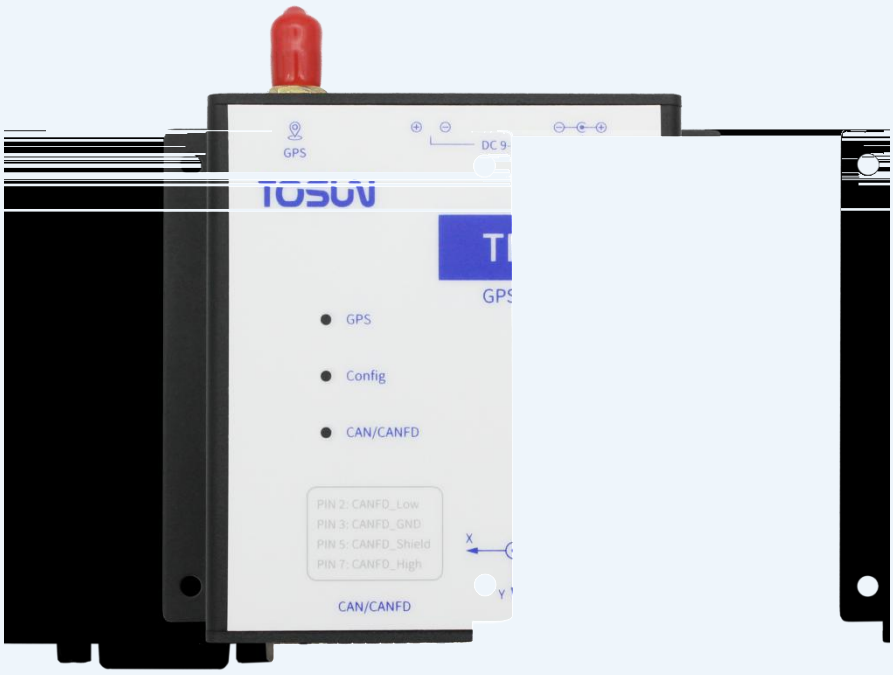
TOSUN



7 0 3 U R G X F W 0 D Q X D C

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W R V X Q D L F R P

:K\ ,V D-*W3&$1 'HYLFH 1?HFHVVDU\

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:KDW &DQ0WKH'R

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$ERXW WKLV 8VHU 0DQXDO

:DUUDQW\

&RS\ULJKW

TOSUN

7 0

2 Y H U Y L H Z

) H D W X U H V

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- ✓ -
- ✓
- ✓
- ✓
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7H F K Q L F D O ' D W D

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	- ～
	～ (non-condensing)

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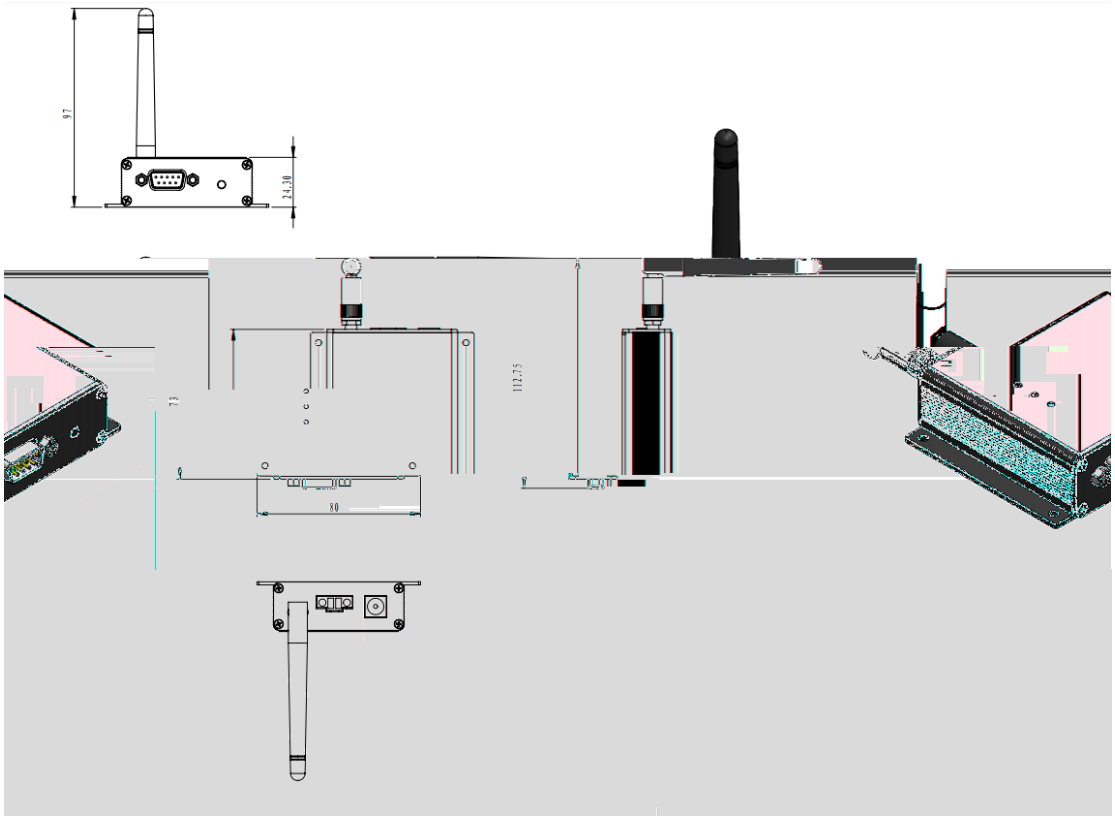
(OHFWULFDO 'DWD

		Test Condition	Minimum Value	Typical Value		
	External DC power supply	CAN transmission				
	External DC power supply	CAN transmission	--		--	
	External DC power supply	CAN transmission	--		--	
	Bus pin voltage resistance					
CAN Interface						

0HFKDQLFDO 'DWD



6FRSH RI 'HOLYHU\

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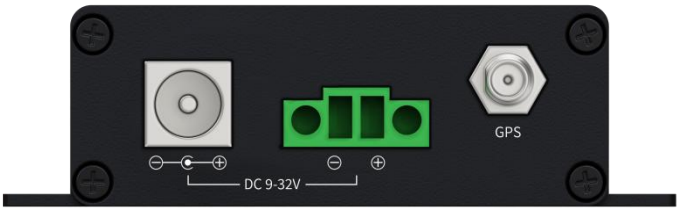
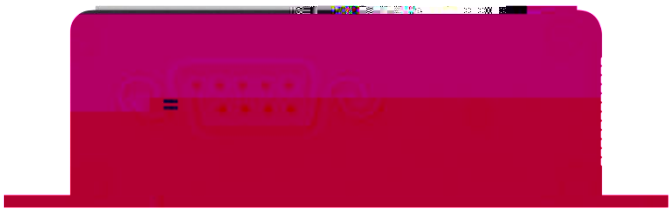
+DUGZDUH ,QWHUIDFH





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'% 3L	3,1	'HILQLWL

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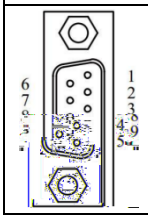
	1XPEH	
		

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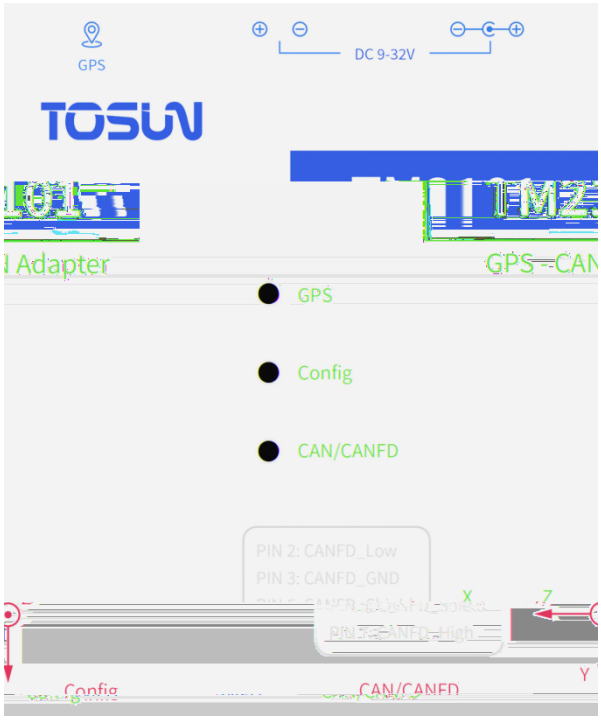

