EATHA06

Datasheet

V1.0.0

ECOTRON CORPORATION

www.ecotron.ai

Revision History

Revision Date	Version	Description
2025.10	V1.0.0	Initial Release

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1. General Information

The EATHA06 is designed with an NVIDIA Jetson Thor + Infineon TC397 architecture, delivering up to 2070 TFLOPS of computing power and targeting L3–L5 autonomous driving applications. It integrates computation-intensive sensor data processing, fusion, and control strategy development into a single control unit.

It can be used in application scenarios requiring high computing performance, such as autonomous logistics delivery, unmanned sanitation vehicles, autonomous mining trucks, driverless buses, and intelligent construction machinery.

2. Interface

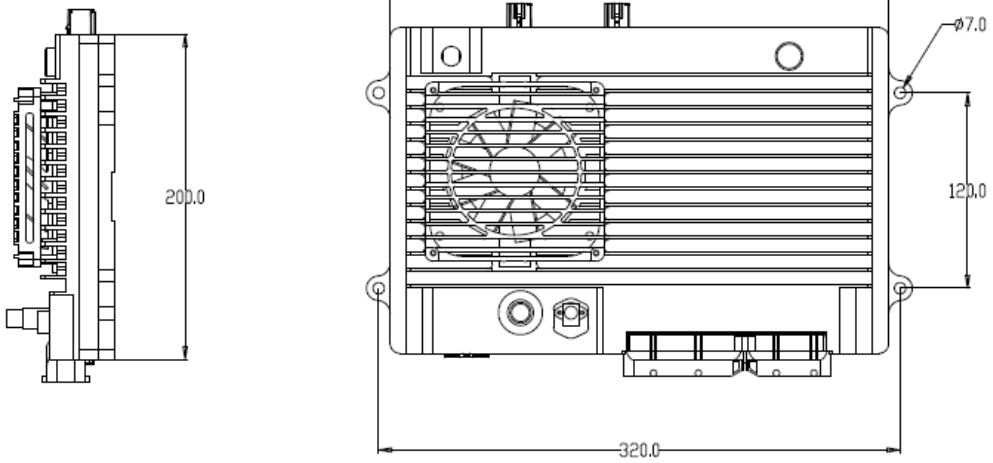
Interface type	Quantity	Function	Internal Chip	Connector
Camera Interface	8	GMSL/GMSL2	SOC	2*4 Fakra Connectors
100M Automotive Ethernet	2	100Base-T1	Switch	1*6 Fakra Connector
1G Automotive Ethernet	4	1000Base-T1	Switch	
Standard 1G Automotive Ethernet	1	100BASE-T/1000BASE-T Standard	Switch	1* aviation plug
HDMI	1		SOC	
USB	1	1× USB Host; supports USB2.0, USB3.0, USB3.1	SOC	
M.2 KEY M	1	Storage expansion	SOC	Internal
GPS+IMU	1		SOC	
CANFD	2		SOC	121PIN-CMC
RS232	3	One of the ports is used for Debugging	SOC	
PPS_IN	1	Supports 5V–16V	SOC	
PPS_OUT	4	PPS high-voltage pulse signal (5V)	SOC	
CAN	1		GNSS	
RS232	1		GNSS	
CANFD	8	2 Channels with Specific Frame Wakeup	MCU	
LIN	6		MCU	
USS	12		MCU	
KEYON	3	1 Channel for SoC, 2 Channels for MCU	MCU	
Digital Acquisition	6	Default configuration, 4 High-Active Channels, 2 Low-Active Channels	MCU	
Analog Acquisition	6		MCU	
Low-side Drive	8	8 channels @ 250 mA	MCU	
High-side Drive	4	4 channels @ 1A	MCU	
5V Sensor Power Supply	2	Max output current 100mA	MCU	
Power Positive	6			

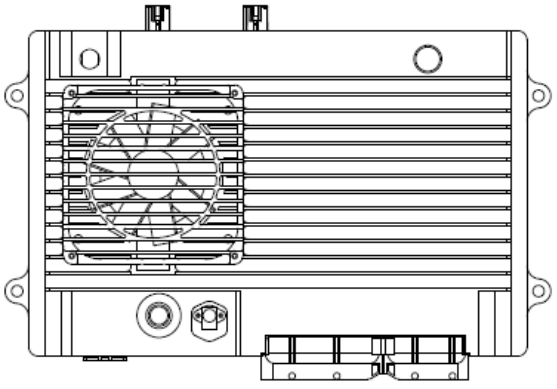
Power Ground	7			
Signal Ground	9			

3. Mechanical Properties

3.1 Dimensions

The exterior housing of the controller has no special surface treatments or coatings and contains no sharp burrs or edges.





3.2 Connectors

The connectors used in the EATHA06 comply with automotive safety-grade requirements. The connector types and part numbers are listed in the table below.

No.	Connector	Name	Category	Supplier	Link
1	121P	PCB Pin Header	1746979-1	TE	--
2		81P Housing	1473244-1	TE	http://www.digikey.com/products/en?keywords=1473244-1
3		40P Housing	1473252-1	TE	http://www.digikey.com/products/en?keywords=1473252-1
4		Large Terminal	964273-2	TE	http://www.digikey.com/products/en?keywords=964273-2%20
5		Small Terminal	968220-1	TE	http://www.digikey.com/products/en?keywords=968220-1
6		81P Back Cover	1473247-1	TE	http://www.digikey.com/products/en?keywords=1473247-1
7		40P Back Cover	1473255-1	TE	http://www.digikey.com/products/en?keywords=1473255-1
8		81P Clip	368382-1	TE	http://www.digikey.com/products/en?keywords=368382-1
9		40P Clip	368388-1	TE	http://www.digikey.com/products/en?keywords=368388-1
10	4-Pin Waterproof Connector	Board-side	2404815-1	TE	
11		Harness-side	2-2354439-1	TE	
12	6-Pin Connector	Board-side	E3SN6A-BMR131-S00	Amphenol	
13		Harness-side	E3SN6X-WFS101-T02	Amphenol	
14	Aviation Plug	Board-side	EEG.1K. 308.CLN	JX	
15		Harness-side	FGG.1K.308.CLAC	JX	
16		Board-side	M8-F1-S8	DAOSM	
17		Harness-side	M8-D-P8	DAOSM	
18	Antenna Interface	Waterproof Antenna Connector	SMA-KKY-22.2MM	YINSAIGE	

4. Quick Start

4.1 Preparation

Before using this device, please prepare the following item

- Stable power supply, 12V DC/ 5A min or 24V DC/ 5A min
- USB to RS-232 adapter
- Laptop

4.2 Basic Knowledge

If you are a Linux beginner, it is helpful to learn how to use Linux command line tools. Here is a good Linux tutorial: tutorial.

4.3 Get Started

1. Connection

Connect the device's positive terminals (BATTA as the main power supply, BATTB as the backup power supply) to a DC power source. Use a USB-to-RS232 cable to connect the device's UART3 port to the computer, ensuring that the computer can properly access the serial interface of the device.

2. Configuration

Configure the serial port: baud rate 115200, 8 data bits, no parity, 1 stop bit.

On Windows, use MobaXterm or Putty. For Linux, use Minicom, etc., to open the serial port.

3. Startup

Turn on the device's KeyOn switch to power up the device. The device will first boot U-Boot, followed by the Linux system. You will see the system booting up normally in the serial terminal window. Afterward, you can log in with the default username: nvidia, and password: nvidia.

5. Hardware Description

The hardware circuit of the computing platform is designed according to the application requirements of the autonomous driving system. The electrical parameters meet Automotive grade requirements and have a variety of data transmission interfaces that can meet the needs of sensor fusion for autonomous driving systems. The main chip contains a variety of high-performance computing units to adapt to the computation-intense characteristics of autonomous driving, including sequential and parallel computing.

