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iDAS R&D User Manual

1. Introduction

1.1 Purpose

The purpose of this user manual is to thoroughly describe the functionalities of this software and its operating environment, enabling users to understand the software's scope and usage, and to provide necessary information for software maintenance and updates.

1.2 Definitions

Sensor: refers to the multi-axis force sensor produced by SRI.

Data acquisition card: refers to the device that provides signal conditioning, amplification, and filtering for the sensor, performs A/D conversion, and runs the iDAS R&D software on the host while communicating via RS232, RS485, Ethernet bus, EtherCAT bus, and CAN bus. Such as M8128, M8126, M8127, or sensors with built-in digital communication.

Channel: refers to the number of data transmission paths; a Six-axis Force Sensor transmits signals through 6 channels.

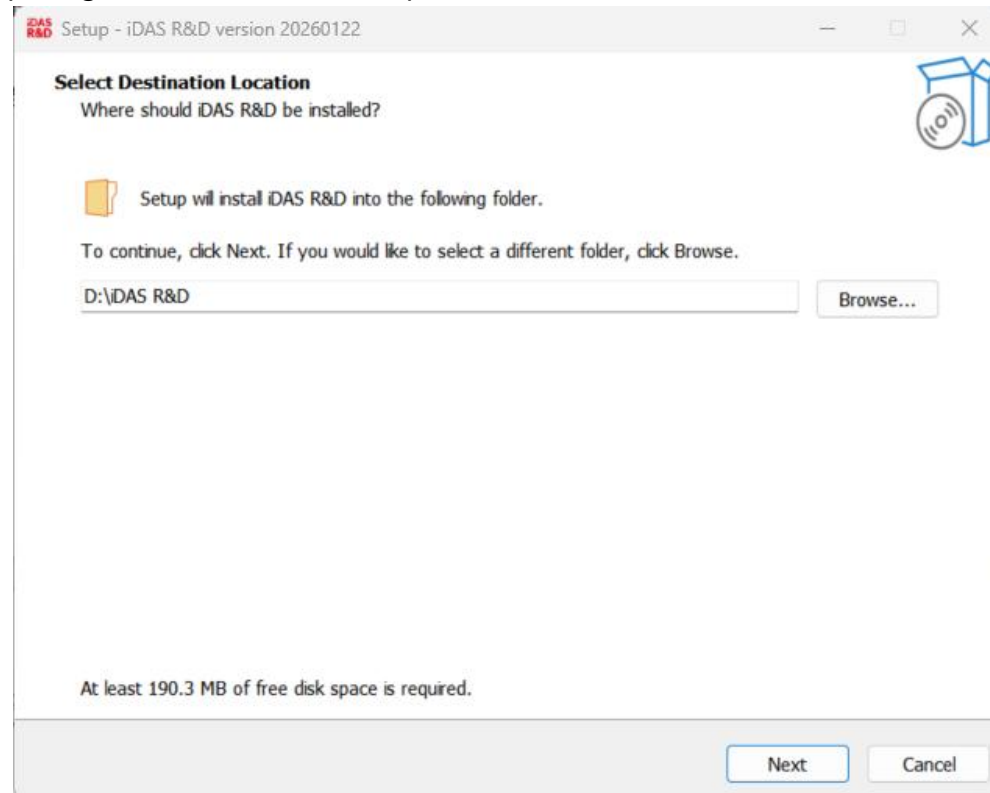




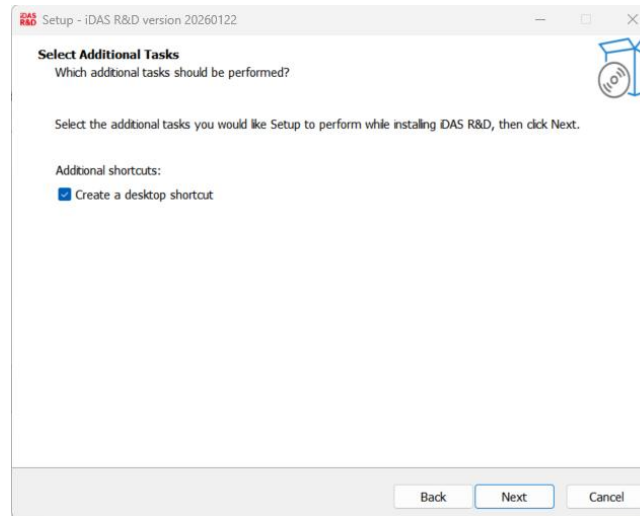
2. Installation

- PC system requirements: Windows 7 or later; Linux systems are not supported.
- Installation steps:

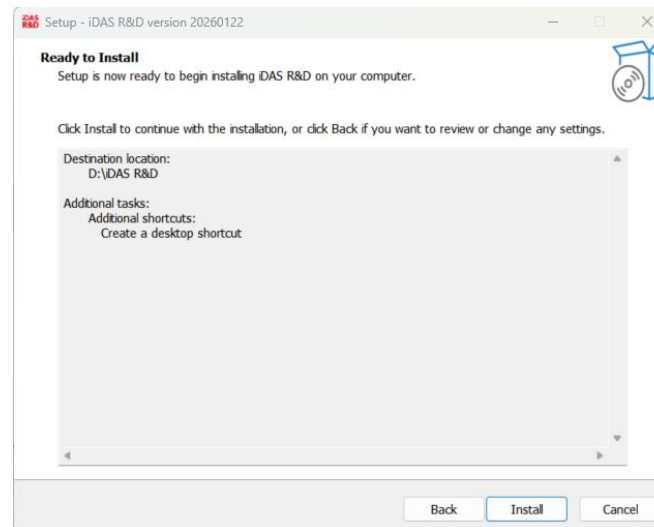
① Double-click the installation package, select the installation path, and click 'Next'.