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,QGLFDV	'HILQLWLRQ

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,QGLFDW	'HVFULSWLRQ

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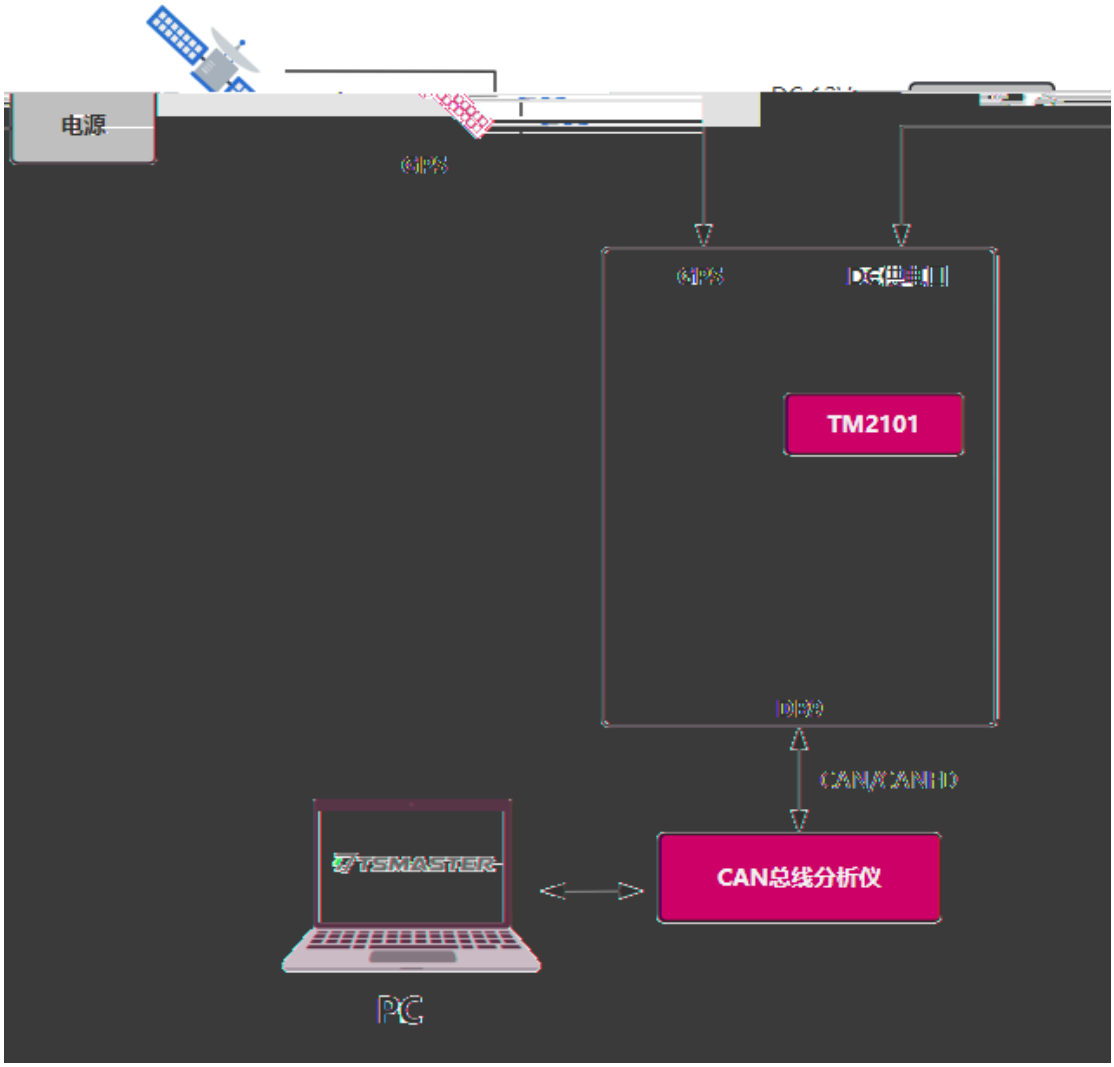
2SWLRQDO $FFHVVRULHV

4XLFN 6WDUW

6\VWHP &RQQHFWLRQ



'ULYHU ,QVWDOODWLRQ

6RIWZDUH 2YHUYLHZ

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6RIWZDUH ,QVWDOODWLRQ

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)XQFWLRQGXOH

)XOPRGH 3RVLWLRQLQJ DQG 1DYLJDWLRQ 0RGXOH

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*\URVFRSH DQG $FFHOHURPHWHU

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)XQGDPHQWDO 8VDJH

%DVLF ,QWURGXFWLRQ

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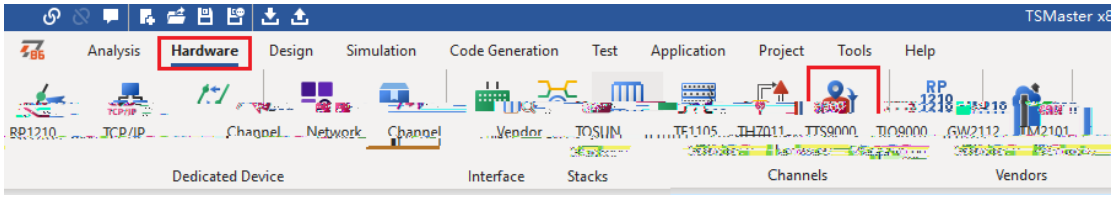

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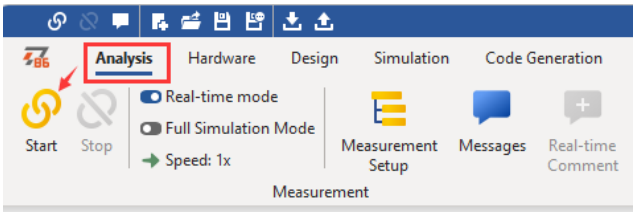

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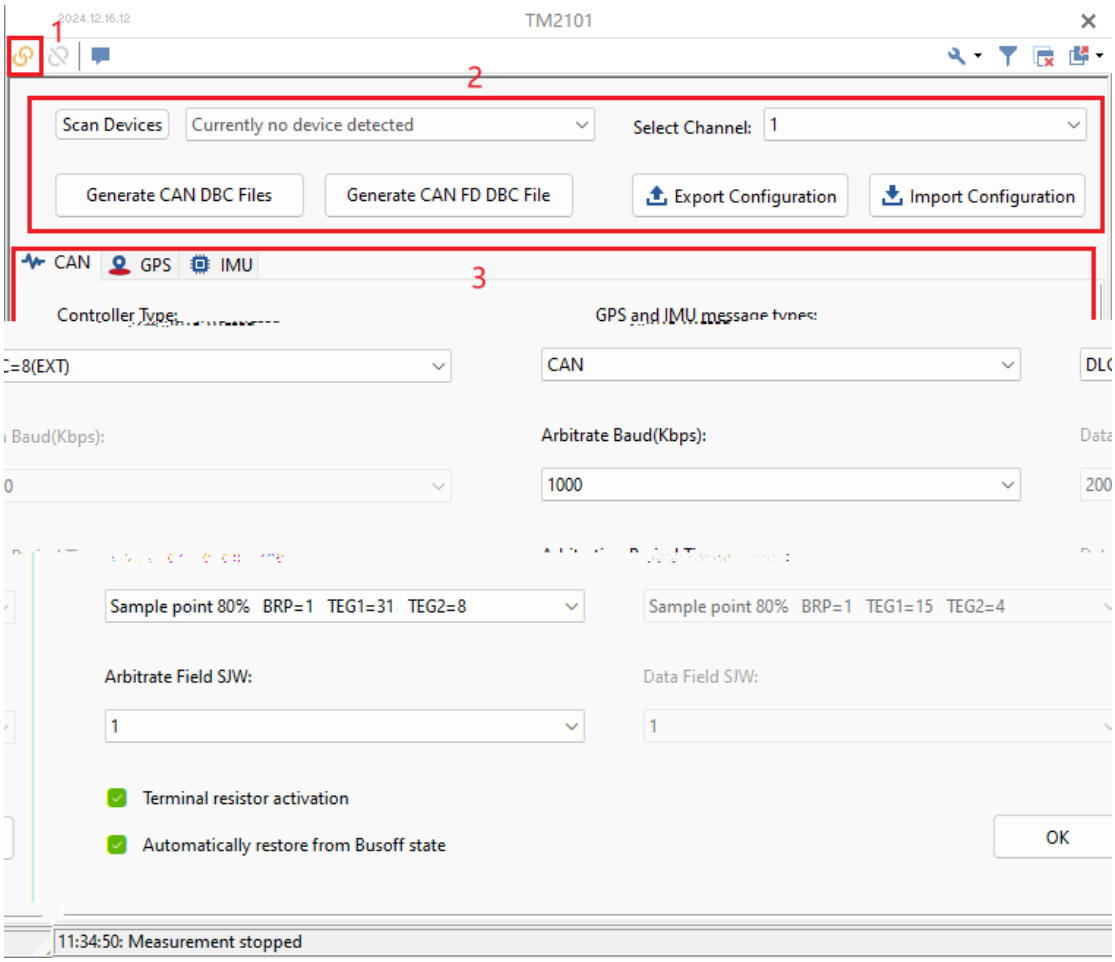
2024.12.16.12
TM2101
1
2
Scan Devices
Currently no device detected
Select Channel:
1
Generate CAN DBC Files
Generate CAN FD DBC File
Export Configuration
Import Configuration
CAN
GPS
IMU
3
Controller Type:
GPS and IMU message types:
=8(EXT)
CAN
Baud(Kbps):
Arbitrate Baud(Kbps):
0
1000
Sample point 80% BRP=1 TEG1=31 TEG2=8
Sample point 80% BRP=1 TEG1=15 TEG2=4
Arbitrate Field SJW:
Data Field SJW:
1
1
Terminal resistor activation
Automatically restore from Busoff state
OK
11:34:50: Measurement stopped