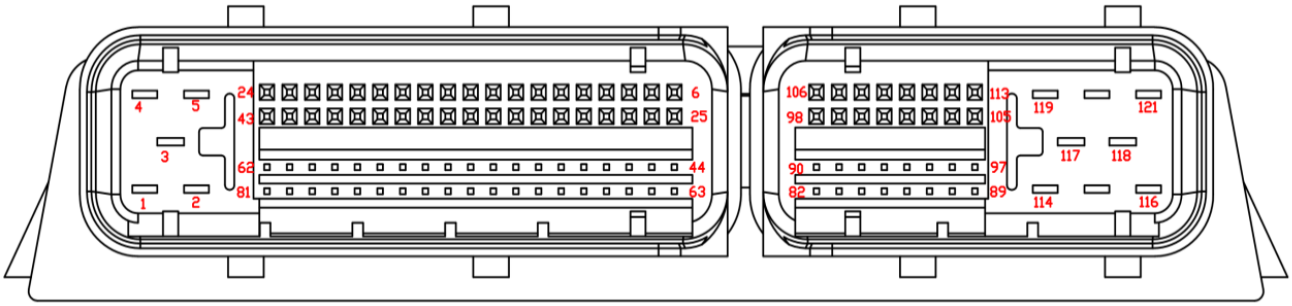
5.1 Specifications

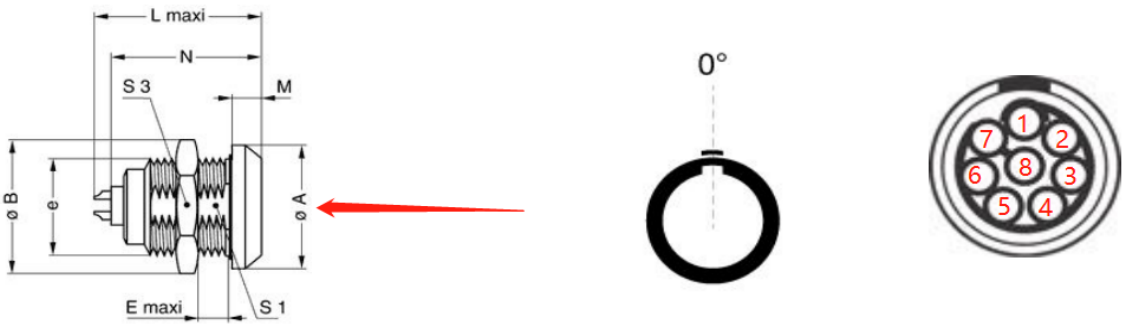
Item	Parameter
Working Voltage	DC 9～32V
Operating Memory	128GB
Storage Space	Depends on selected SSD capacity
Operating Temperature	-25～70℃
Operating Humidity	0～95%，non-condensing
Storage Temperature	-40～85℃
Dimensions	335mm*214mm*60mm
Waterproof Rating	IP5X
Cooling Method	Air Cooling

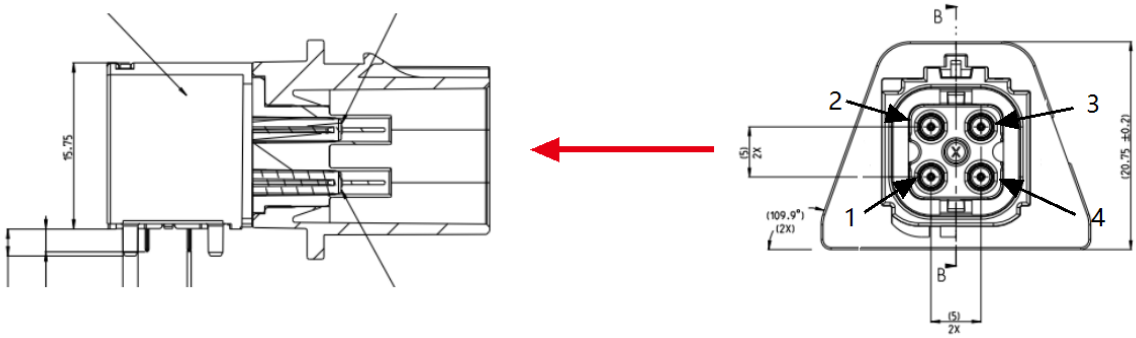
5.2 Device Ports

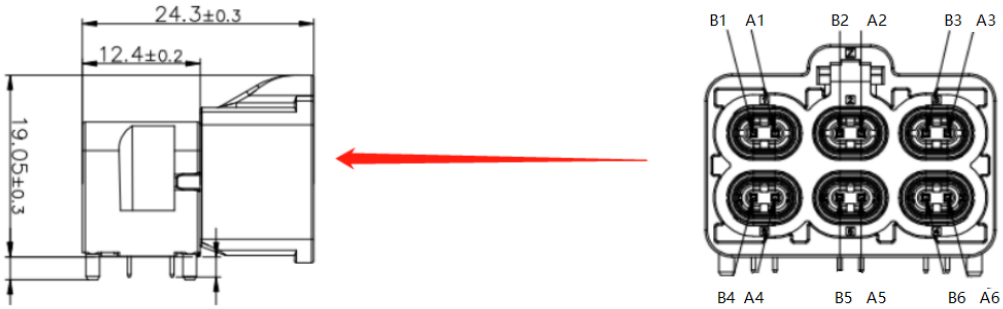
5.2.1 Port Distribution

The distribution of the input and output ports of this computing platform is shown in the figures below. All diagrams are front views.









5.2.2 Pin Definitions

The functional definitions of the input and output ports of this computing platform are shown in the table below.

Name	PIN	Interface Description	Remark
ESN1 Automotive Ethernet			
P1_MDI_P	E3SN1-A1	Automotive Ethernet Interface 1	1000Base-T1
P1_MDI_N	E3SN1-B1		
P2_MDI_P	E3SN1-A2	Automotive Ethernet Interface 2	1000Base-T1
P2_MDI_N	E3SN1-B2		
P3_MDI_P	E3SN1-A3	Automotive Ethernet Interface 3	1000Base-T1
P3_MDI_N	E3SN1-B3		
P4_MDI_P	E3SN1-A4	Automotive Ethernet Interface 4	1000Base-T1
P4_MDI_N	E3SN1-B4		
P5_MDI_P	E3SN1-A5	Automotive Ethernet Interface 5	100Base-T1
P5_MDI_N	E3SN1-B5		
P6_MDI_P	E3SN1-A6	Automotive Ethernet Interface t 6	100Base-T1
P6_MDI_N	E3SN1-B6		
EEG Standard Ethernet			
NPort7_BI_DD+	EEG1-1	Standard Ethernet	100BASE-TX/1000BASE-T
NPort7_BI_DD-	EEG1-2		
NPort7_BI_DC+	EEG1-3		
NPort7_BI_DC-	EEG1-4		
NPort7_BI_DB+	EEG1-5		
NPort7_BI_DB-	EEG1-6		
NPort7_BI_DA+	EEG1-7		
NPort7_BI_DA-	EEG1-8		
Camera			
Camera-1	2404815-4	GMSL/GSML2 Serial Camera Interface 1	
Camera-2	2404815-3	GMSL/GSML2 Serial Camera Interface 2	
Camera-3	2404815-2	GMSL/GSML2 Serial Camera Interface 3	
Camera-4	2404815-1	GMSL/GSML2 Serial Camera Interface 4	
Camera-5	2404815-4	GMSL/GSML2 Serial Camera Interface 5	
Camera-6	2404815-3	GMSL/GSML2 Serial Camera Interface	

Name	PIN	Interface Description	Remark
		6	
Camera-7	2404815-2	GMSL/GSML2 Serial Camera Interface 7	
Camera-8	2404815-1	GMSL/GSML2 Serial Camera Interface 8	
Display			
HDMI	HDMI	HDMI Display Interface	
USB			
USB Host	USB	USB Interface	
Power			
BATT	121P-1	BATTB Power Positive	BATTA is the main power supply. BATTB is the backup power supply
	121P-3		
	121P-115		
	121P-116	BATTA Power Positive	
	121P-118		
	121P-121		
Power Ground			
PGND	121P-2	Power Negative Terminal	
	121P-4		
	121P-5		
	121P-114		
	121P-117		
	121P-119		
	121P-120		
Signal Ground			
GND	121P-36	Signal Ground Section	
	121P-45		
	121P-57		
	121P-59		
	121P-63		
	121P-64		
	121P-65		
	121P-82		
	121P-87		
5V Sensor Power Supply			
5V-1	121P-83	5V-1 Sensor Power Supply	Max current: 100mA
5V-2	121P-86	5V-2 Sensor Power Supply	Max current: 100mA
Power-On Section			

