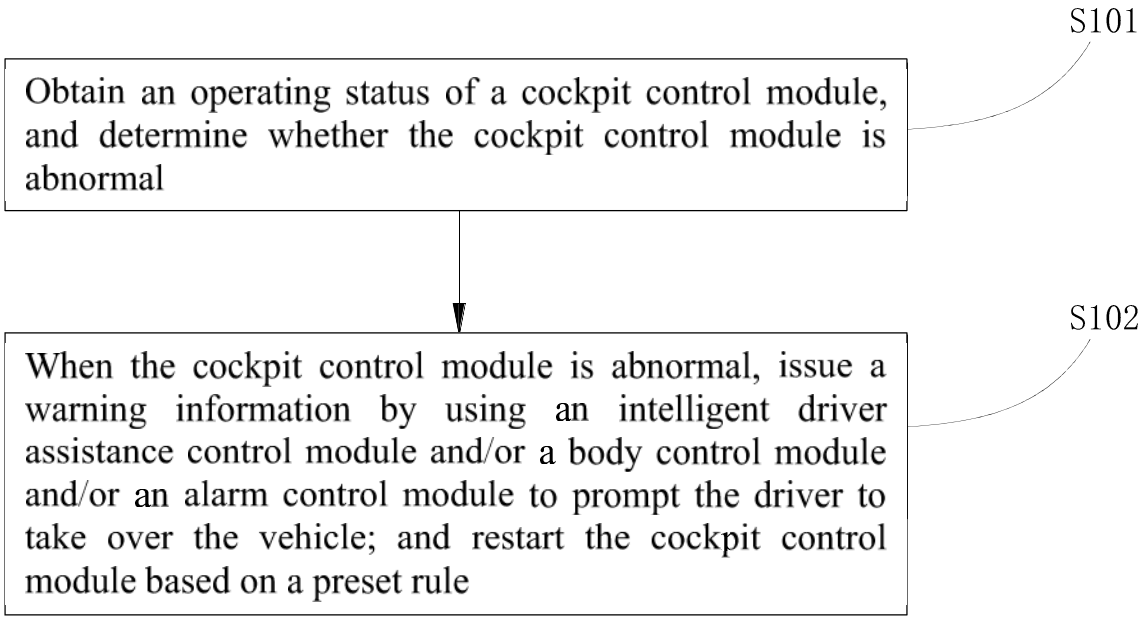
S101
Obtain an operating status of a cockpit control module, and determine whether the cockpit control module is abnormal
S102
When the cockpit control module is abnormal, issue a warning information by using an intelligent driver assistance control module and/or a body control module and/or an alarm control module to prompt the driver to take over the vehicle; and restart the cockpit control module based on a preset rule