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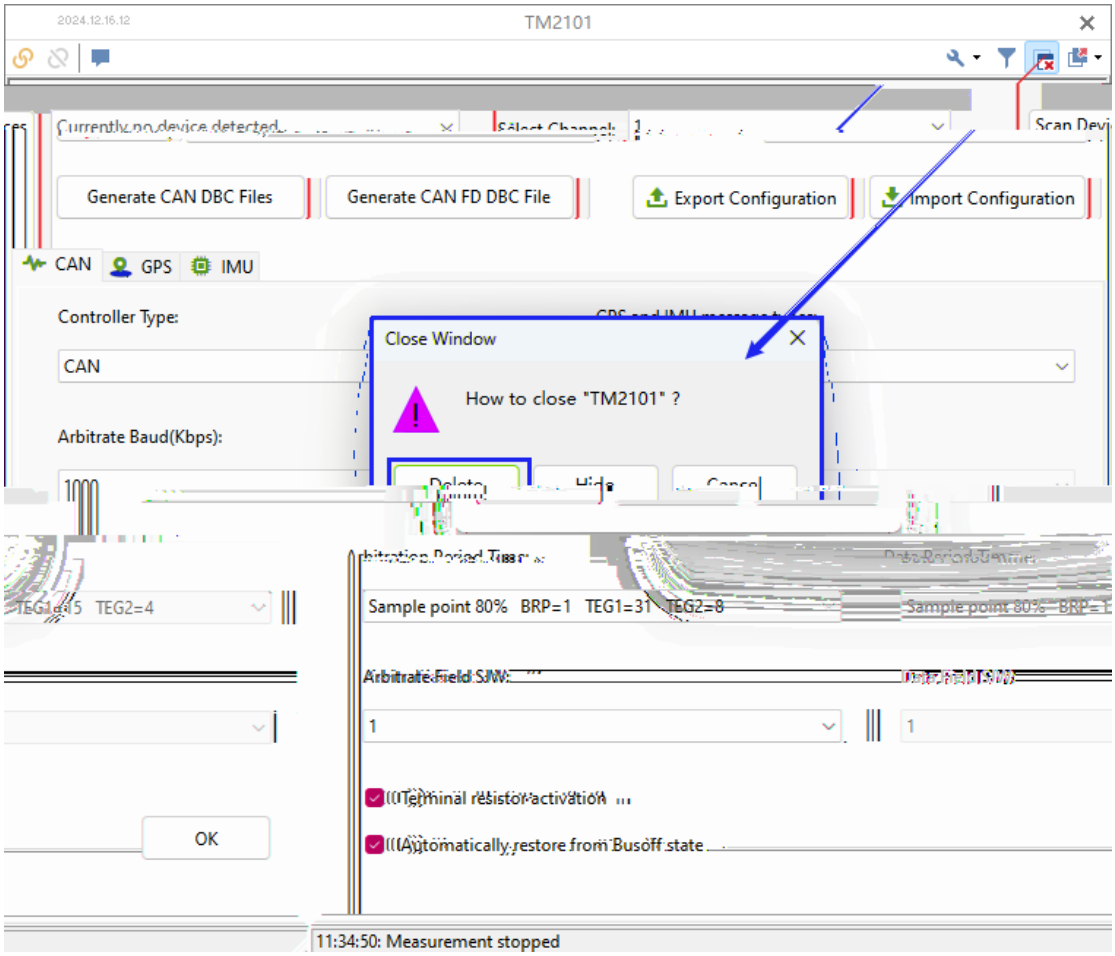
2024.12.16.12
TM2101
Generate CAN DBC Files
Generate CAN FD DBC File
Export Configuration
Import Configuration
CAN
GPS
IMU
Controller Type:
CAN
Arbitrate Baud(Kbps):
Close Window
How to close "TM2101" ?
Sample point 80% BRP=1 TEG1=31 TEG2=8
OK
11:34:50: Measurement stopped

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' H W D L Q W R G X F W L R Q

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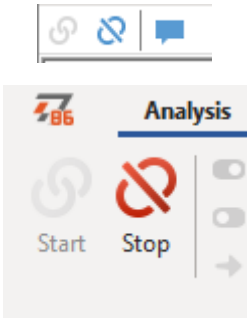
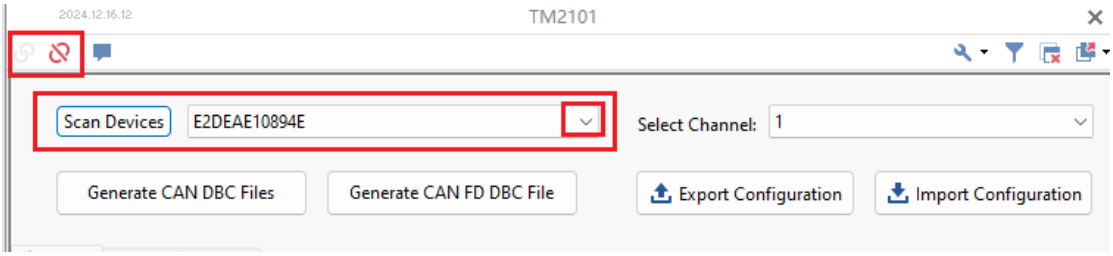
(1) -



(2)



