

AM3356: CAN communication issue

Processor SDK(Linux SDK v06.01.00.08 / Kernel v4.19)

Company :

CAN : Strange behavior

Customer developed their system with AM3356/TCAN1042GVDRBRQ1 and they noticed the AM3356 outputs unexpected data after resuming from sleep state. They mean, customer mentioned this behavior was observed when AM3356 received CAN-Data from outside device after just resumed.

Regarding customer's current code, The CAN driver recovery process is performed as follows when waking up from sleep.

“CAN DOWN Code” is executed when transitioning to sleep, and “CAN UP Code is executed when returning from sleep. But, since CAN communication sometime failed, after executing “CAN DOWN/CAN UP”, customer is executing “CAN DOWN/CAN UP” once again.

1. “CAN DOWN Code” is executed when transitioning to sleep
2. --- Sleep ---
3. “CAN UP Code is executed when resuming from sleep
4. “CAN DOWN Code” is executed when transitioning to sleep
5. Waiting for 10m sec
6. “CAN UP Code is executed when resuming from sleep

Customer's code is as follows

CAN : Strange behavior

```
// CAN DOWN Process
memset(sndbuff, 0, sizeof(sndbuff));
sprintf(sndbuff, "/sbin/ip link set can%d down", canch);
system(sndbuff);

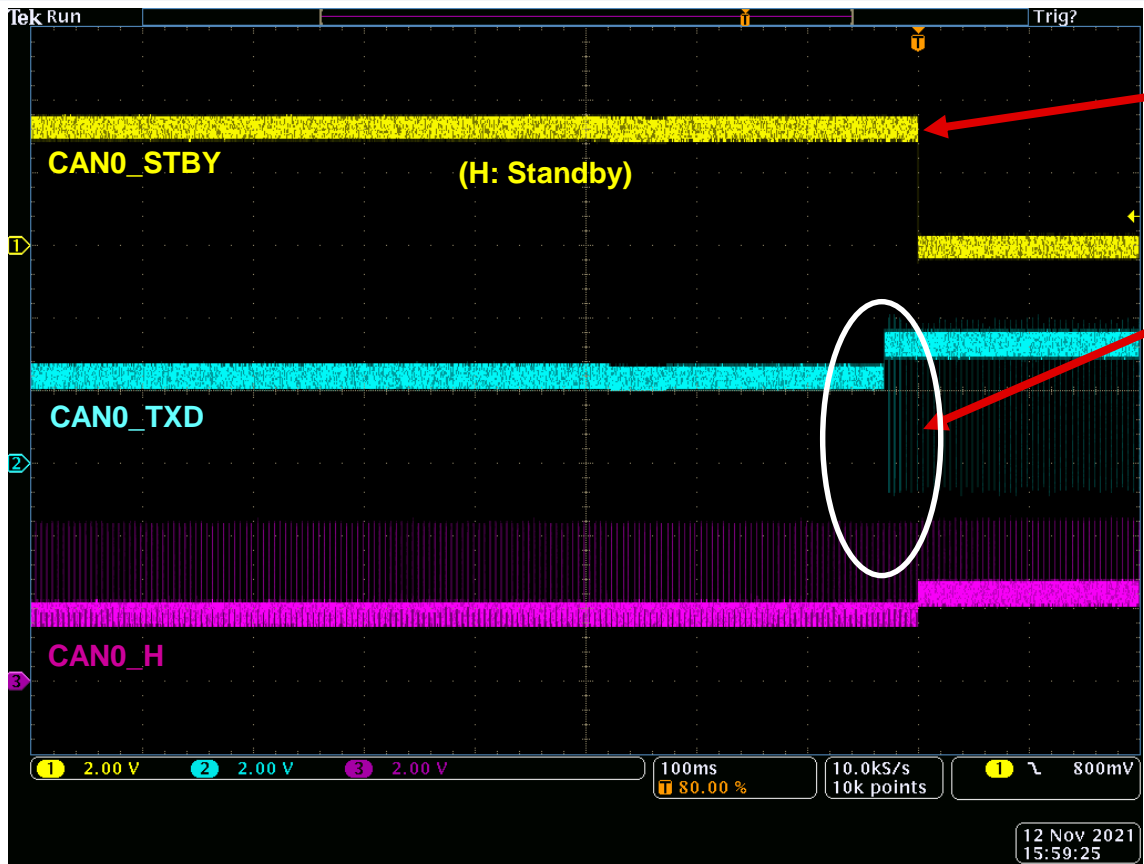
nanosleep(&req, NULL);           // 10msec wait

// CAN UP Process
memset(sndbuff, 0, sizeof(sndbuff));
sprintf(sndbuff, "/sbin/ip link set can%d up", canch);
system(sndbuff);
```

