block +9V$_{DC}$ .. +24V$_{DC}$
Operating Temperature	-40°÷+85°C (Industrial Temperature range)
Dimensions	4x8 cm

BLOCK DIAGRAM

Streamline and expedite your edge computing implementations

EDGEHOG OS

A flexible operating system that adapts to your needs, thanks to the customization tool and Docker support. Reliability and security are built-in through a dual-partition system and native integration with Exein's robust AI-based protection.

DEVICE MANAGER

Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

DATA ORCHESTRATION

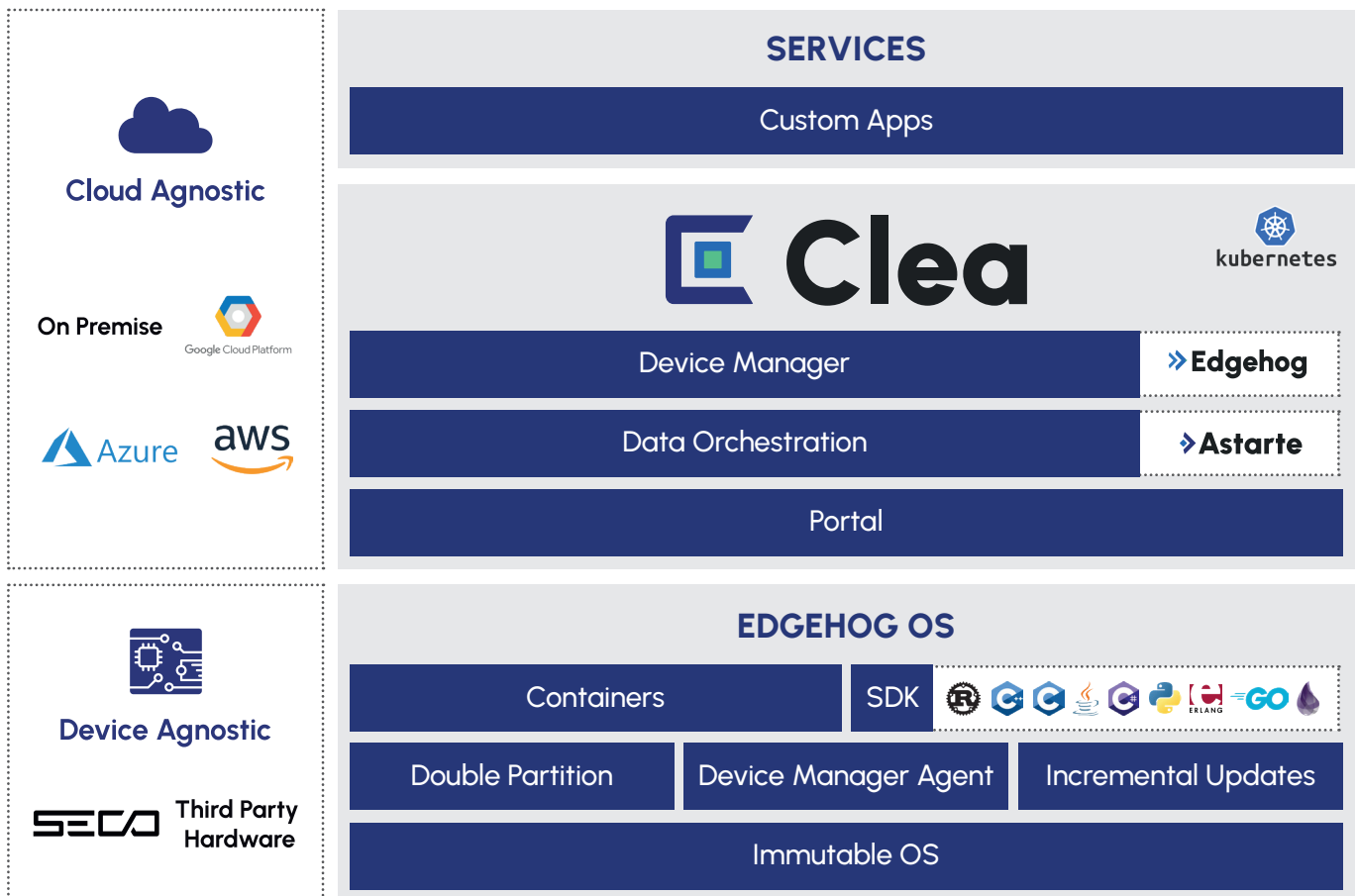Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

PORTAL

Analyze data from remote devices, customize the user experience with applications tailored to user needs, and manage user rights, company access, and tenant privileges.

Cloud Agnostic

On Premise

Google Cloud Platform

Azure

aws

Device Agnostic

SECO **Third Party Hardware**

SERVICES

Custom Apps

Clea

kubernetes

Device Manager — »Edgehog

Data Orchestration — ›Astarte

Portal

EDGEHOG OS

Containers | SDK

Double Partition | Device Manager Agent | Incremental Updates

Immutable OS

Scan to know more about our solution

EDGEHOG OS

CLEA DOCS

Information subject to change. Please visit www.edge.seco.com to find the latest version of this datasheet

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