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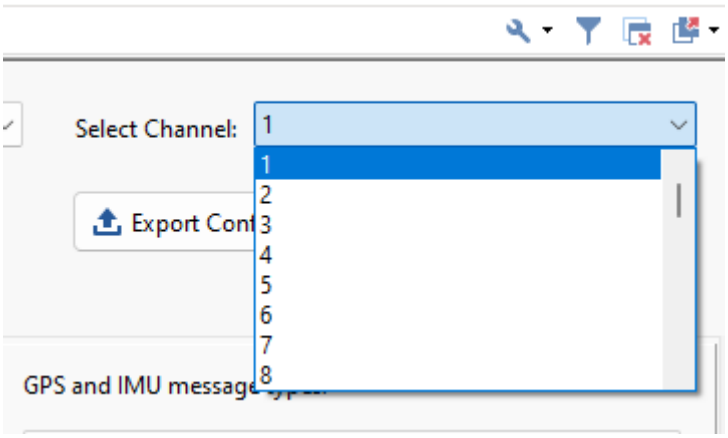
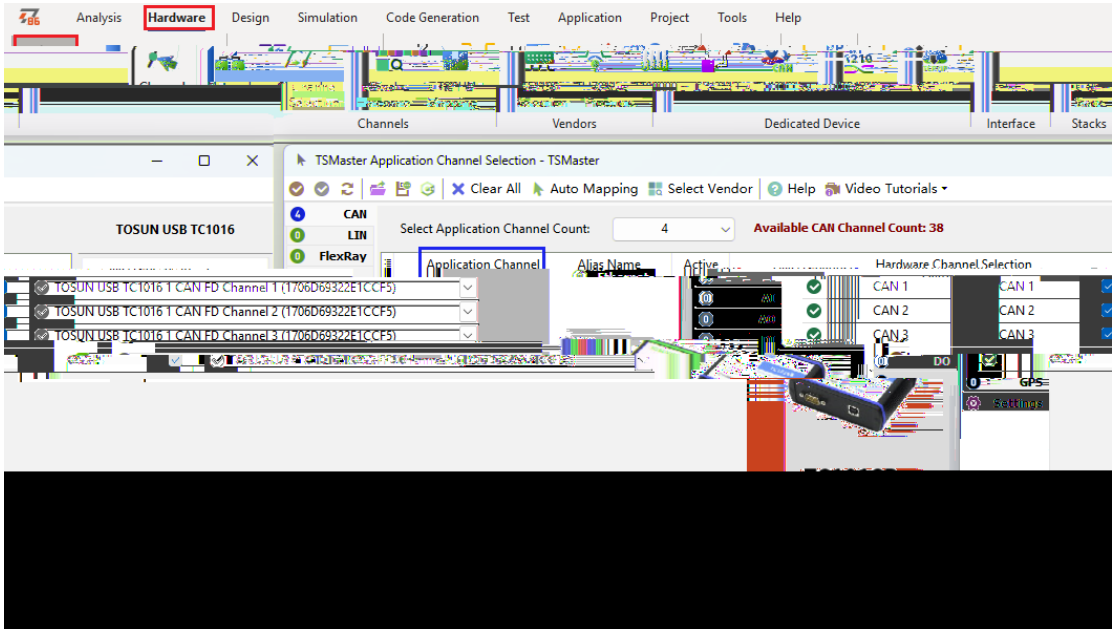

Select Channel:
1
1
2
3
4
5
6
7
8
Export Conf
GPS and IMU message


Analysis
Hardware
Design
Simulation
Code Generation
Test
Application
Project
Tools
Help
Channels
Vendors
Dedicated Device
Interface
Stacks
TSMaster Application Channel Selection - TSMaster
Clear All
Auto Mapping
Select Vendor
Help
Video Tutorials
TOSUN USB TC1016
CAN
LIN
FlexRay
Select Application Channel Count:
4
Available CAN Channel Count: 38
Application Channel
Alias Name
Active
Hardware Channel Selection
TOSUN USB TC1016 1 CAN FD Channel 1 (1706D69322E1CCF5)
TOSUN USB TC1016 1 CAN FD Channel 2 (1706D69322E1CCF5)
TOSUN USB TC1016 1 CAN FD Channel 3 (1706D69322E1CCF5)
CAN 1
CAN 2
CAN 3
DO
GPS
Settings

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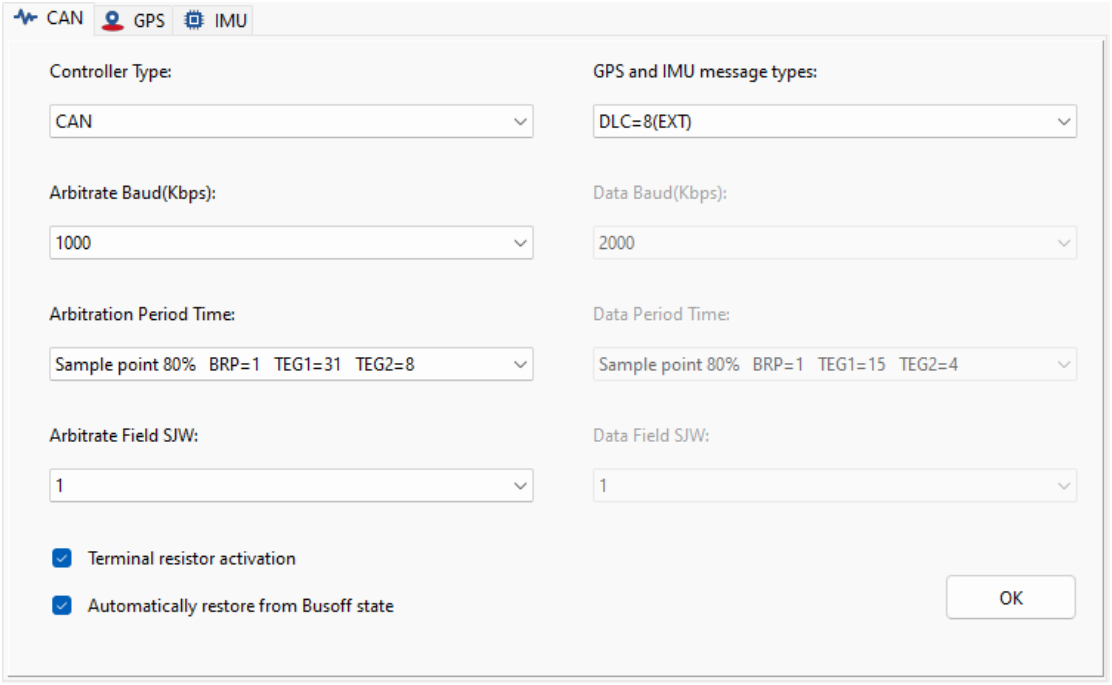
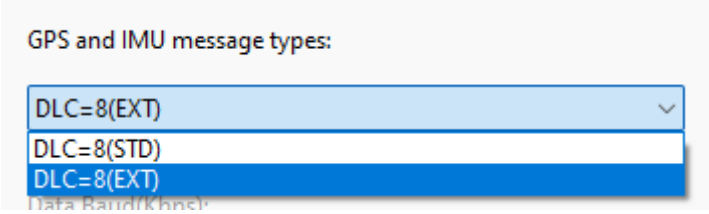

CAN
GPS
IMU
Controller Type:
CAN
GPS and IMU message types:
DLC=8(EXT)
Arbitrate Baud(Kbps):
1000
Data Baud(Kbps):
2000
Arbitration Period Time:
Sample point 80% BRP=1 TEG1=31 TEG2=8
Data Period Time:
Sample point 80% BRP=1 TEG1=15 TEG2=4
Arbitrate Field SJW:
1
Data Field SJW:
1
Terminal resistor activation
Automatically restore from Busoff state
OK


GPS and IMU message types:
DLC=8(EXT)
DLC=8(STD)
DLC=8(EXT)

(2)