Since customer has to explain the reason why this behavior occurs, customer would like to know TI's advice/comments on this behavior.

Can we have your expert's advice/comments on this, please?

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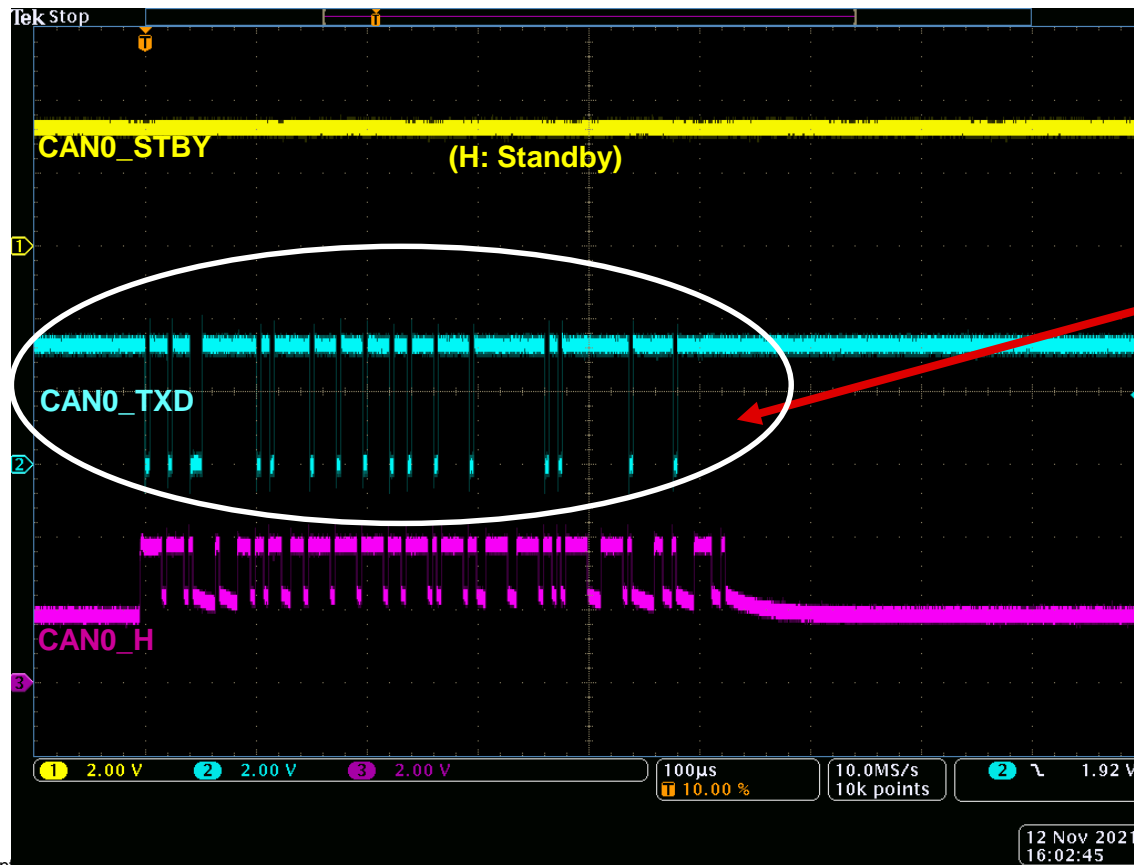


After resuming, CAN Transceiver is enabled.

