

# FogSphere™ VX:Edge: A computer vision Edge Platform by Redev Technology

White Paper



VX-Edge



White Paper



AI Solutions – FogSphere Product Sheet

Driving Digital Innovation in the  
Industry of tomorrow

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# FogSphere™: An End-to-end AI Stack by Redev

# VX-Edge

## Introduction



THE POWER OF A  
RASPBERRY PI CM4  
WITH THE  
INTELLIGENCE OF A  
GOOGLE CORAL  
ONBOARD

FogSphere VX-Edge™ is a unique IoT Edge-AI Solution by Redev Technology, targeting Computer Vision use-cases in Commercial and Industrial production applications. It comes with a SaaS management platform (that can be deployed also on-premise).

### The Hardware

The device is powered by an industrial grade carrier board hosting a Raspberry PI 4 Compute Module, providing a number of ports and an internal modem as well. FogSphere VX-Edge™ integrates also a Google Coral AI chip (TPU) capable of performing 4 trillion operations per second (TOPS), using 0.5 watts for each TOPS.

### The Software

FogSphere VX-Edge™ provides an Edge AI stack implementing a number of remotely deployable Computer Vision (CV) models, accelerated by the Google Coral chip. It is the ideal solution for Edge CV applications where bandwidth is a concern requiring the complete video inference to be run directly on the edge device. Pre-trained [models are remotely trained and deployed](#) via containers, then are [operated and monitored](#) via a local and a cloud web management interface.

### The Intelligence

FogSphere VX-Edge™ can run either a customer provided, pre-trained model, or one of the many models pre-trained by Redev Technology.

A number of models are already provided to solve the most challenging use cases with the highest accuracy seen today on the market. The Google Coral chip provides full support for TensorFlow models and AutoML Vision Edge by Google.

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## Technical Specs



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Property	Description
CPU	Raspberry Pi Computer Module 4 (Broadcom BCM2711B0, 4-core, 64-bit ARM Cortex A72 @1.5 GHz)
RAM	2 GB
TPU	Google Coral
DISK	16 GB eMMC Flash
Networking	1 x Gigabit Ethernet interfaces (RJ45) 1 x LTE cat.4 Modem 1 x NB-IoT / LTE cat M1 (*Optional) 1 x GPS 1 x LoRaWan Gateway chip 1 x WiFi 2.4GHz & 5.0GHz (*Optional) 1 x Bluetooth 5.0 (*Optional)
I/O	1 x CAN interface 2 x miniPCI2.0 interface (NVMe SDD, WiFi, other) 1 x M2 2280 interface (*Optional) 1 x USB 2.0 Host 1 x USB-OTG 1 x Serial RS232/RS485 4 x Digital Input 4 x Digital Output 1 x 1-Wire interface 4 x Analog Input
Display	OLED Display
Other	Wide temperature range, RTC, Watchdog,

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## VX-Edge

AI Applications require a substantial amount of effort in the form of [software](#), [hardware](#), [connectivity](#) and [training](#). At Redev we have wrapped up all this problems in two end-to-end solution, the FogSphere™ VX and CX platform series. The FogSphere™ VX product family includes both a [VX-Core](#) and a [VX-Edge](#) product.

In this white paper we have covered just [VX-Edge](#), an integrated product targeted primarily for moderate use-cases with no more than 2 network cameras connected per VX-Edge. For larger deployments customers can either combine more than one VX-Edge or purchase a VX-Core server, a virtual appliance solution operating on any commercial server. VX-Core provides support for NVIDIA GPU cards, Intel Movidius cards and Google Coral interfaces.

The FogSphere™ VX family is built as an open platform. It is extensible, programmable and provides API for integrations with any 3<sup>rd</sup>-party system. The last twenty years have proven that open platforms are key enablers of progress and evolution for Industries and Enterprises against what has been happening with [vendor locked](#) solutions.

For the past five years, the Redev Technology team has been very active in building a portfolio of AI software solutions (edge and cloud) that companies use today to build their own industrial applications to build up their future digital strategies.

If you are interested in knowing more, please book a call with us:

Website: <https://redev.technology/appointments>

Email: [info@redev.technology](mailto:info@redev.technology)

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