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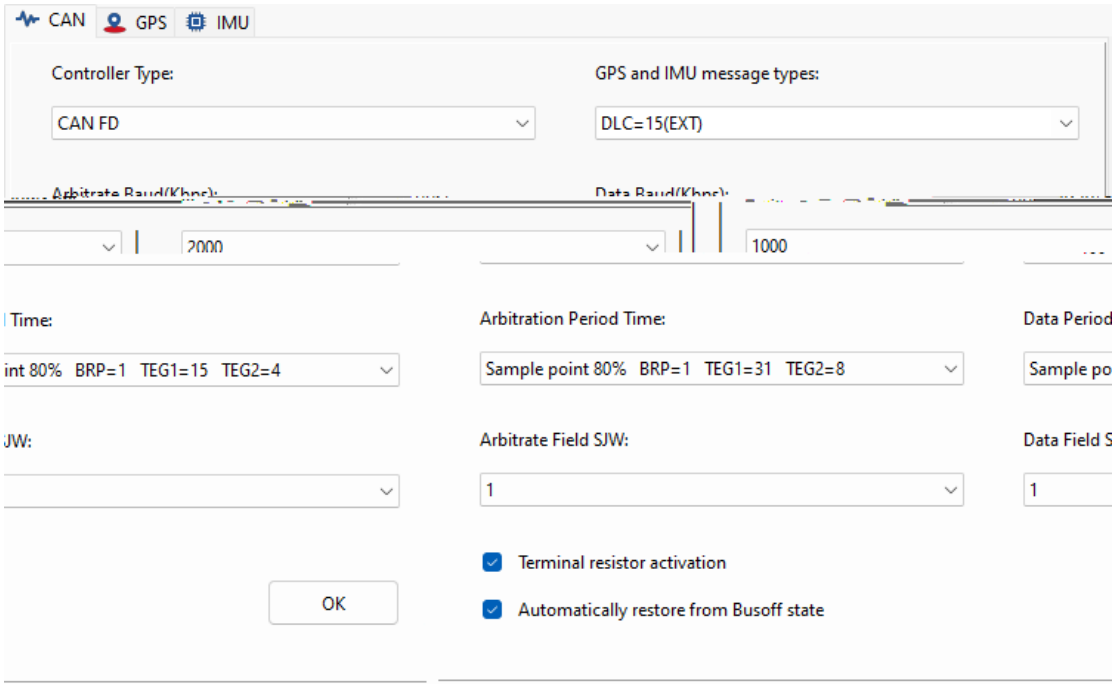
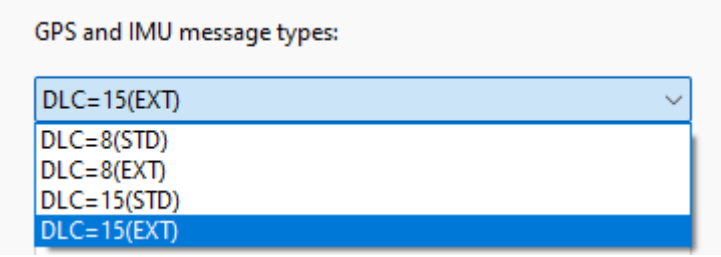

CAN
GPS
IMU
Controller Type:
CAN FD
GPS and IMU message types:
DLC=15(EXT)
2000
1000
Time:
Arbitration Period Time:
Data Period
int 80% BRP=1 TEG1=15 TEG2=4
Sample point 80% BRP=1 TEG1=31 TEG2=8
Sample po
JW:
Arbitrate Field SJW:
Data Field S
1
1
Terminal resistor activation
OK
Automatically restore from Busoff state


GPS and IMU message types:
DLC=15(EXT)
DLC=8(STD)
DLC=8(EXT)
DLC=15(STD)
DLC=15(EXT)

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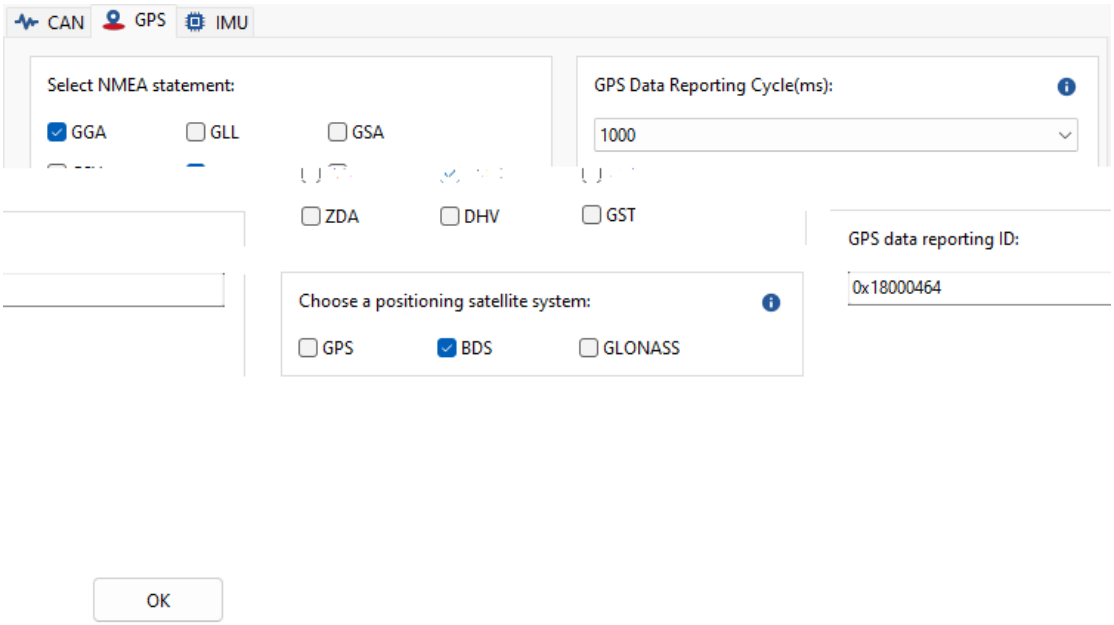
CAN
GPS
IMU
Select NMEA statement:
GGA
GLL
GSA
GPS Data Reporting Cycle(ms):
1000
ZDA
DHV
GST
GPS data reporting ID:
0x18000464
Choose a positioning satellite system:
GPS
BDS
GLONASS
OK

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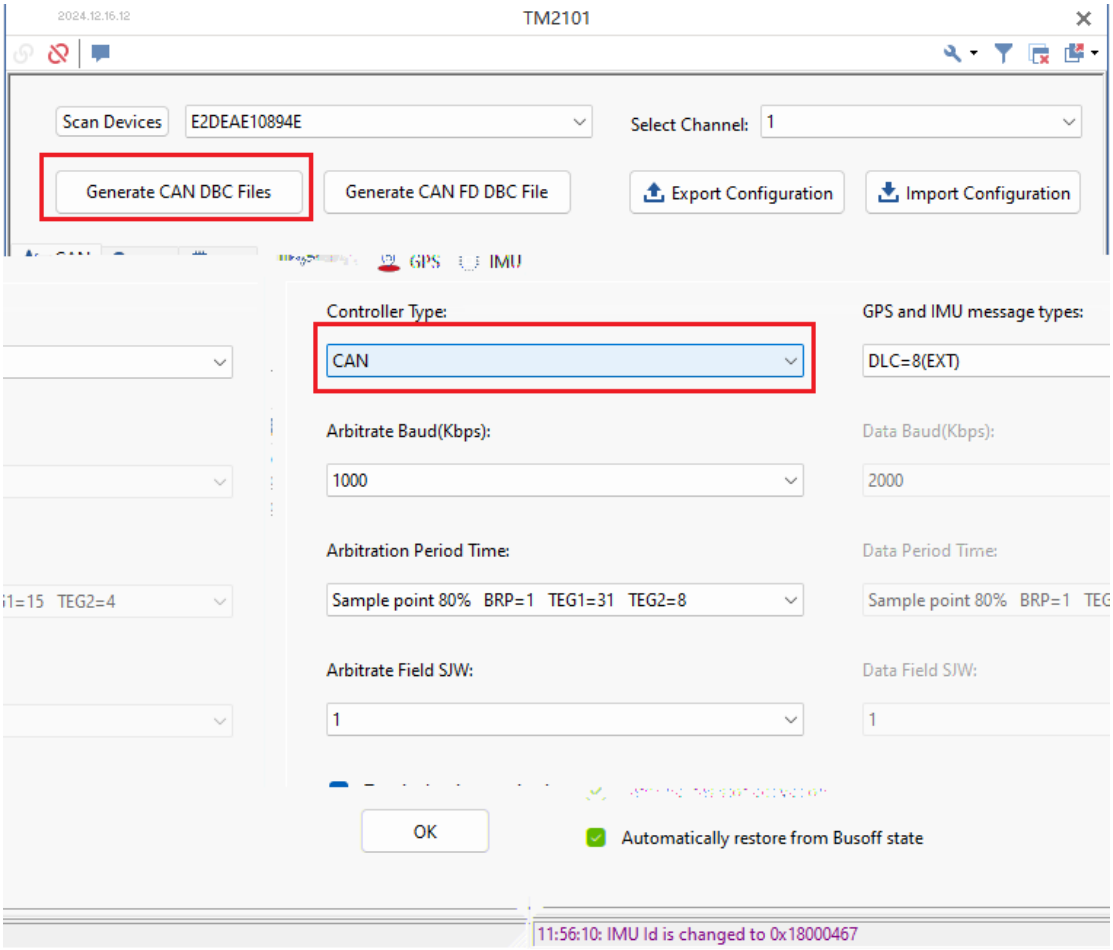
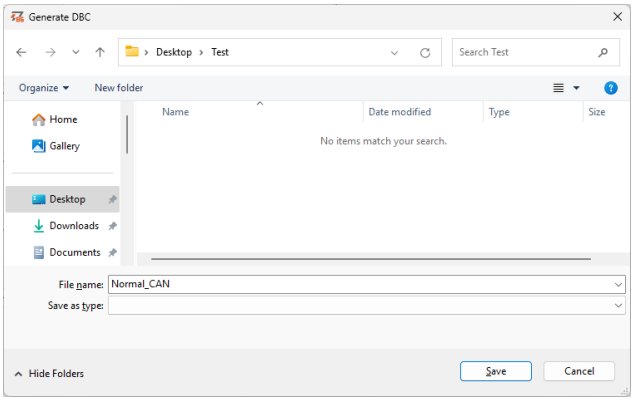