AM3356 output the unexpected data, but, it does not appear on CAN BUS

CAN0_STBY : CAN Transceiver
(TCAN1042GVDRBRQ1 : L=active ,H=standby)
CAN0_TXD : AN3356 ⇒ CAN Tx CAN data
CAN0_H : TCAN1042's CANH signal

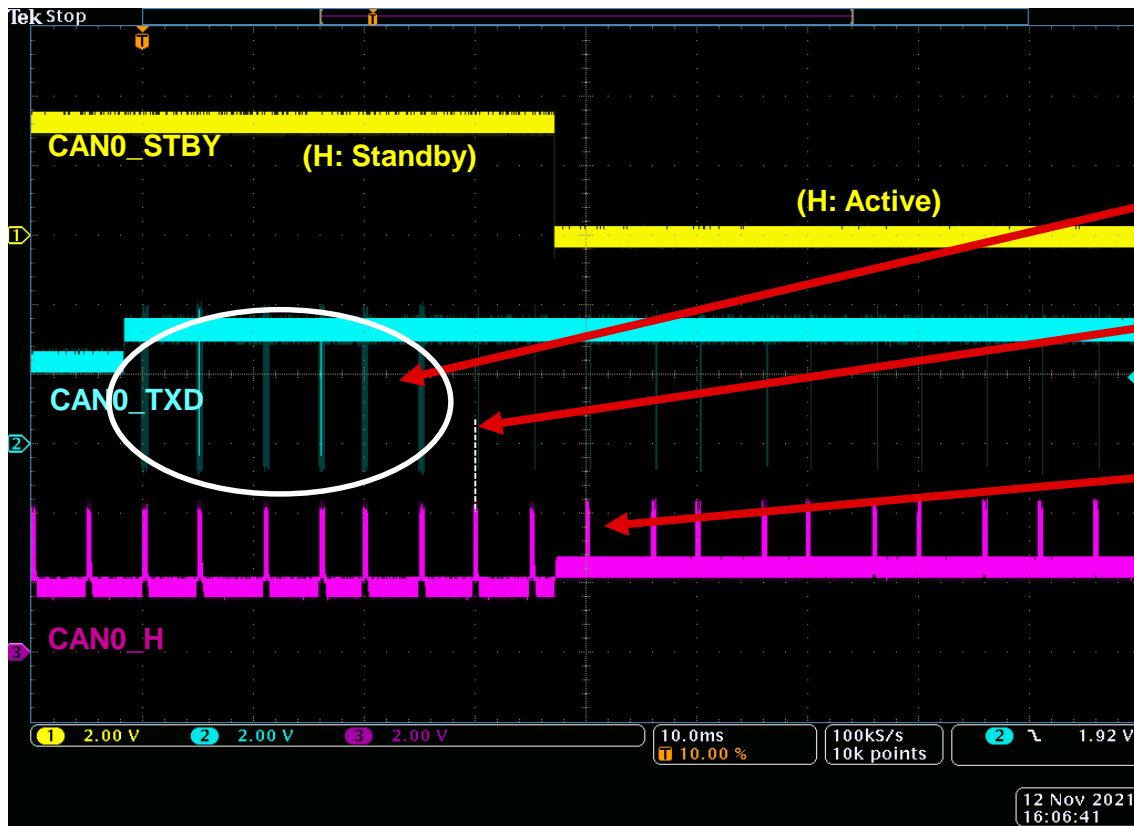
CAN : Strange behavior



AM3356 output the unexpected data, but, it does not appear on CAN BUS because of Standby state.

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AM3356 output the unexpected data, but, it does not appear on CAN BUS because of Standby state.

From this point, ACK is output as the normal timing

Actual Data is output from here to CAN-BUS

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