FIG. 1

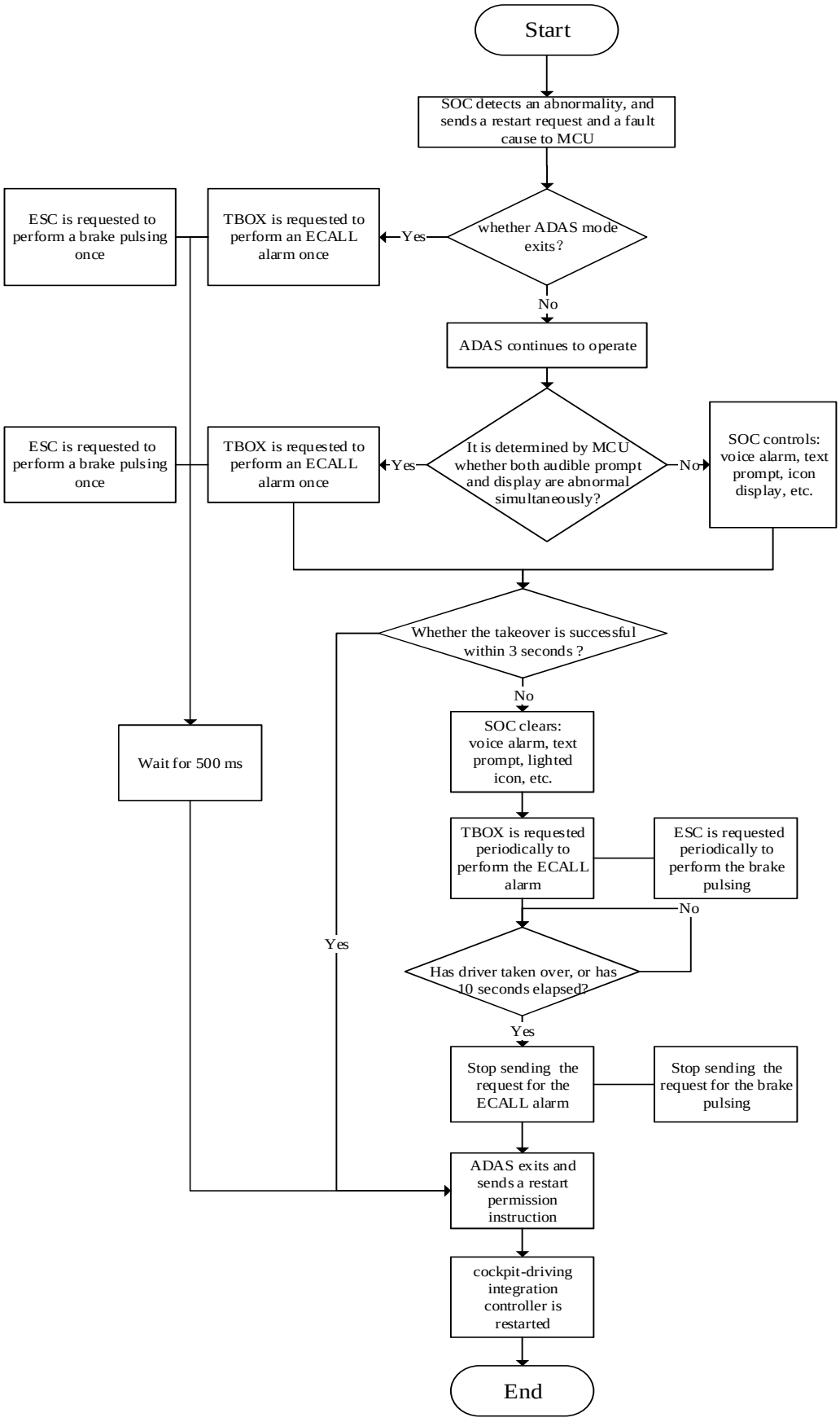
Start
SOC detects an abnormality, and sends a restart request and a fault cause to MCU
whether ADAS mode exits?
Yes
TBOX is requested to perform an ECALL alarm once
ESC is requested to perform a brake pulsing once
No
ADAS continues to operate
It is determined by MCU whether both audible prompt and display are abnormal simultaneously?
Yes
TBOX is requested to perform an ECALL alarm once
ESC is requested to perform a brake pulsing once
No
SOC controls: voice alarm, text prompt, icon display, etc.
Whether the takeover is successful within 3 seconds ?
Yes
No
Wait for 500 ms
SOC clears: voice alarm, text prompt, lighted icon, etc.
TBOX is requested periodically to perform the ECALL alarm
ESC is requested periodically to perform the brake pulsing
No
Has driver taken over, or has 10 seconds elapsed?
Yes
Stop sending the request for the ECALL alarm
Stop sending the request for the brake pulsing
ADAS exits and sends a restart permission instruction
cockpit-driving integration controller is restarted
End