2024.12.16.12
TM2101
Scan Devices
E2DEAE10894E
Select Channel:
1
Generate CAN DBC Files
Generate CAN FD DBC File
Export Configuration
Import Configuration
GPS
IMU
Controller Type:
CAN
GPS and IMU message types:
DLC=8(EXT)
Arbitrate Baud(Kbps):
1000
Data Baud(Kbps):
2000
Arbitration Period Time:
Sample point 80% BRP=1 TEG1=31 TEG2=8
Data Period Time:
Sample point 80% BRP=1
Arbitrate Field SJW:
1
Data Field SJW:
1
OK
Automatically restore from Busoff state
11:56:10: IMU Id is changed to 0x18000467


Generate DBC
Desktop
Test
Search Test
Organize
New folder
Home
Gallery
Desktop
Downloads
Documents
Name
Date modified
Type
Size
No items match your search.
File name:
Normal_CAN
Save as type:
Hide Folders
Save
Cancel

(2)

(3)

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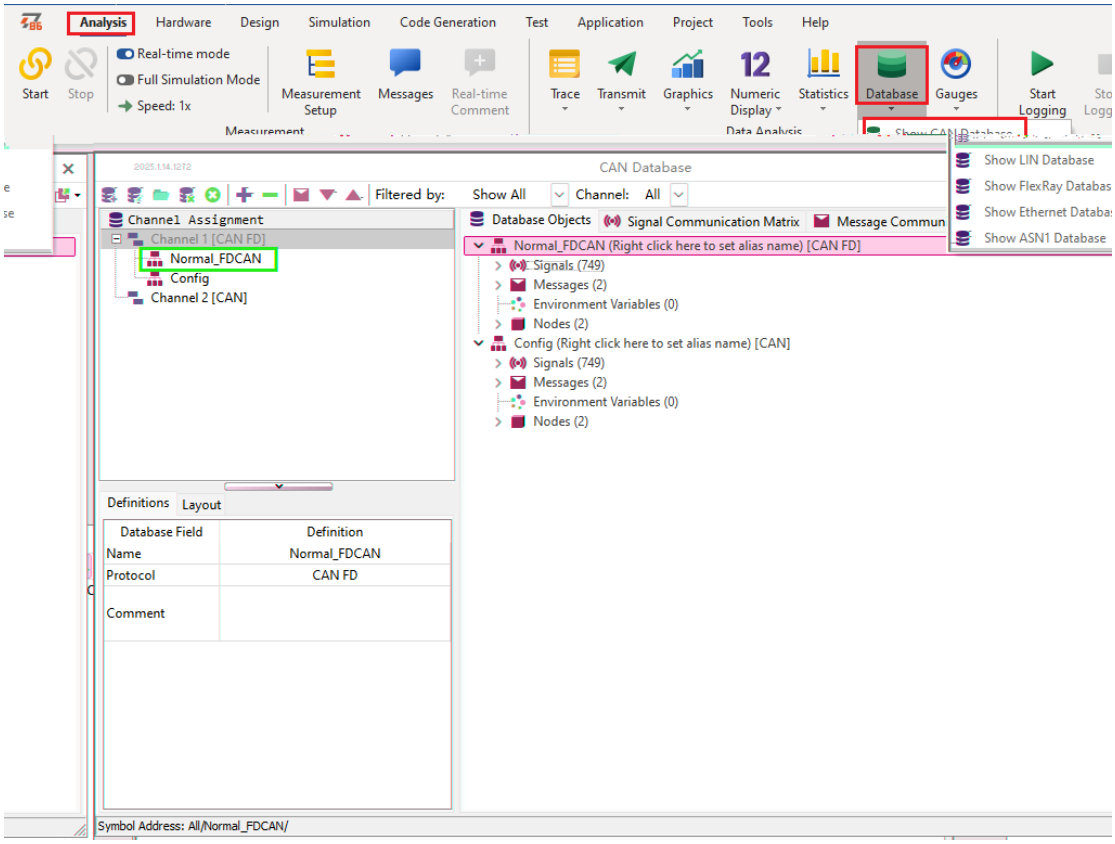
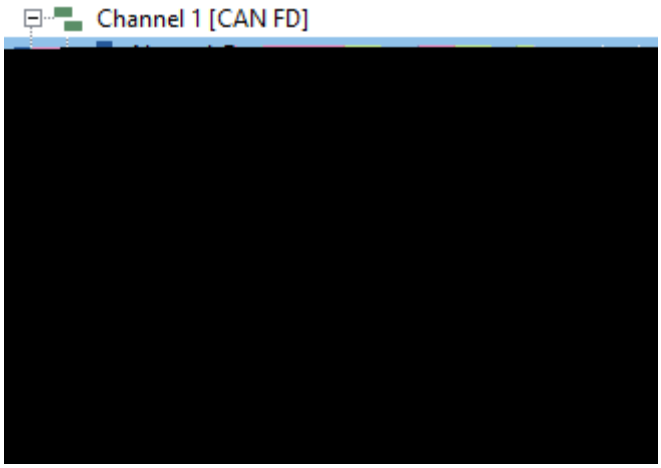

Analysis
Hardware
Design
Simulation
Code Generation
Test
Application
Project
Tools
Help
Start
Stop
Real-time mode
Full Simulation Mode
Speed: 1x
Measurement Setup
Messages
Real-time Comment
Trace
Transmit
Graphics
Numeric Display
Statistics
Database
Gauges
Start Logging
Show LIN Database
Show FlexRay Databas
Show Ethernet Databas
Show ASN1 Database
CAN Database
Filtered by:
Show All
Channel:
All
Channel Assignment
Channel 1 [CAN FD]
Normal_FDCAN
Config
Channel 2 [CAN]
Database Objects
Signal Communication Matrix
Message Commun
Normal_FDCAN (Right click here to set alias name) [CAN FD]
Signals (749)
Messages (2)
Environment Variables (0)
Nodes (2)
Config (Right click here to set alias name) [CAN]
Signals (749)
Messages (2)
Environment Variables (0)
Nodes (2)
Definitions
Layout
Database Field
Definition
Name
Normal_FDCAN
Protocol
CAN FD
Comment
Symbol Address: All/Normal_FDCAN/


Channel 1 [CAN FD]

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Scan Devices
E2DEAE10894E
Select Channel:
1
Generate CAN DBC Files
Generate CAN FD DBC File
Export Configuration
Import Configuration

(1)

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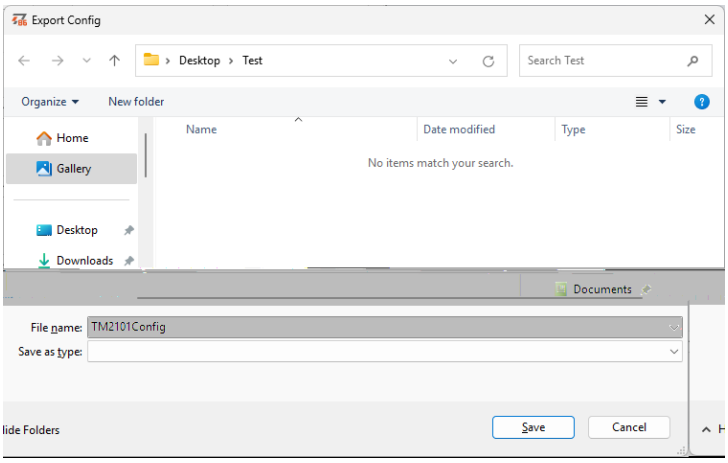
Export Config
Desktop › Test
Search Test
Organize
New folder
Home
Gallery
Desktop
Downloads
Name
Date modified
Type
Size
No items match your search.
Documents
File name: TM2101Config
Save as type:
lide Folders
Save
Cancel