Name	PIN	Interface Description	Remark
KEYON39	121P-39	KEYON39	High-active, controls TC397 power-on Triggered by high level
KEYON44	121P-44	KEYON44	High-active, controls Thor power-on Triggered by high level
KEYON56	121P-56	KEYON56	High-active, controls TC397 power-on Triggered on rising edge
Analog Input Section			
AI01	121P-42	Analog Input 0~5V（Voltage type）	12-bit Accuracy
AI02	121P-60	Analog Input 0~5V（Voltage type）	12-bit Accuracy
AI03	121P-43	Analog Input（Resistance type）	12-bit Accuracy
AI04	121P-24	Analog Input（Resistance type）	12-bit Accuracy
AI13	121P-62	Analog Input 0~36V（Voltage type）	12-bit Accuracy
AI14	121P-40	Analog Input 0~36V（Voltage type）	12-bit Accuracy
Digital Input Section			
DI01	121P-20	Digital Input 0~BATT	Active High
DI02	121P-58	Digital Input 0~BATT	Active High
DI03	121P-77	Digital Input 0~BATT	Active Low
DI04	121P-38	Digital Input 0~BATT	Active Low
DI21	121P-74	Digital Input 0~BATT	Active High
DI22	121P-16	Digital Input 0~BATT	Active High
Output Signal Section			
HSO01	121P-88	Rated 0.5A, max 1A	
HSO02	121P-89	Rated 0.5A, max 1A	
HSO03	121P-97	Rated 1A, max 1.5A	
HSO04	121P-96	Rated 1A, max 1.5A	
LSO01	121P-101	Rated 250mA	
LSO02	121P-94	Rated 250mA	
LSO03	121P-90	Rated 250mA	
LSO04	121P-92	Rated 250mA	
LSO05	121P-110	Rated 250mA	
LSO06	121P-103	Rated 250mA	
LSO07	121P-109	Rated 250mA	
LSO08	121P-107	Rated 250mA	
Serial Communication Interface Section			
CAN_A_H	121P-27	Without 120 Ω Terminal Resistor	Supports CANFD and specific-frame wake-up, corresponding to CANA in EcoCoder.
CAN_A_L	121P-28		
CAN_B_H	121P-9	Without 120 Ω Terminal Resistor	Supports CANFD and specific-frame wake-up,
CAN_B_L	121P-10		

Name	PIN	Interface Description	Remark
			corresponding to CANB in EcoCoder.
CAN_C_H	121P-31	With 120 Ω Terminal Resistor	Supports CANFD,
CAN_C_L	121P-32		corresponding to CANC in EcoCoder.
CAN_D_H	121P-11	With 120 Ω Terminal Resistor	Supports CANFD,
CAN_D_L	121P-12		corresponding to CAND in EcoCoder.
CAN_E_H	121P-29	With 120 Ω Terminal Resistor	Supports CANFD,
CAN_E_L	121P-30		corresponding to CANE in EcoCoder.
CAN_F_H	121P-13	With 120 Ω Terminal Resistor	Supports CAN FD,
CAN_F_L	121P-14		corresponding to CANF in EcoCoder.
CAN_G_H	121P-18	With 120 Ω Terminal Resistor	Supports CANFD,
CAN_G_L	121P-17		corresponding to CANG in EcoCoder.
CAN_H_H	121P-22	With 120 Ω Terminal Resistor	Supports CANFD,
CAN_H_L	121P-21		corresponding to CANH in EcoCoder.
SOC_CANA_H	121P-47	With 120 Ω Terminal Resistor	Supports CANFD,
SOC_CANA_L	121P-66		corresponding to Thor CAN0.
SOC_CANB_H	121P-48	With 120 Ω Terminal Resistor	Supports CAN FD,
SOC_CANB_L	121P-67		corresponding to Thor CAN1.
CAN_H_LG69T	121P-33	With 120 Ω Terminal Resistor	Supports CAN,
CAN_L_LG69T	121P-34		used for GNSS communication.
CAN_SHILD-1	121P-46	CAN Shield	
CAN_SHILD-2	121P-8	CAN Shield	
LIN_BUS0	121P-6	LIN0 Bus	
LIN_BUS1	121P-26	LIN1 Bus	
LIN_BUS2	121P-7	LIN2 Bus	
LIN_BUS3	121P-25	LIN3 Bus	
LIN_BUS4	121P-61	LIN4 Bus	
LIN_BUS5	121P-55	LIN5 Bus	
RS232_1_TXD	121P-52	RS-232 Port 1	Thor ttyTHS0
RS232_1_RXD	121P-71		
RS232_2_TXD	121P-69	RS-232 Port 2	Thor ttyTHS4
RS232_2_RXD	121P-50		
RS232_3_TXD	121P-51	RS-232 Port 3	Thor ttyTCU0 (default for Debug)
RS232_3_RXD	121P-70		
RS232_TXD_LG69T	121P-72	GNSS RS-232 Port	used for GNSS communication
RS232_RXD_LG69T	121P-73		
Ultrasonic Radar Interface Section			
USS1	121P-108	IO Interface for Radar 1	
USS2	121P-100	IO Interface for Radar 2	

Name	PIN	Interface Description	Remark
USS3	121P-99	IO Interface for Radar 3	
USS4	121P-112	IO Interface for Radar 4	
USS5	121P-105	IO Interface for Radar 5	
USS6	121P-113	IO Interface for Radar 6	
USS7	121P-106	IO Interface for Radar 7	
USS8	121P-98	IO Interface for Radar 8	
USS9	121P-91	IO Interface for Radar 9	
USS10	121P-102	IO Interface for Radar 10	
USS11	121P-111	IO Interface for Radar 11	
USS12	121P-104	IO Interface for Radar 12	
USS-POWER1	121P-37	VCC Interface for Radar Group 1	
USS-POWER2	121P-41	VCC Interface for Radar Group 2	
USS-POWER3	121P-53	VCC Interface for Radar Group 3	
USS-POWER4	121P-54	VCC Interface for Radar Group 4	
USS-GND	121P-93	GND Interface for Radar Groups 1 & 2	
USS-GND	121P-95	GND Interface for Radar Groups 3 & 4	
Other			
PPS_IN	121P-23	Pulse-per-second input signal	Thor, supports 5V–16V
PPS_OUT1	121P-81	Pulse-per-second input signal	Thor, 5V output
PPS_OUT2	121P-80	Pulse-per-second input signal	Thor, 5V output
PPS_OUT3	121P-79	Pulse-per-second input signal	Thor, 5V output
PPS_OUT4	121P-78	Pulse-per-second input signal	Thor, 5V output

5.3 System Main Chip

The autonomous driving processing module inside the EATHA06 is designed with NVIDIA's Thor chip, an embedded intelligent computing processor dedicated to autonomous driving systems. The computing performance of each processor inside the Thor module is listed as follows.