② 'Create Desktop Shortcut' is selected by default; click 'Next'.

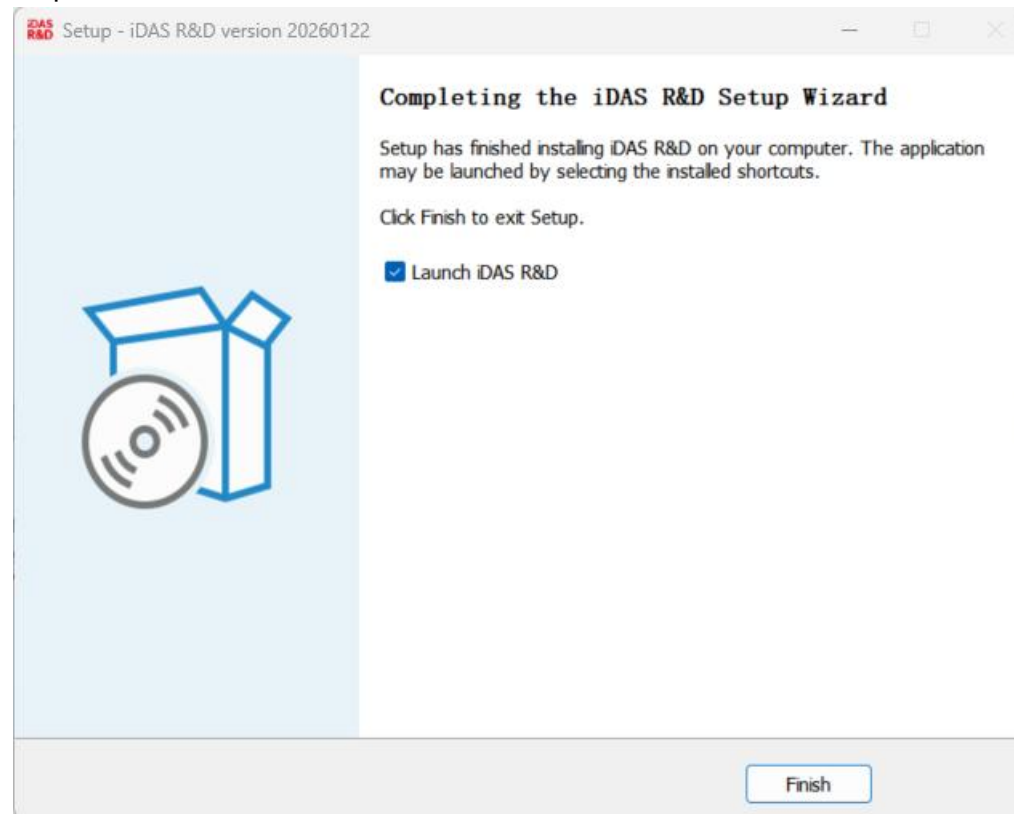


③ Click 'Install' to start the installation.