TSMaster x86 v2025.2.17.1319 [Unsaved *]
Export Finish
OK

(2)


TSMaster x86 v2025.2.17.1319 [Unsaved *]
Import Finish
OK

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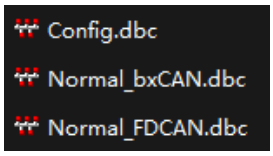
0HVVDJH 3DUVLQJ

'%&DQ OH 'HVFULSWLRQ



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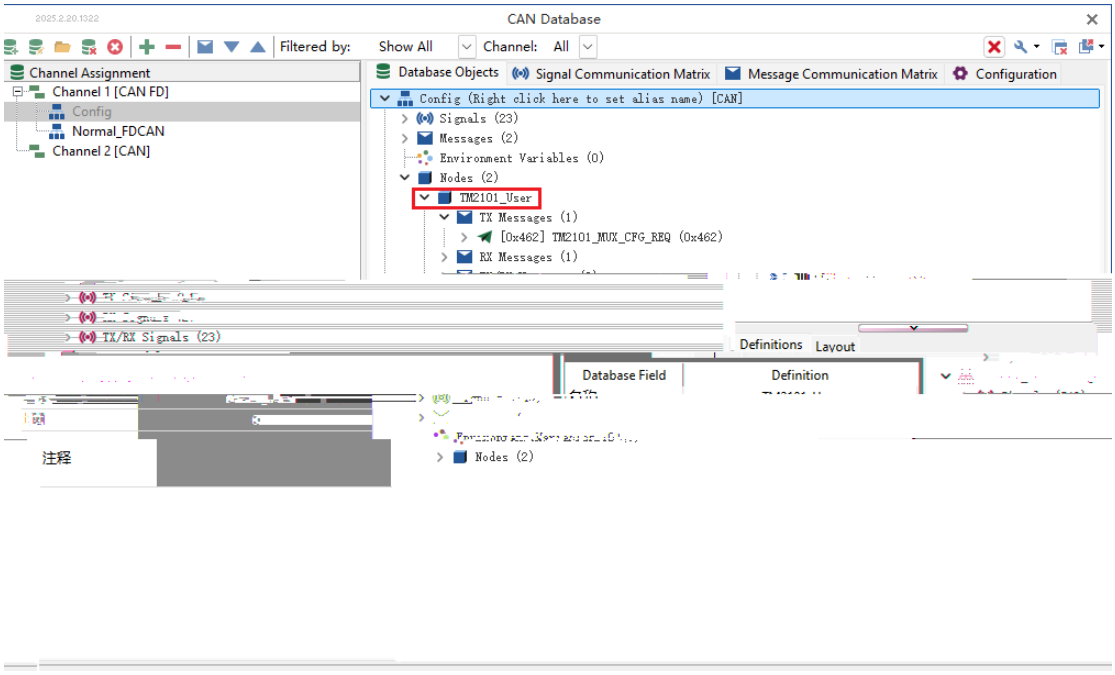

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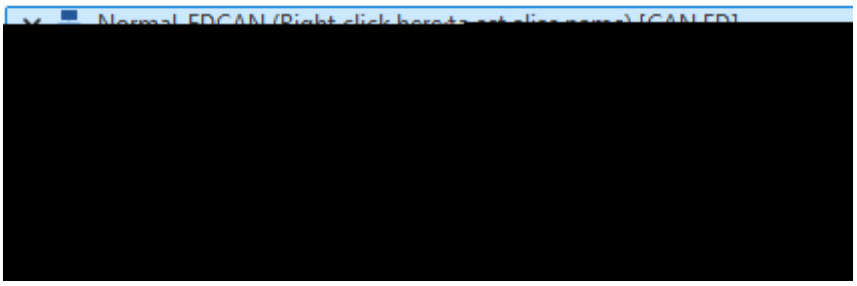

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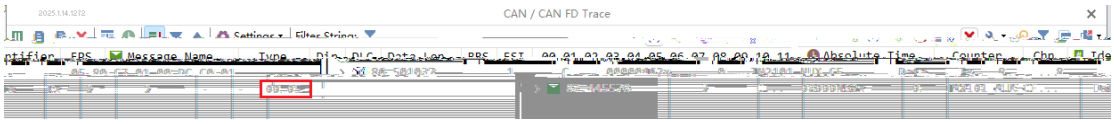
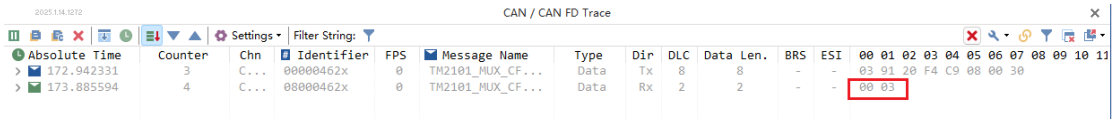
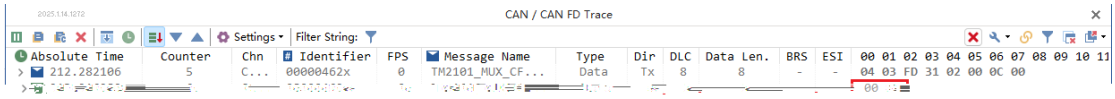
(1)


CAN / CAN FD Trace

(2)


CAN / CAN FD Trace
Settings
Filter String:
Absolute Time Counter Chn Identifier FPS Message Name Type Dir DLC Data Len. BRS ESI 00 01 02 03 04 05 06 07 08 09 10 11
172.942331 3 C... 00000462x 0 TM2101_MUX_CF... Data Tx 8 8 - - 03 91 20 F4 C9 08 00 30
173.885594 4 C... 08000462x 0 TM2101_MUX_CF... Data Rx 2 2 - - 00 03

(3)


CAN / CAN FD Trace
Settings
Filter String:
Absolute Time Counter Chn Identifier FPS Message Name Type Dir DLC Data Len. BRS ESI 00 01 02 03 04 05 06 07 08 09 10 11
212.282106 5 C... 00000462x 0 TM2101_MUX_CF... Data Tx 8 8 - - 04 03 FD 31 02 00 0C 00

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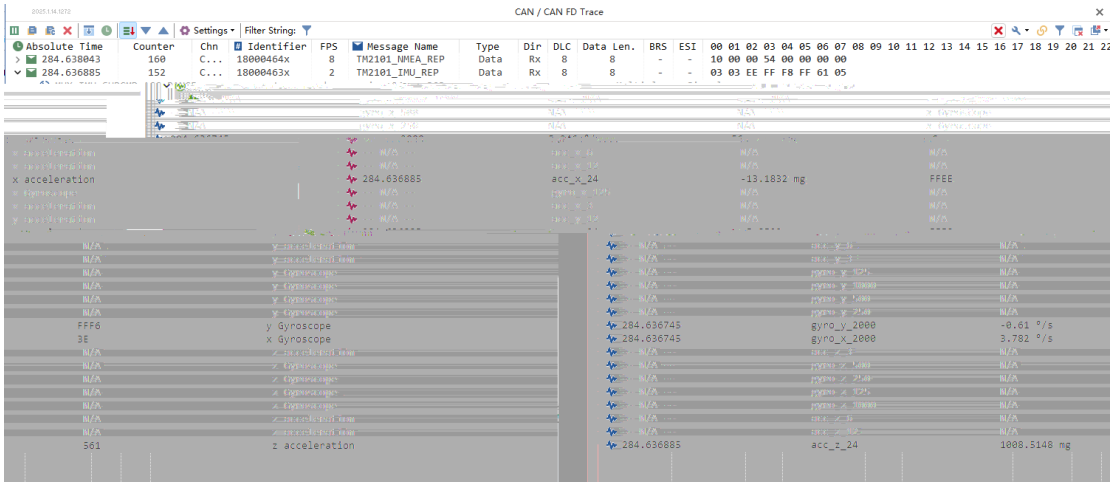
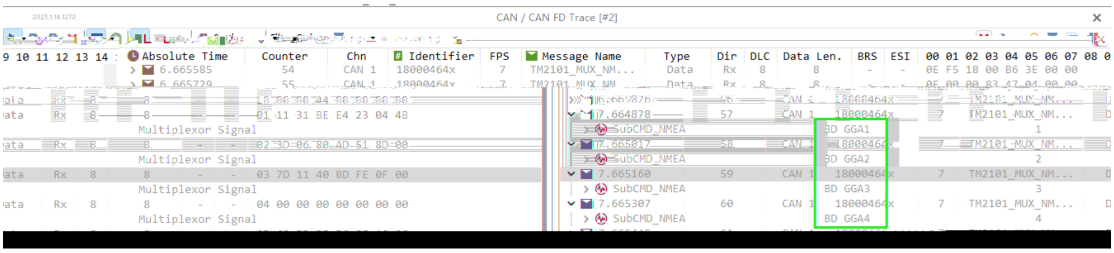
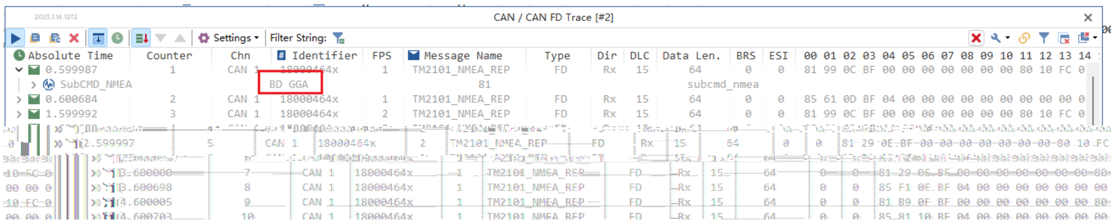
(1)


