Engineering Services

AI Image Recognition ECU for Special Vehicles

The agricultural and construction fields are facing a shortage of labor and people carrying on and enduring the workload so it is hoped that automation of machinery will help to streamline and save labor. In addition to this, attention is being paid to measures that will prevent accidents on construction sites by using AI-based human detection systems to reduce accidents during work. Amid this situation, we have developed an AI-based image recognition ECU required for preventing accidents and automating special vehicles. By utilizing our expertise developed through many years of experience in automotive electronics, we offer solutions that can be quickly commercialized while reducing initial development costs by providing AI image recognition for outdoor testing that stands up to environmental demands.

Do you have any of the following needs? We want to...

- •Equip high-performance edge computing that can be used outdoors
- •Develop a unique image recognition ECU quickly with low initial development costs
- ·Install AI image recognition around machines for safety monitoring purposes
- •Develop high-quality edge computing with a view to commercialization

Jetson™ Reference ECU One-Stop Service

Based on the reference ECU developed independently by our company on NVIDIA® Jetson modules, we provide customized mass production specifications in one stop.

Joint ECU testing Identify issues Formulate specs AI development support

PoC
development
Design,
prototype and
manufacturing

Mass production
Testing and
manufacture

Our Strengths:

- 1. Providing services based on many years of experience in development in the automotive field
- Development of highly robust products for use in special vehicles
- Technical support and quality support at the in-vehicle level
- 2. Addition of on-board interfaces and composite proposals for peripheral components such as cameras and sensors

Jetson Software Installation Support

Software assets developed by customers using Jetson developer kits can be installed in Jetson ECUs provided by us. We provide services that make use of our expertise to support the development of customers' applications in various ways, such as through technical support when installing, technical consulting for AI development, and PoC development, etc.



Application example: Object recognition and distance estimation with single camera

Jetson Reference ECU Features

We provide an AI-based computing ECUs that stand up to environmental demands based on the Jetson Industrial SoM (System on Module).

- Equipped with industrial grade Jetson SoM
- · Robust housing suitable for outdoor environments
- · Can be connected to side of vehicle with a collective connector
- Equipped with multi-channel GMSL camera interface for automotive applications
- Equipped with general-purpose interfaces (USB, Ethernet, HDMI) as standard



ECU equipped with TX2i module



ECU equipped with AGX Xavier Industrial module (Scheduled for release in December)

