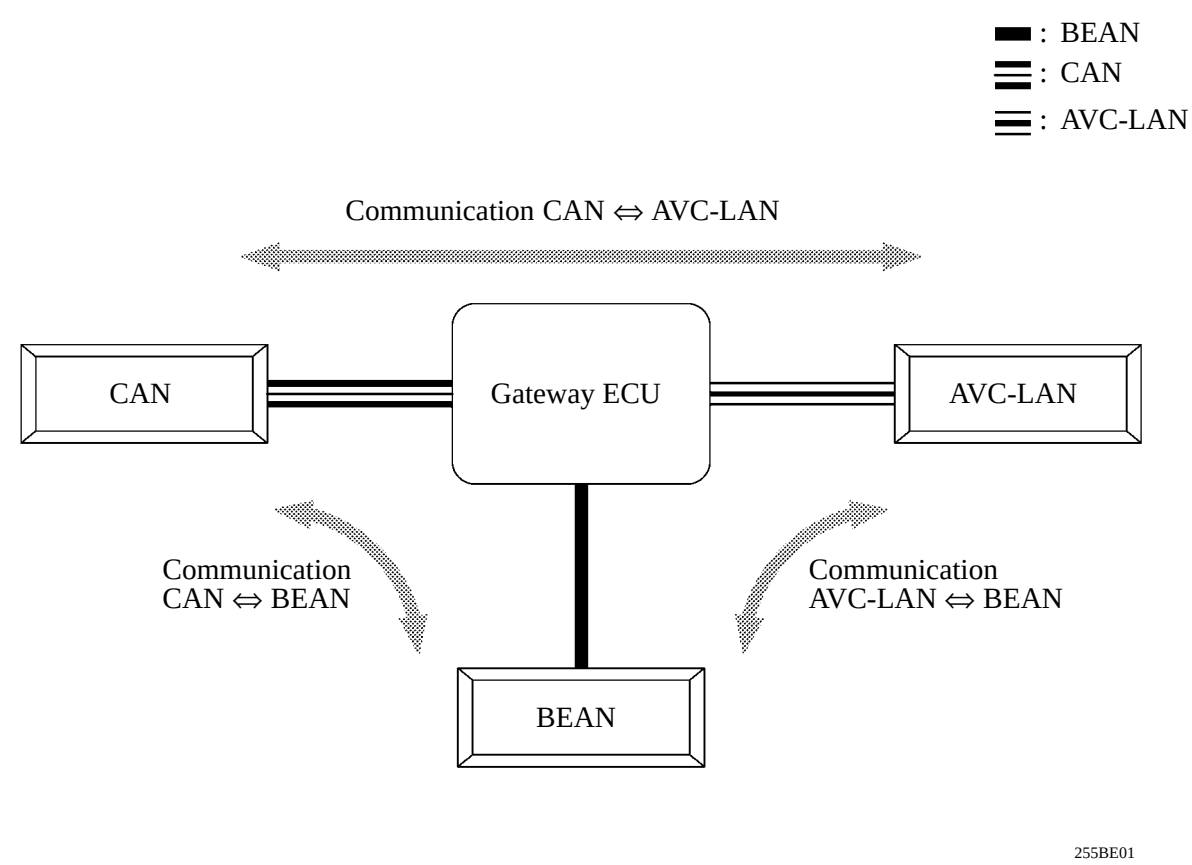
MULTIPLEX COMMUNICATION

■DESCRIPTION

- The ’04 Prius primarily uses the three types of multiplex communication systems described below in order to achieve a slimmer wiring harness configuration.
  - CAN (Controller Area Network), which networks the vehicle control systems (engine electrical, chassis electrical, and hybrid system) and maintains communication between the ECUs, has been newly adopted.
  - BEAN (Body Electronics Area Network), which networks the ECUs of the body electric system control and maintains communication between the ECUs, continues to be used.
  - AVC-LAN (Audio Visual Communication - Local Area Network), which networks the ECUs of the audio visual system and the audio visual devices, and maintains communication between the devices and the ECUs, continues to be used.