CAN / CAN FD Trace
Settings
Filter String:
Absolute Time Counter Chn Identifier FPS Message Name Type Dir DLC Data Len. BRS ESI 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22
284.638043 160 C... 18000464x 8 TM2101_NMEA_REP Data Rx 8 8 - - 10 00 00 54 00 00 00 00
284.636885 152 C... 18000463x 2 TM2101_IMU_REP Data Rx 8 8 - - 03 03 EE FF F8 FF 61 05
x acceleration
284.636885 acc_x_24 -13.1832 mg FFEE
FFF6 y Gyroscope
3E x Gyroscope
284.636745 gyro_y_2000 -0.61 °/s
284.636745 gyro_x_2000 3.782 °/s
561 z acceleration
284.636885 acc_z_24 1008.5148 mg

(2)



(3)



'HVFULSWLRQ RI 8DUW WR &$1 $V1R

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'HVFULSWLRQHQWHQFH WR &$1

*36 6XE2&0HUYLHZ

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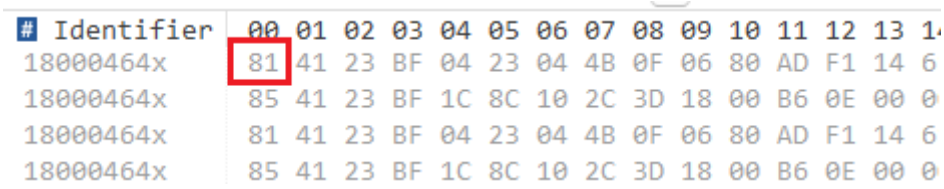

#	Identifier	00	01	02	03	04	05	06	07	08	09	10	11	12	13	1
	18000464x	81	41	23	BF	04	23	04	4B	0F	06	80	AD	F1	14	6
	18000464x	85	41	23	BF	1C	8C	10	2C	3D	18	00	B6	0E	00	0
	18000464x	81	41	23	BF	04	23	04	4B	0F	06	80	AD	F1	14	6
	18000464x	85	41	23	BF	1C	8C	10	2C	3D	18	00	B6	0E	00	0

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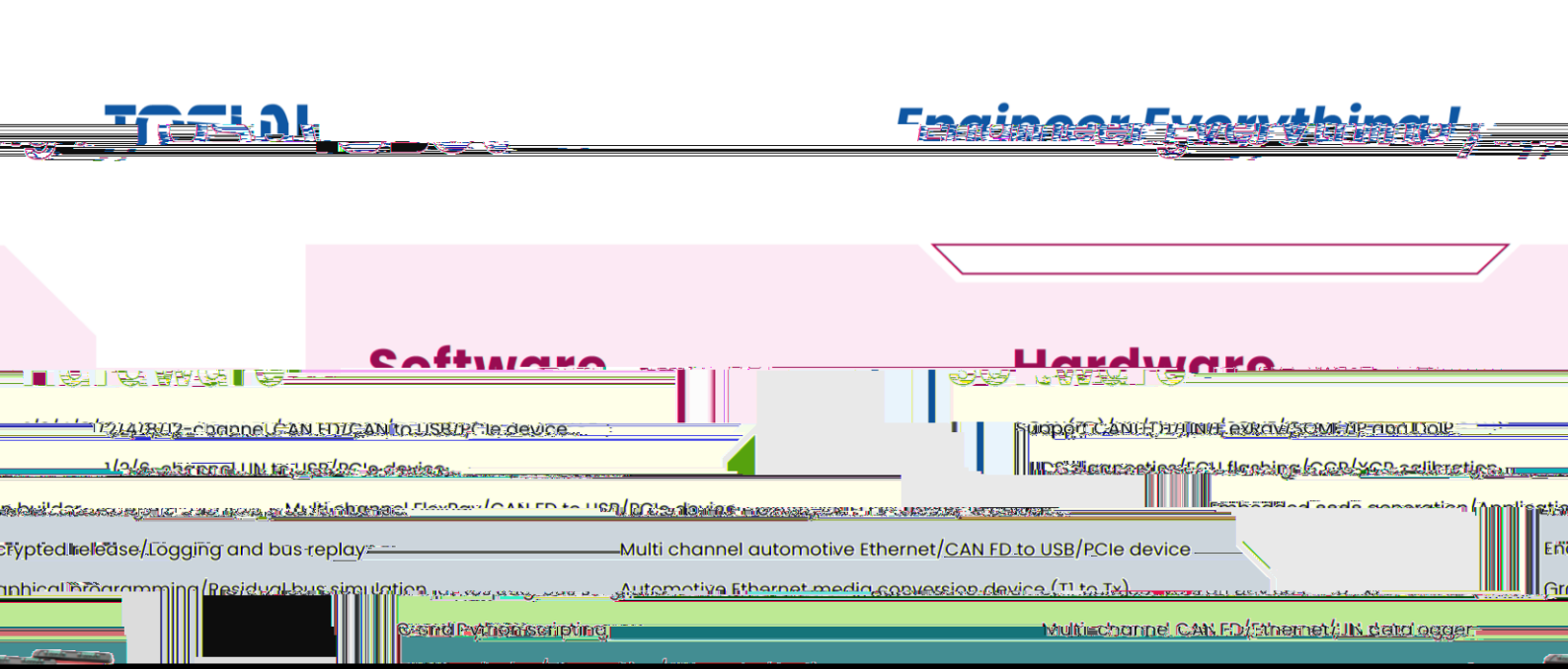
	humidity. (Including the internal humidity of enclosed environments)	humidity must be within the range of 10% to 90%	the humidity and ensure that the ambient humidity within the acceptable range.
	Check for the accumulation of dust, powder, salt, and metal shavings	No accumulation	Clean and protect the equipment.
	Check for any contact with water, oil, or chemical sprays on the equipment	No contact	Clean and protect the equipment if necessary.
	Check for the presence of corrosive or flammable gases in the equipment area	No presence	Inspect by the smell, or using a sensor.
	Check for levels of vibration and shock	Vibration and shock are within the acceptable range	Install padding or other shock-absorbing devices if necessary.
	Check for noise sources near the equipment	No significant noise source	Isolate the equipment from noise sources or protect the equipment.
Wiring Installation	Check the crimped connectors in the external wiring	Ensure enough space between the connectors	Visually inspect and adjust if necessary.
	Check for damage in the external wiring	No damage	Visually inspect and replace the wiring if necessary.


Engineer Everything!
Software
Hardware
Multi channel automotive Ethernet/CAN FD to USB/PCIe device
Automotive Ethernet media conversion device (TJ1 to TX)