Feature	Detail
AI	Up to 2070 FP4 TFLOPs |1035 FP8 TFLOPs
CPU Complex	14 CPU clusters | One core per cluster | Arm Neoverse V3AE (64-bit) symmetric multi-processing (SMP) CPU architecture | L1 Cache (I, D) per core: 64KB + 64KB | L2 Cache per core: 1MB | L3 Cache 16MB shared System Cache | SPECint@2017_int_base (one core): 6.6 |

	SPECrate@2017_int_base (all cores): 80
Blackwell GPU	3GPC, 10 TPC, 2560 NVIDIA® CUDA® cores | 96 5th GEN Tensor cores | MIG Support End-to-end lossless compression | Tile Caching | OpenGL® 4.6+ | OpenGL ES 3.2 | Vulkan® 1.2+ | CUDA 11.4+
Decode	2x NVDEC @ 1.56 GHz NVDEC is on the same rail as the GPU. Supported Standards: H.265 (HEVC), H.264, VP9, VP8, AV1, MPEG-4, MPEG-2, VC-1 Supported Streams: 4x 8Kp30 (H.265), 10x 4Kp60 (H.265), 22x 4Kp30 (H.265), 46x 1080p60 (H.265), 92x 1080p30 (H.265), 4x 8Kp30 (H.264), 10x 4Kp60 (H.264), 20x 4Kp30 (H.264), 40x 1080p60 (H.264), 82x 1080p30 (H.264)
Encode	2x NVENC @ 1.56 GHz NVENC is on the same rail as the GPU. Supported Standards: H.265 (HEVC), H.264 Supported Streams: 6x 4Kp60 (H.265), 12x 4Kp30 (H.265), 24x 1080p60 (H.265), 50x 1080p30 (H.265), 6x 4Kp60 (H.264), 12x 4Kp30 (H.264), 24x 1080p60 (H.264), 48x 1080p30 (H.264)
Programmable Vision Accelerator (PVA)	1x NVIDIA PVA 3.0

The microcontroller inside the EATHA06 uses Infineon's TC397 series chip, featuring a 6-core TriCore™ architecture running at 300 MHz. It includes up to 2.9 MB + 16 MB of ECC-protected RAM and is designed in accordance with the ISO 26262 standard, supporting ASIL-D, the highest automotive functional safety level. Together with the base chip, it forms the core of the hardware safety architecture.

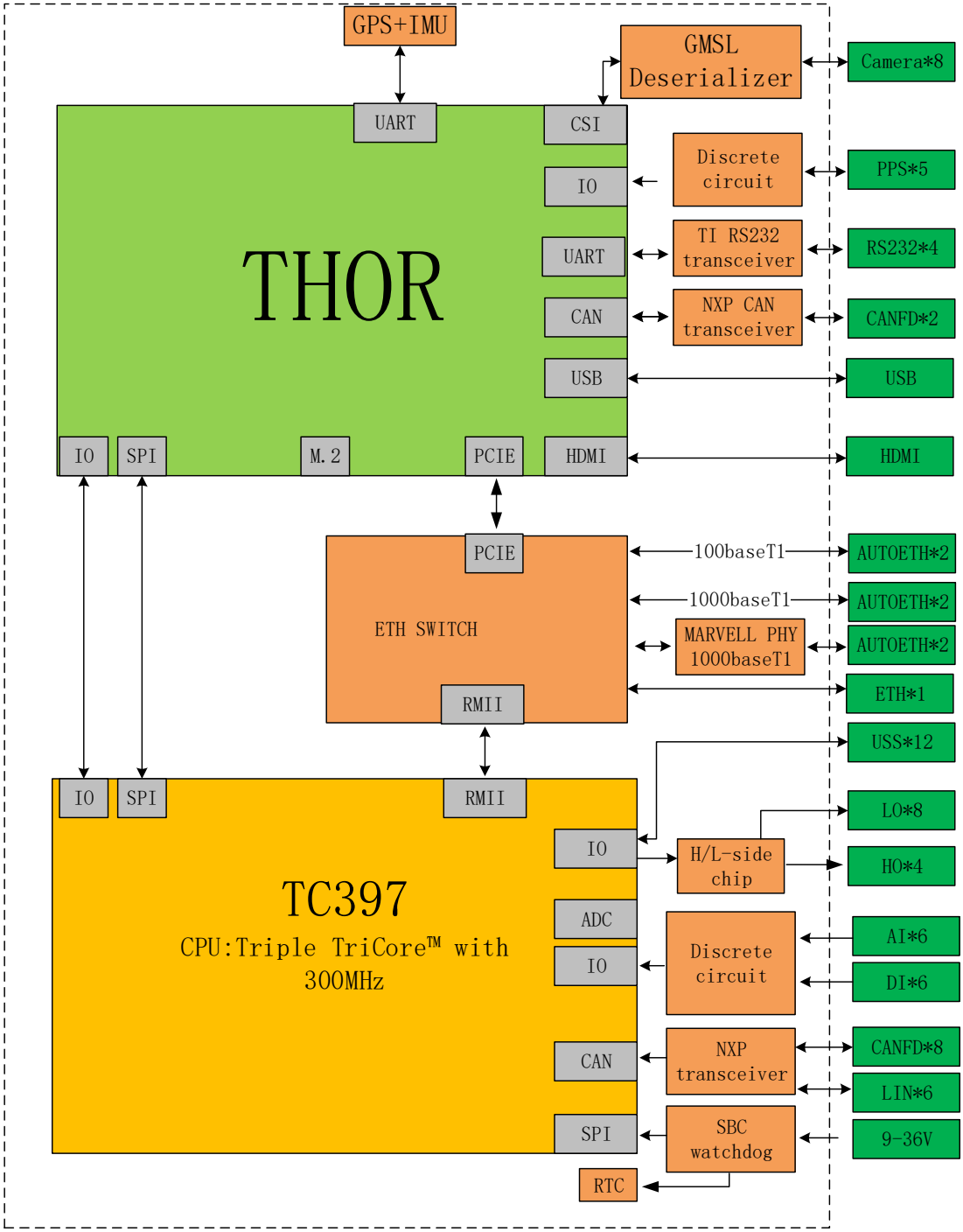
The resources of this chip are as follows:

Feature	**Detail**
Micro Control Core	32-bit Infineon TC397XP
Maximum Frequency	300MHz

Flash	16MB
SRAM	2.9MB
EEPROM	129K
Float Point Capability	Yes
SBC	TLF35584

5.4 Circuit Structure

The internal hardware circuit structure of the EATHA06 is shown in the following diagram.

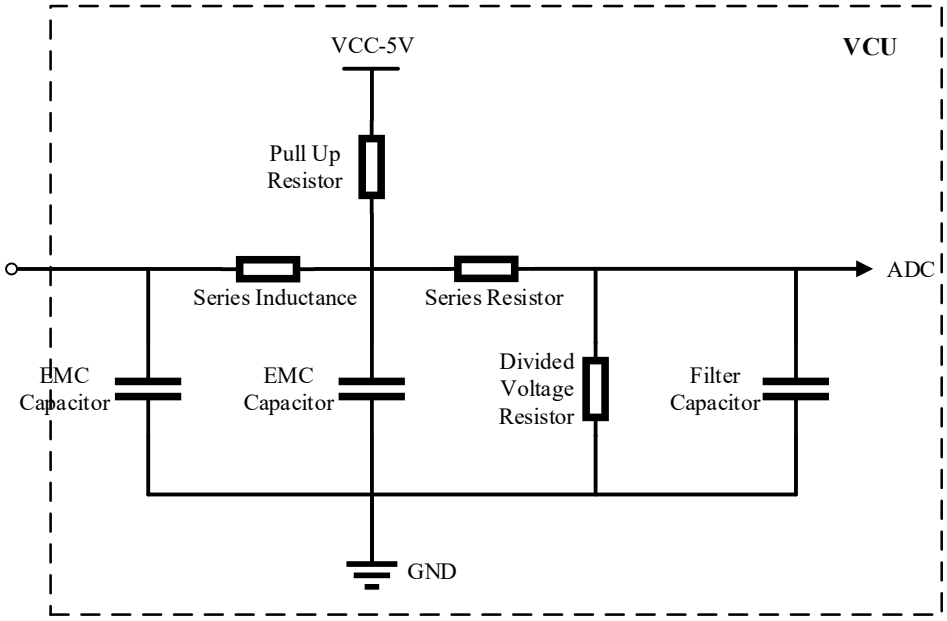


5.5 Circuit Description

5.5.1 Analog Signal Input

The analog input channel circuit has the same structure, the circuit schematic and circuit

details are shown below:



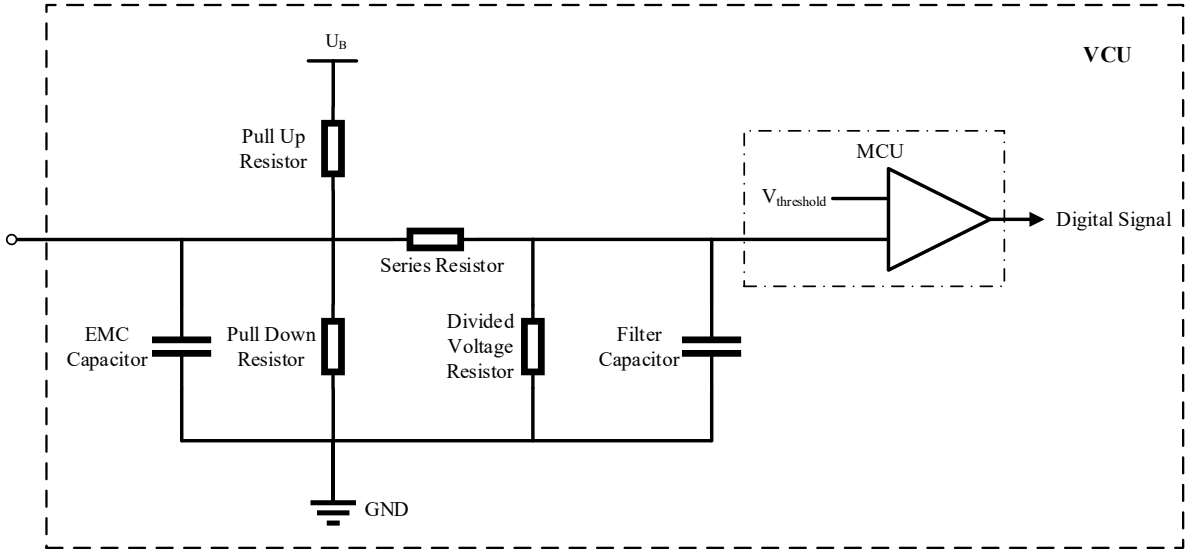
Note: 1) "--" means not installed. 2) UB represents the BATT voltage of the power supply. 3) AI28 acquires BATT voltage signal.

Pin #	AI	EMC Capacitor	Pull Up Resistor	Series Resistor	Divided Voltage Resistor	Filter Capacitor	Input Range		Conditions / Remarks
		(F)	to 5V (Ohm)	(Ohm)	(Ohm)	(F)	Min	Max	
42	AI01	100n	--	22k	--	1n	0V	5V	
60	AI02	100n	--	22k	--	1n	0V	5V	
43	AI03	100n	10k	22k	--	1n	--	--	Resistance type
24	AI04	100n	10k	22k	--	1n	--	--	Resistance type
62	AI13	100n	--	22k	3.48k	1n	0V	32V	
40	AI14	100n	--	22k	3.48k	1n	0V	32V	

5.5.2 Digital Input

The digital input channel circuit has the same structure, the circuit schematic and circuit

details are shown below:



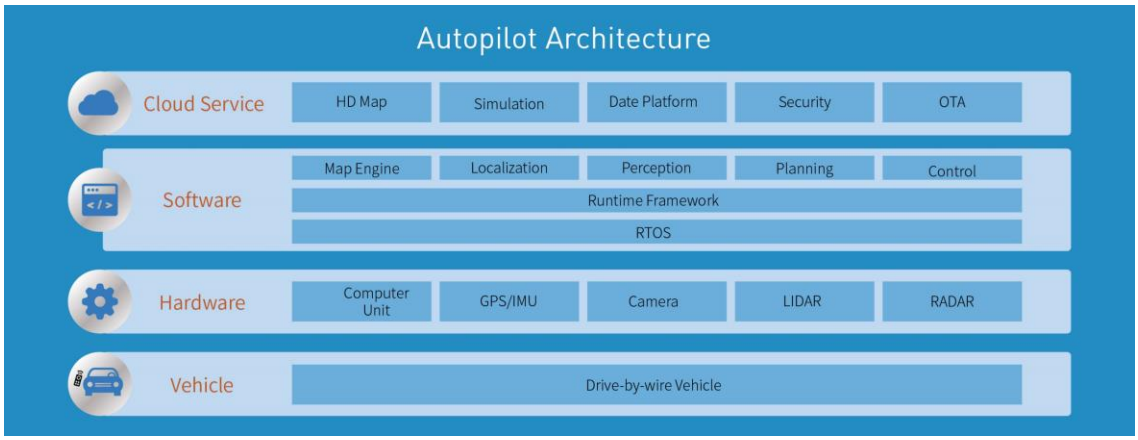
Note: 1) "--" means not installed. 2) UB represents the BATT voltage of the power supply. 3) AI28 acquires BATT voltage signal.

Pin #	DI	Pull Up Resistor	Pull Down Resistor	Operation Threshold for Input Signal		Input Range		Conditions/ Remarks
		to U_B(Ohm)	(Ohm)	V_{low}	V_{high}	Min	Max	
20	DI01	--	10k	3V	8.5V	0V	U_B	Active High
58	DI02	--	10k	3V	8.5V	0V	U_B	Active High
77	DI03	10k	--	3V	8.5V	0V	U_B	Active Low
38	DI04	10k	--	3V	8.5V	0V	U_B	Active Low
74	DI21	--	10k	3V	8.5V	0V	U_B	Active High
16	DI22	--	10k	3V	8.5V	0V	U_B	Active High

6. Basic Software

The SOC software system of the computing platform is customized for the autonomous driving system. A typical framework of an autonomous driving system is shown below. The SoC software system of EAORA04 consists of Runtime Framework and other components. The Runtime Framework is ROS (Robot Operating System) Melodic.

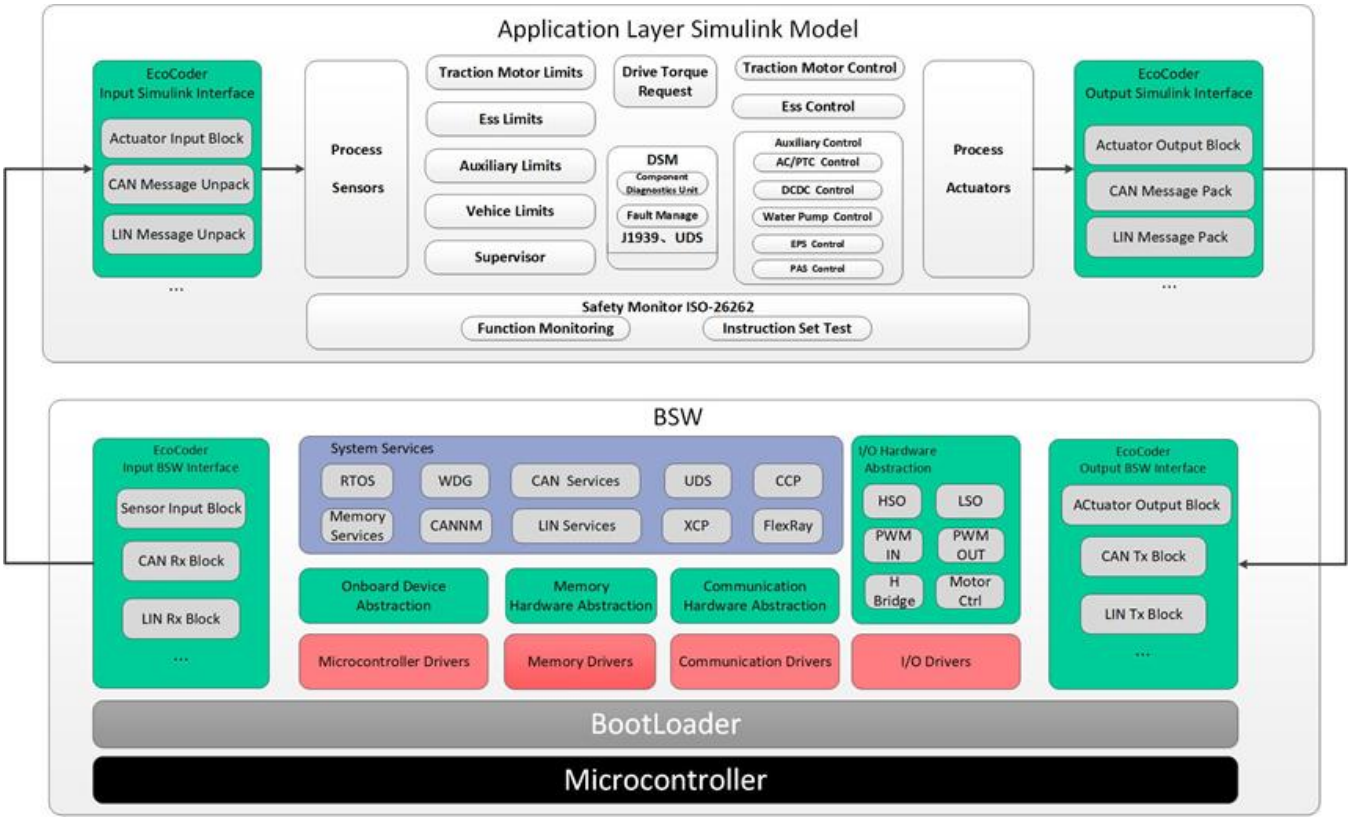
Linux is a bridge connecting the hardware and the users, providing functions such as Process Management, Memory Management, File System, Network, Security, User Interface, and Device Drivers. Users can enter commands through the user interface of the operating system. The operating system interprets the commands, drives the hardware devices, and implements user requirements. ROS provides some standard operating system services, such as Hardware Abstraction, Low-Level Device Control, Inter-Process Messaging, and Message Packet Management. ROS is built on a graph architecture, various nodes can publish, subscribe and aggregate all kinds of information, e.g. sensing, control, status, planning.