FIG. 2

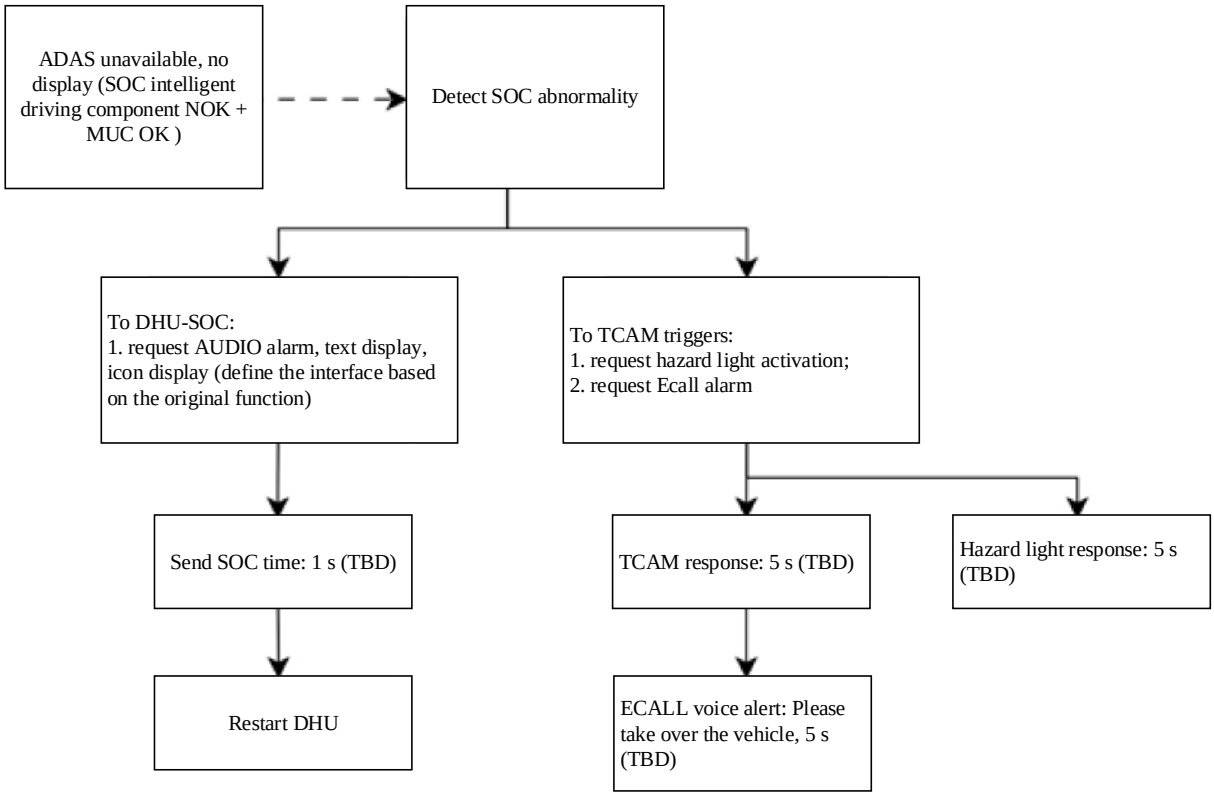
ADAS unavailable, no display (SOC intelligent driving component NOK + MUC OK)
Detect SOC abnormality
To DHU-SOC:
1. request AUDIO alarm, text display, icon display (define the interface based on the original function)
To TCAM triggers:
1. request hazard light activation;
2. request Ecall alarm
Send SOC time: 1 s (TBD)
TCAM response: 5 s (TBD)
Hazard light response: 5 s (TBD)
Restart DHU
ECALL voice alert: Please take over the vehicle, 5 s (TBD)