- These three types of multiplex communication systems are connected to the gateway ECU. The gateway ECU, which is provided with communication circuits that support the three types of multiplex communication systems, enables communication among the multiplex communication systems that are connected to the gateway ECU.
  For example, to enable air conditioning control, the air conditioning ECU receives the engine coolant temperature signal that is input into the ECM via CAN, gateway ECU, and BEAN. Thus, a slimmer wiring harness configuration can be realized.



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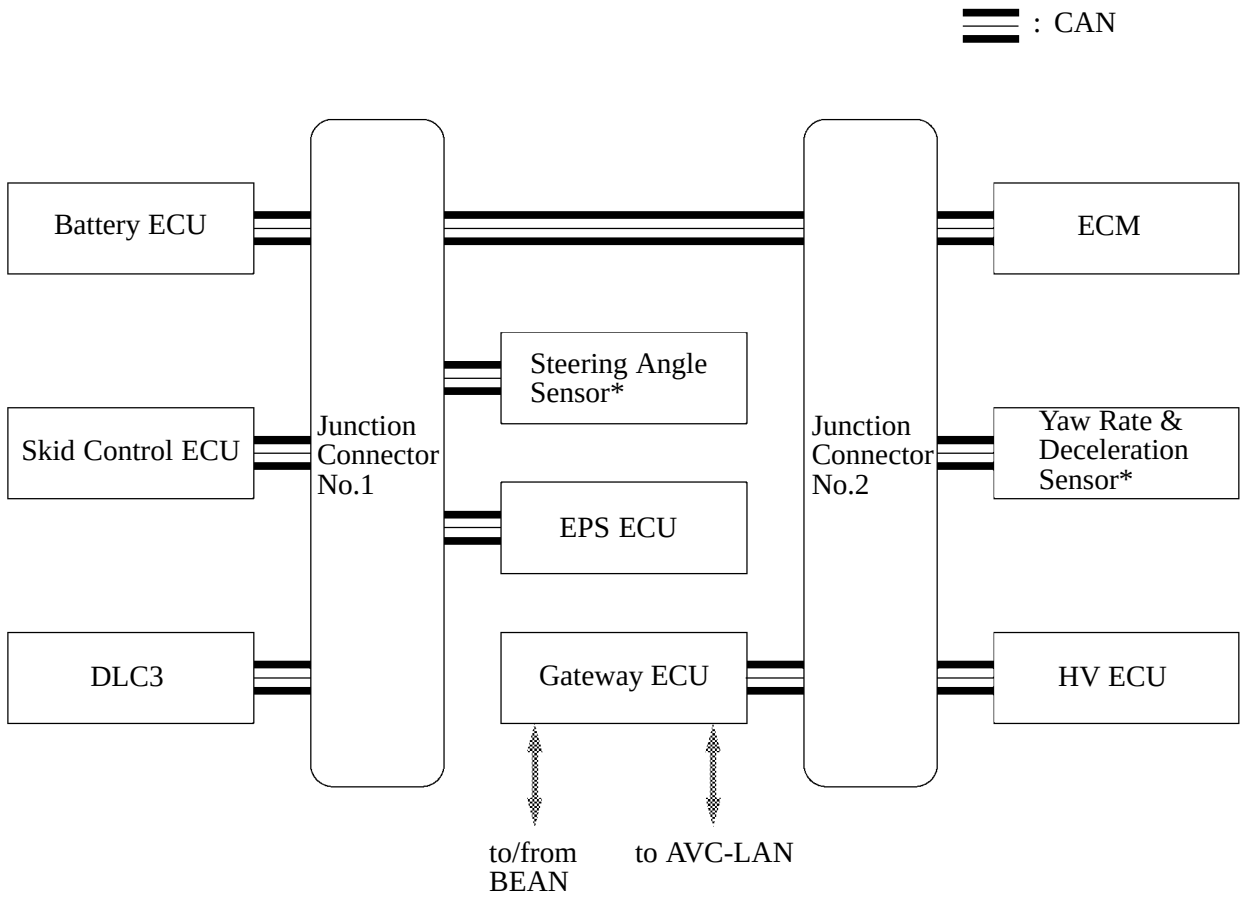
- The CAN in the ’04 Prius is established among the HV ECU, battery ECU, EPS ECU, ECM, skid control ECU, steering angle sensor, yaw rate & deceleration sensor, gateway ECU and DLC3.