The MCU software architecture inside the Thor computing platform is designed with reference to the AUTOSAR standard and is divided into the Application Software Layer and the Basic Software Layer. Basic Software Layer consists of a microcontroller abstraction layer, an ECU abstraction layer, a service layer, and a complex driver. Application software and basic software are connected and integrated through EcoCoder. EcoCoder encapsulates the low-level software interfaces into the Simulink library via

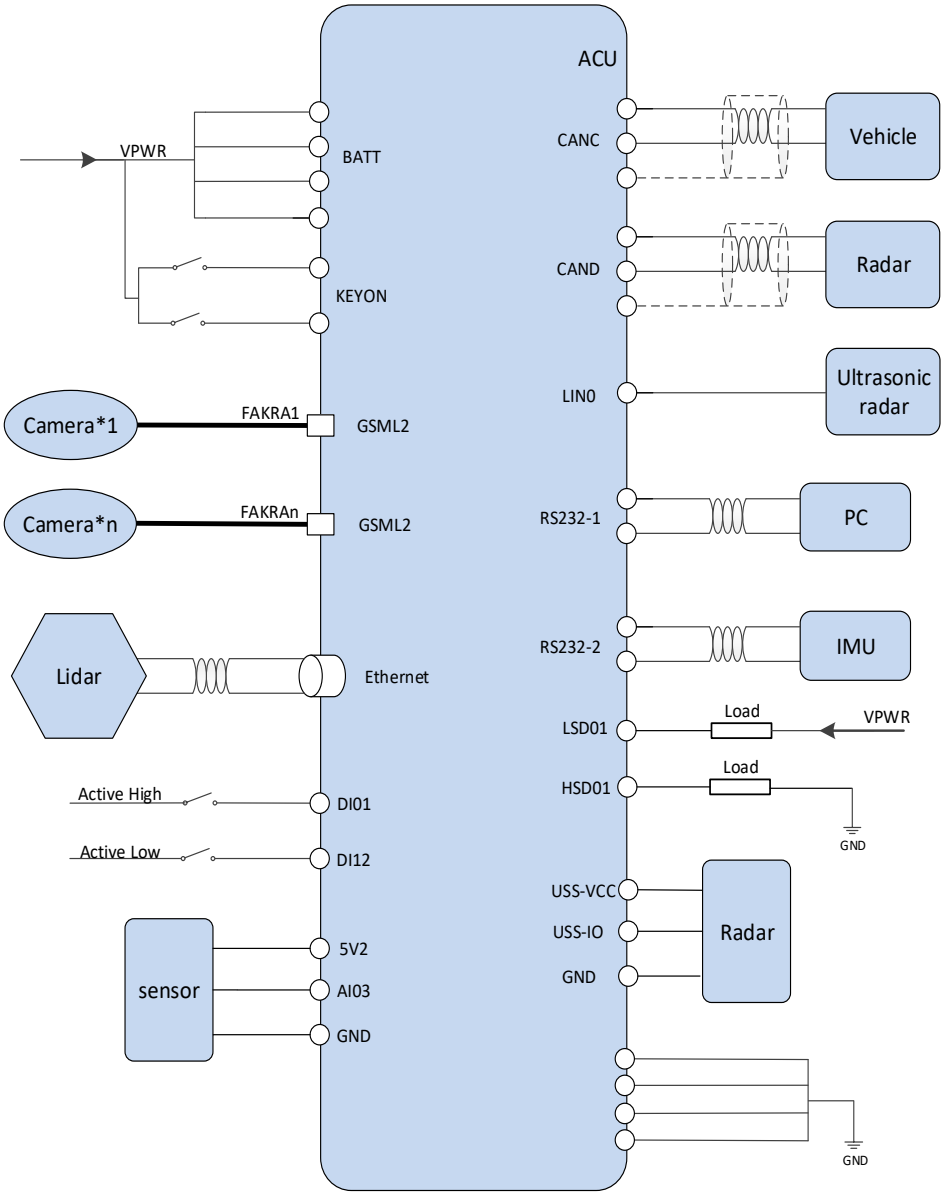
s-functions. Application developers can use Simulink to build the model and generate executable program files for TC397 via Simulink by just one click

The basic software interfaces that EcoCoder encapsulates can read digital and analog input signals, control high and low side outputs, support .dbc file interpretation, implement CCP and UDS protocols, and define the measurement, calibration and NVM variables. MCU application development is implemented with the calibration software EcoCAL and the flashing software EcoFlash.



7. Application Scenarios

The EATHA06 is used in the field of autonomous driving as a hardware platform that works together with sensors to form an autonomous driving system. A typical connection method is shown in the figure below.



8. Development Tool

The MCU software architecture inside the Thor computing platform is designed based on the AUTOSAR framework and is divided into an application software layer and a basic software layer. The basic software layer is further subdivided into the Microcontroller Abstraction Layer (MCAL), ECU Abstraction Layer, Service Layer, and Complex Drivers.

The application layer and basic software are integrated through EcoCoder. EcoCoder uses S-Functions within Simulink to encapsulate the low-level interfaces into Simulink library modules. This allows application developers to build application-layer models directly in Simulink and generate TC397-compatible executable programs with a single click.

