TxWIRELESS™

Datasheet

EDGE Vision

Part No:
EV15

Description:

Machine Vision Platform.

Ordering Information:
EV15 – EDGE Vision unit with machine vision

Features:

- Powerful processing module, BLE & Wi-Fi wireless connectivity, up to three imaging sensors, connections for two LEDs, battery connector with recharging circuitry, and connectors to host additional sensors.
- Utilizes the powerful Intel Movidius Myriad X Vision processing unit for real-time data analysis.
- Equipped with BLE and Wi-Fi connectivity for access to additional peripheral devices

Introduction

The TxWireless™ EDGE Vision platform offers a versatile solution for automated imaging applications, including measurement, tracking, and other event-detection tasks. The EDGE Vision platform utilizes machine vision technologies to analyze image data in real time to extract valuable information from large datasets and transform them into a manageable file. These files can be quickly accessed by our clients, enabling efficient decision-making.

The EDGE Vision platform is made up of imaging components, system modules, completed devices, and cloud service solutions. EDGE Vision allows our clients to choose from a comprehensive range of options that can be seamlessly integrated into their product portfolio.

Key Benefits

Integrate Into Your Design

Compact reference design can easily be integrated into your existing design or flexible enough to work in your proof of concept (PoC) product design.

Accelerate Your Project

Automate operations – speed, consistency, and repeatability

Automate Operations

Reduce your development time and accelerate your product roadmap with the EV15 Imaging system.

Specifications

Model Name	EV15
Processing Unit	Intel® Movidius™ Myriad™ X Vision Processing unit
Power	12VDC
Rechargeable	option
Weight	75g

Imaging Sensors	2 x Monochrome camera (available). 1 x RGB Camera (available)
Resolution	1mp (1280 x 800)
Max Frame Rate	120 FPS
Field of view (DFOV)	82°
Focus	Fixed Focus
Shutter	Global
Lighting	2 x LED connector
Operating Temperature	-20°C (-4°F) to +60°C (+140°F)
Connectivity wireless	Wi-Fi (802.11 b/g/n)/Bluetooth LE module. ESP32-S3-WROOM-1

Machine Vision Workflow

The workflow below highlights the movement of data through the process. At each step TxWireless can offer a solution to our customers.

A. Camera: An imaging system is placed in a strategic position to ensure the camera FOV captures the area of interest.

B. Machine vision: All collected data is analyzed. Auto measurement, auto tracking, auto evening, and event classification all take place in a matter of seconds.

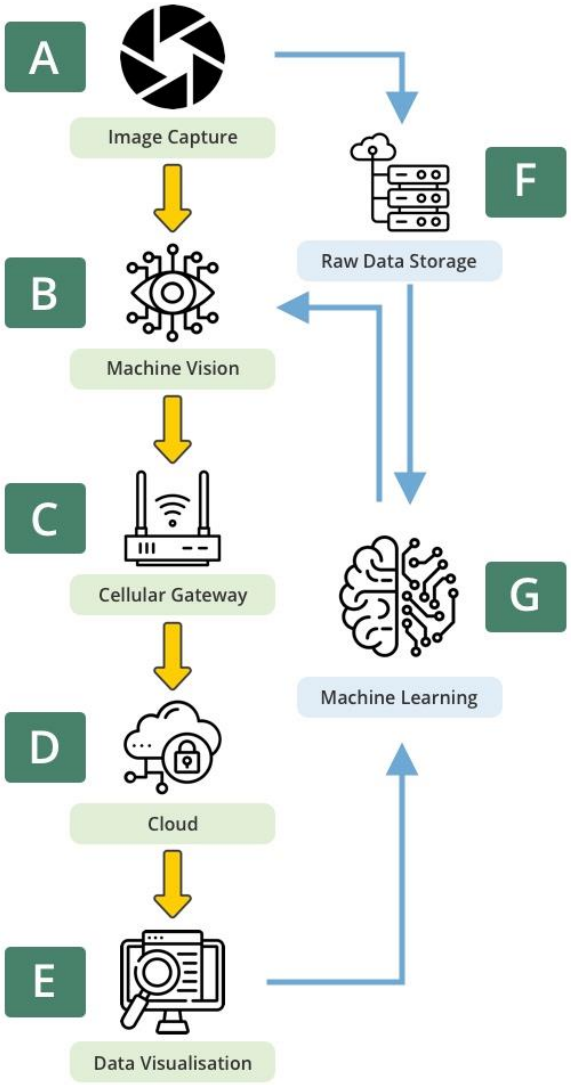
C. Gateway: Insights mined for the image analysis are sent to the cloud via cellular connectivity.

D. Cloud platform: Device management, data Management, and remote sensor management are hosted in the cloud.

E. Dashboard: Real-time insights are displayed on a user's device to provide instant notifications, alerts, and other valuable analytics.

F. Storage: All data is stored locally on the device or on a NAS.

G. Machine learning: Spot trends and common traits in the data to improve the process. Learn new functionality and improve on existing auto eventing services.



Why Use Machine Learning

Instant image analysis – As the image data is collected, the device analyzes it in real time to find the information required. This process filters the large image data so only important information makes it through. This reduces the amount of data uploaded to the cloud.

Automated operations – No human is involved in the process. No downtime. Always analyzing. Speed, consistency, and repeatability.

Protect sensitive visual datasets – When a device is in locations where imagery data can be classed as too sensitive to be sent to the cloud, only the actionable information is uploaded.

Act quickly – Instant insights enable the team to make quick, informed decisions.

Quality improvement – Improving the value of the data collected and identifying issues early reduce downtime, leading to reduced costs.

Cost reduction – By automating visual inspection and quality control processes, machine vision can reduce costs associated with labor, rework, and product recalls.

Regional Support and International Engineering

Let's make something great together

We are trusted by over 5000+ clients.
Join them by using our services and grow your business.

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