▶ CAN System Diagram ◀

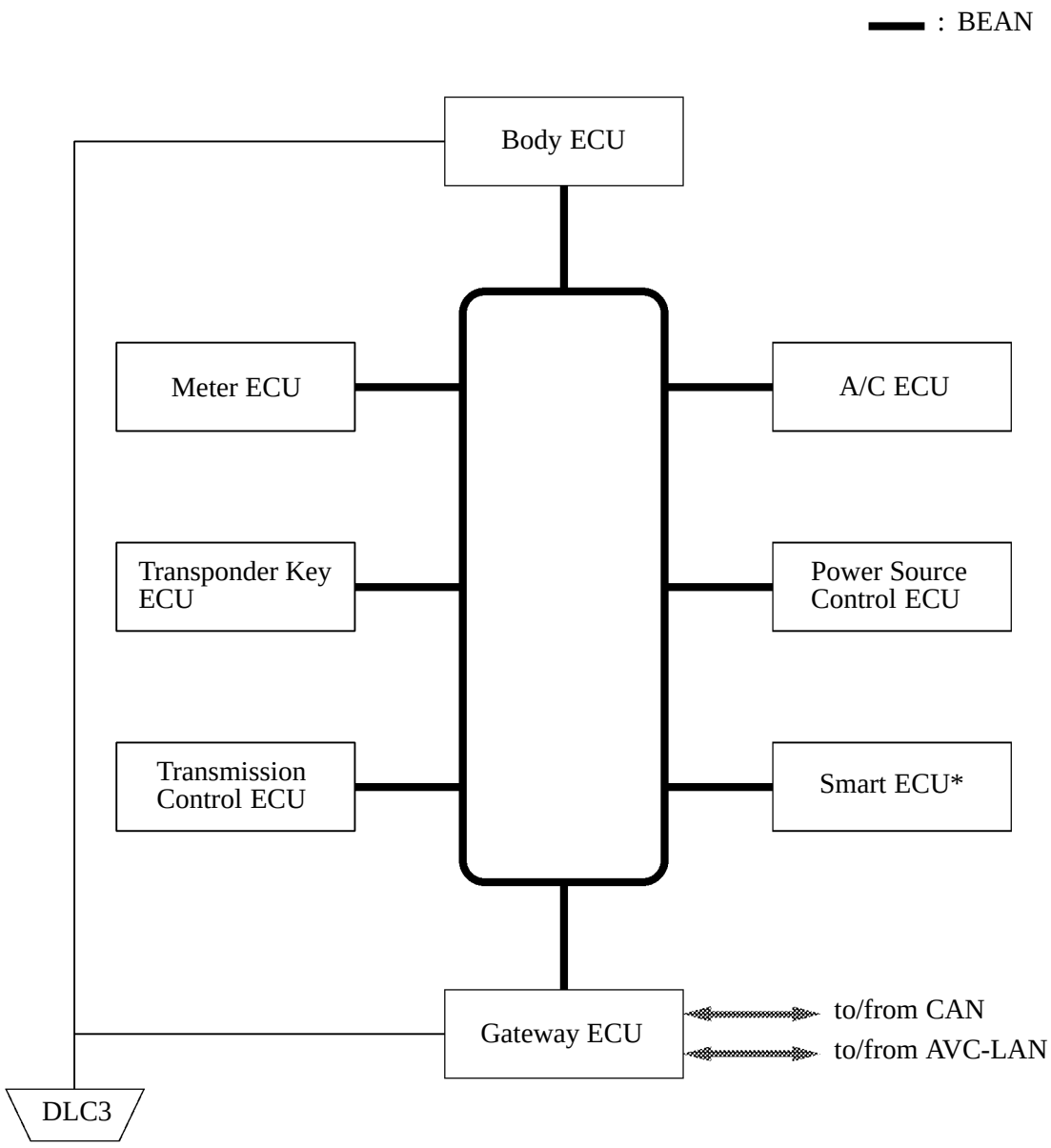


*: with Enhanced VSC System

255BE02

- The configuration of the BEAN has been changed in accordance with the addition of equipment.
- The BEAN in the ’04 Prius is established among the body ECU, meter ECU, air conditioning ECU, transponder key ECU, power source control ECU, transmission control ECU, smart ECU* and gateway ECU.
- A customized body electronic system has been adopted, enabling the