8.1 EcoCoder

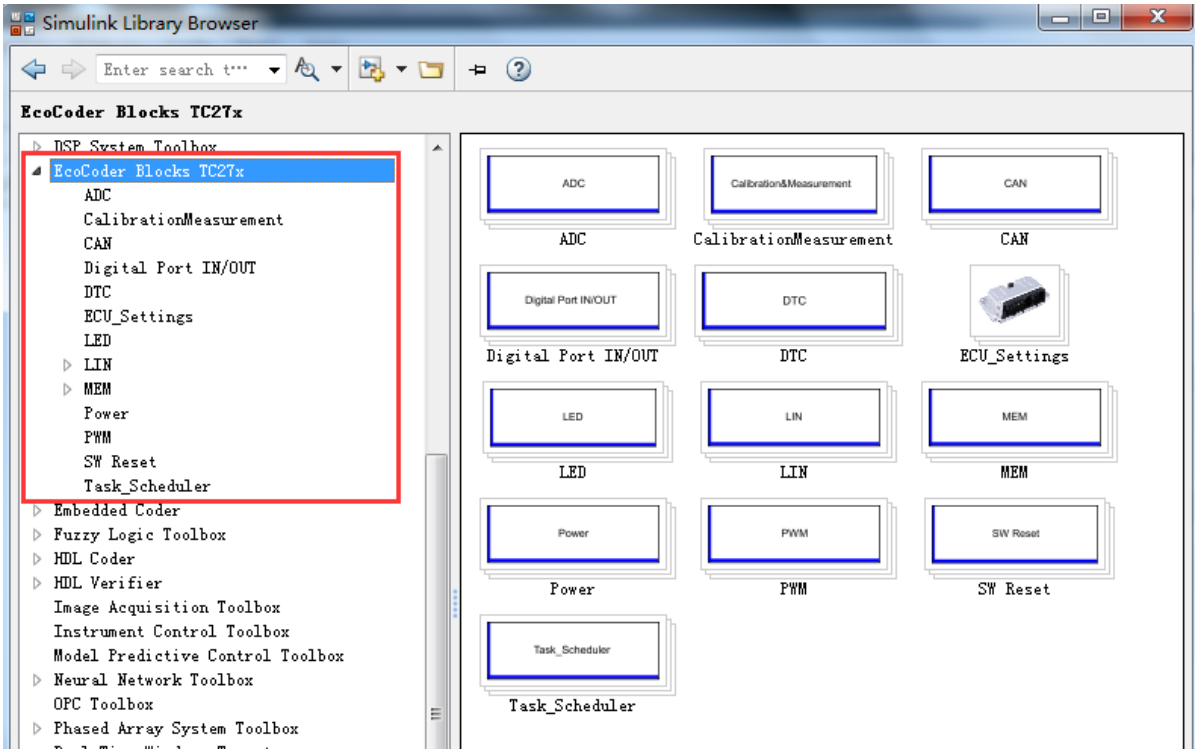
EcoCoder is an application development tool for the control system, which makes it easier for users to develop embedded application software in the Simulink environment. It expands the resources of Simulink and Real-Time Workshop embedded encoders to generate the necessary code module and automatically configures and optimizes code generation. By encapsulating the low-level software library to s-functions, EcoCoder allows developers to use low-level software interfaces by model-based-design method and configure basic parameters. It can generate executable files and data description files with one click and provide .a2l file address update tool

Features：

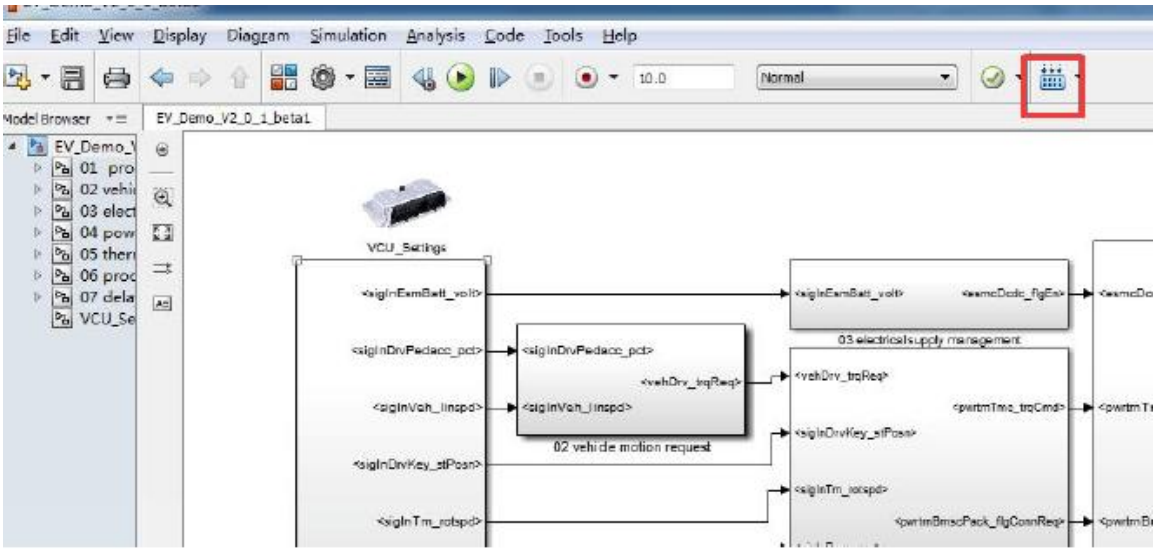
- Users develop embedded application software in the Simulink environment.
- Application developers can focus on control strategy development without knowing all the information about hardware.
- By encapsulating the low-level software library to s-functions, EcoCoder enables developers to use the low-level software interfaces and configure parameters using the model-based-design

method.

- Executable file and data description file can be generated by one click, and an .a2l file address update tool is provided. During the generation, the code generated by the model is integrated with the low-level software automatically in the background, then makefile is used to call the compiler to generate executables.



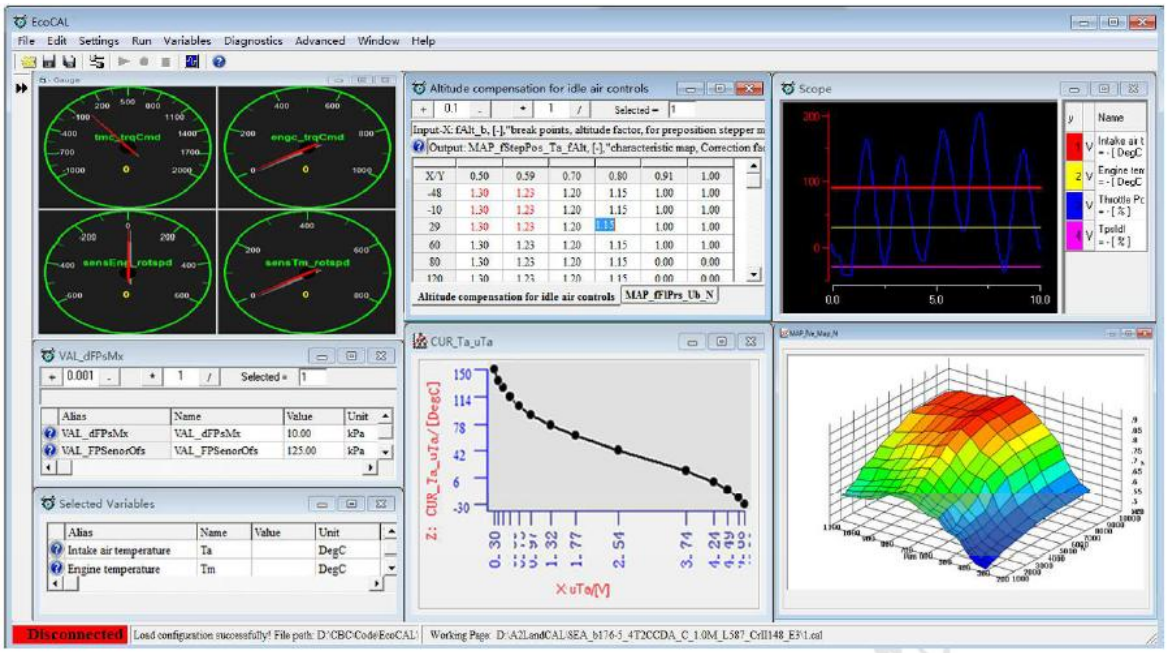
After compilation of the model, use the shortcut “Ctrl + B” or click the button shown below, the executable (ready-to-flash) files will be generated.



Developers can use EcoCoder to develop application software for MCU in EAORA04. For more details, please refer to the document *"EcoCoder User Manual."*