FIG. 3

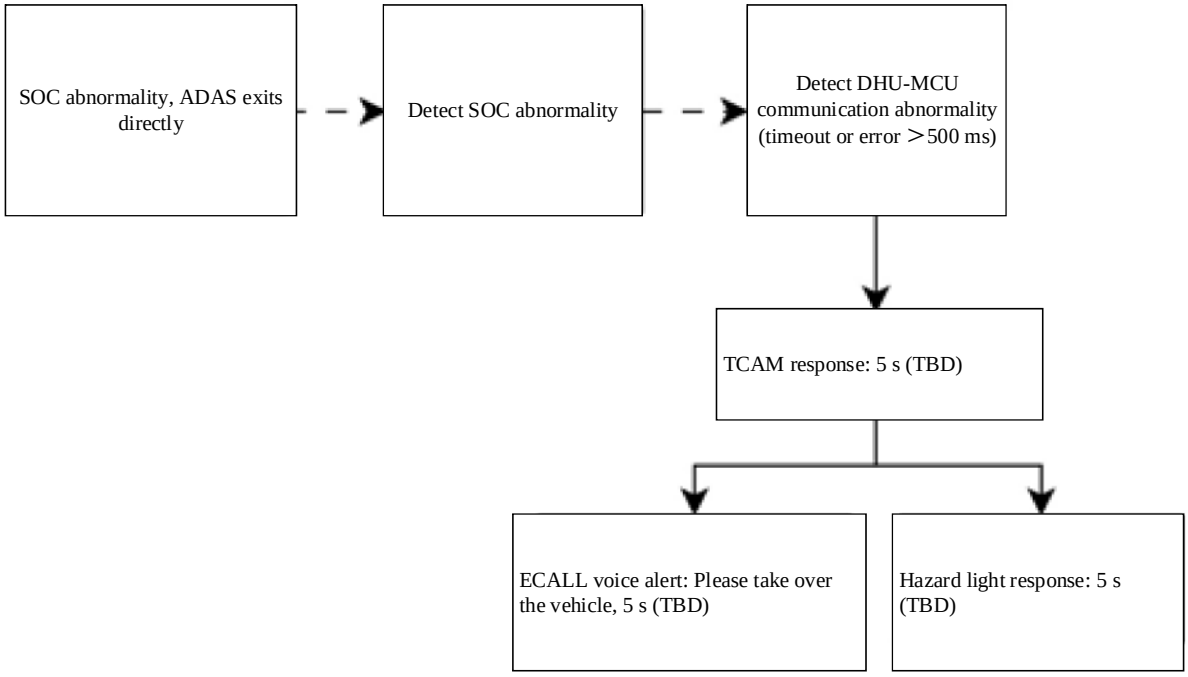
SOC abnormality, ADAS exits directly
Detect SOC abnormality
Detect DHU-MCU communication abnormality (timeout or error ＞500 ms)
TCAM response: 5 s (TBD)
ECALL voice alert: Please take over the vehicle, 5 s (TBD)
Hazard light response: 5 s (TBD)

FIG. 4

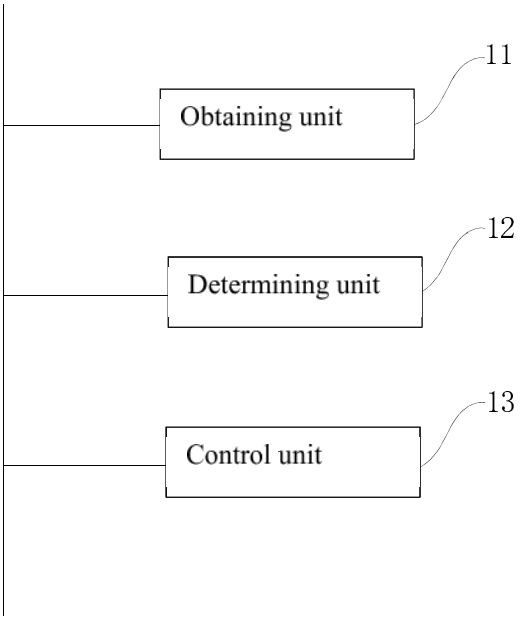
11
Obtaining unit
12
Determining unit
13
Control unit

FIG. 5

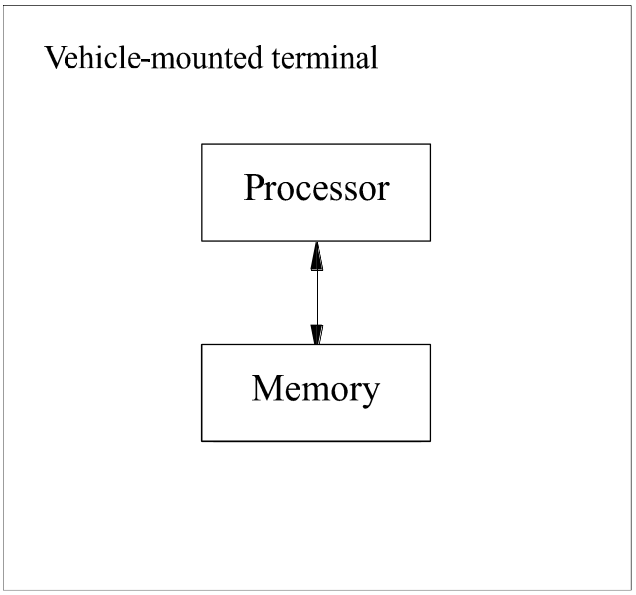
Vehicle-mounted terminal
Processor
Memory

FIG. 6