control functions of the ECUs comprising the BEAN to be set using a hand held tester. For details, see page BE-64 of the customized body electronic system section.

▶ BEAN System Diagram ◀



*: Optional Equipment

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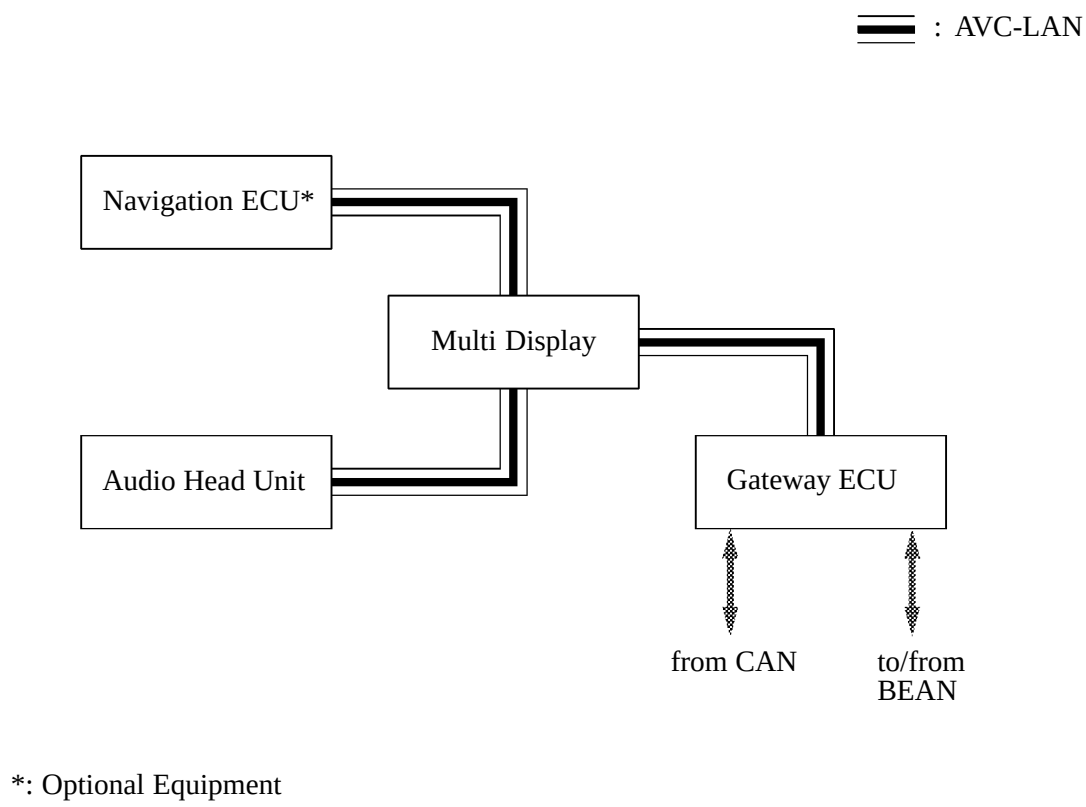
- The AVC-LAN is established among the multi display, audio head unit, navigation ECU* and gateway ECU.

▶ AVC-LAN System Diagram ◀



*: Optional Equipment

255BE04