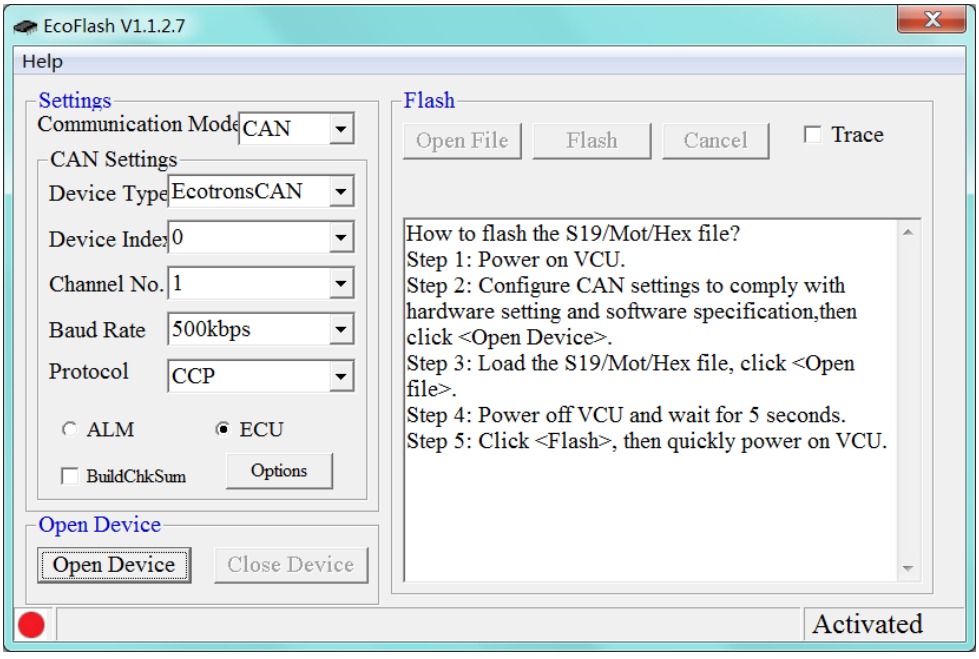
8.2 EcoCAL

EcoCAL is a PC-side calibration software based on the CCP protocol. By loading .a2l and .hex files, to achieve real-time observation and online calibration. It can assist control strategy development engineers to debug and calibrate application software. For more details, please refer to the document *"EcoCAL User Manual."*



8.3 EcoFlash

EcoFlash is PC-side software working with BootLoader to flash target program files. It uses CAN communication protocol CCP/UDS, and the support target files for flashing include S19, .mot, and .hex files.

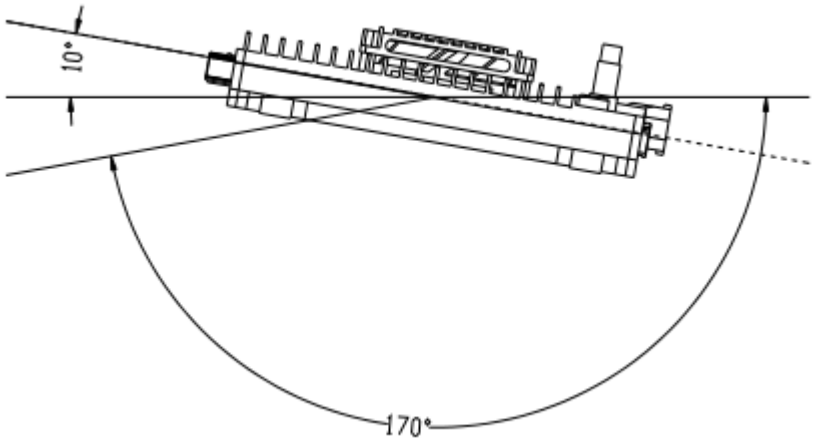


9. Installation Guidelines

Ecotron recommends installing the ADCU (Autonomous Driving Control Unit) inside the cockpit. If the vehicle manufacturer wishes to install the ADCU in another location, the installation position should be evaluated jointly by engineers from Ecotron and the vehicle manufacturer.

The following points should be noted when installing the ADCU:

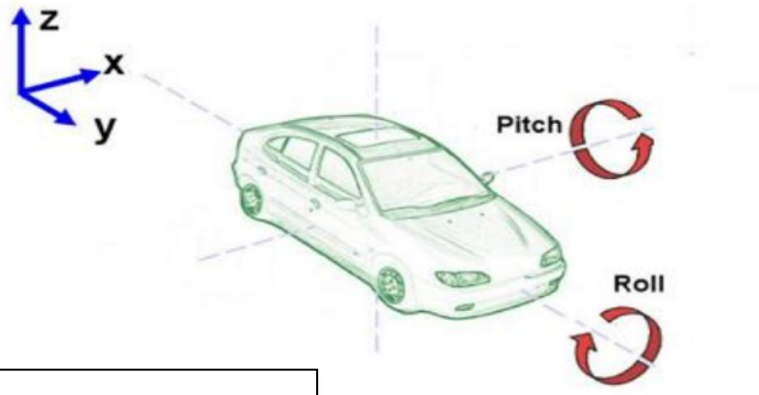
1) The installation of ADCU and wiring harness should be firm and reliable, and there should be no looseness. Avoid supporting the wiring harness by ADCU. At the same time, the arrangement of ADCU wiring harness should prevent and protect all wires in the wiring harness from damage due to wear and overheating.
2) Try to avoid installing in places where dust is easy to gather, a large amount of dust accumulation will affect the reliability of ADCU work.
3) ADCU should keep away from the location where the temperature of the housing itself may exceed 70°C. At the same time, it is necessary to prevent the surrounding parts from releasing heat to the ADCU.



4) Avoid installing the ADCU in locations where oil, moisture, and water droplets are likely to splash on it.
5) Avoid the possibility of additional mechanical shock and external impact due to the installation

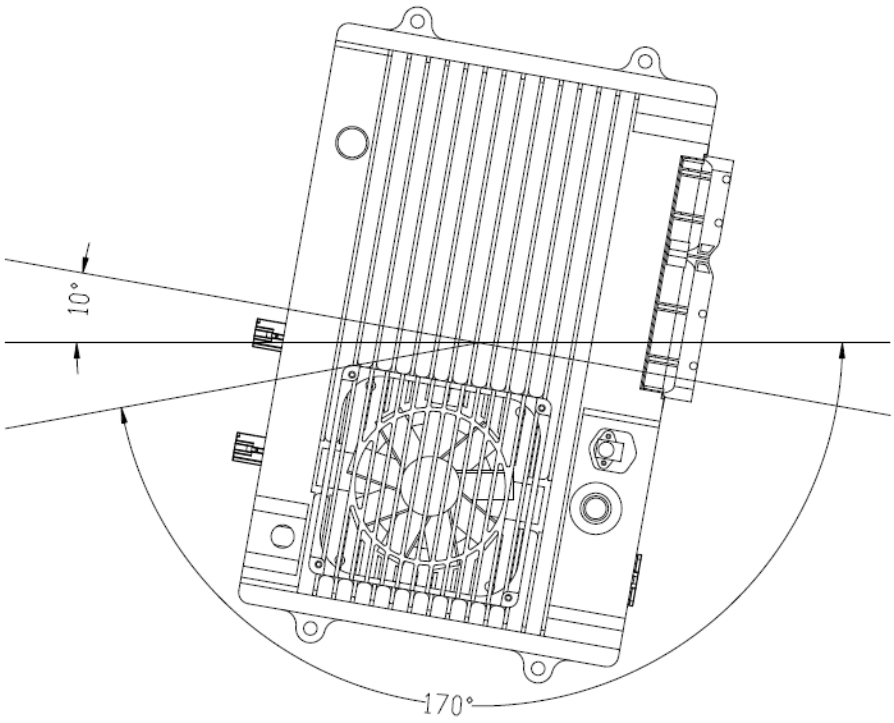
position and fixing method of the ADCU and avoid installing the ADCU at the resonance point of the car body.

6) Avoid installing the ADCU where it may come into contact with the battery or other parts that are prone to seepage of acid and alkaline solutions, and near the ADCU power terminal.
7) Avoid installing the ADCU where it may come into contact with the positive terminal of Battery and the ignition power terminal.
8) ADCU should be installed in the horizontal and vertical position according to the connector downwards and maintain a certain angle to prevent water from entering the connector. In the horizontal direction, the recommended installation angle is -170° to -10°, as shown in Figure below. In the vertical direction, the recommended installation angle is -170°~ -10°, as shown in Figure below.



Z-axis: Vertical direction of the vehicle

X, Y-axis: Horizontal direction of the vehicle



Ecotron recommends using the 4 mounting holes on the ADCU for installation. It is recommended to manufacture the mounting bracket out of metal materials such as aluminum alloy, and the housing should have a reliable electrical connection with the vehicle GND through the bracket. If other materials are used, the customer must ensure that it can meet the requirements of ADCU for vibration, heat dissipation, temperature, EMC, etc. If there is any deviation, it needs to be confirmed with Ecotron.

10) High-speed signal lines such as harness installation, network cables, video cables, etc. should keep away from areas of high voltage, radiation interference such as motors, battery packs, DCDCs as much as possible.