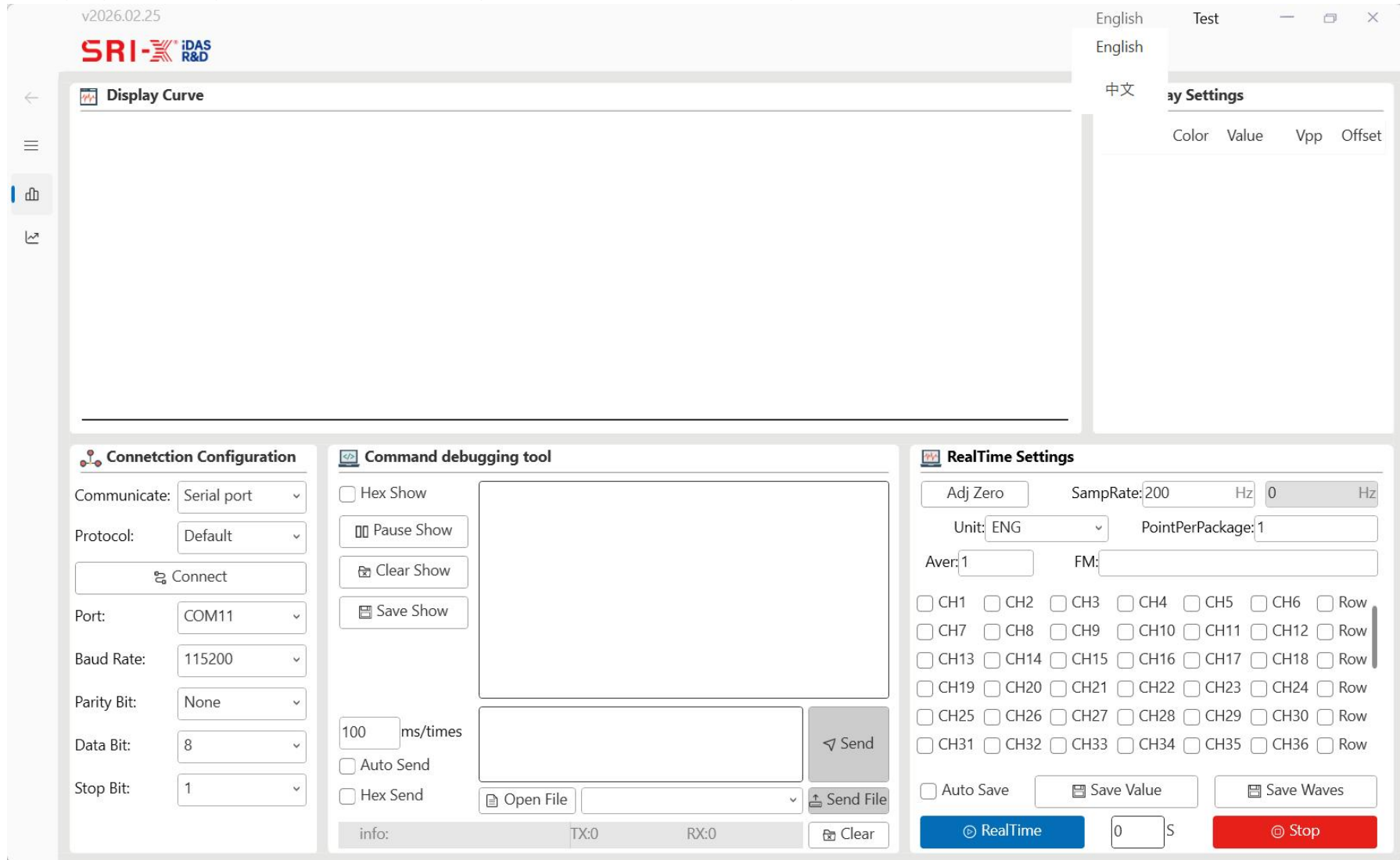




- ④ Wait for the installation to complete, then click 'Finish' and run the software.



⑤ Language switching between Chinese and English is available in the upper right corner of the software.

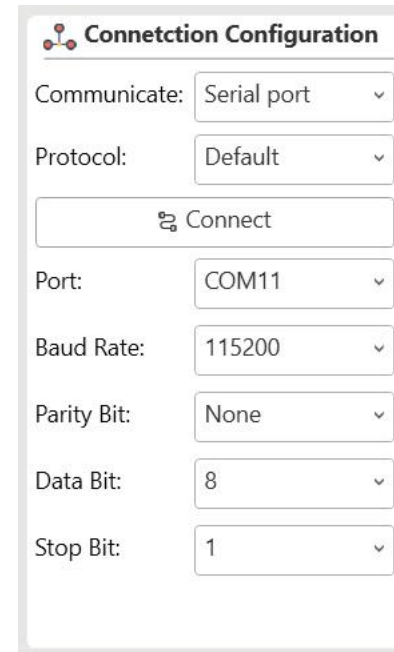
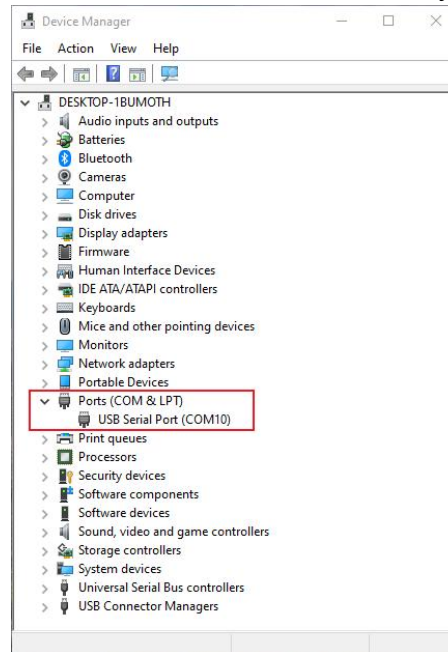


3. User Instructions

This software supports five communication methods: RS232, RS485, Ethernet communication, EtherCAT communication bus, and CAN communication bus.

3.1 RS232

① The data acquisition card and PC computer are connected via a serial cable; select Serial port for communication, choose Default Protocol, select the corresponding COM port, set the Baud rate to 115200, set Parity Bit to "None," and click Connect.





- ② Power on the data acquisition card; the command response window of the iDAS R&D software will display initialization information.

The screenshot displays the iDAS R&D software interface, divided into two main panels: **Connection Configuration** and **Command debugging tool**.

Connection Configuration Panel:

- Communicate: Serial port (dropdown)
- Protocol: Default (dropdown)
- Stop (button)
- Port: COM11 (dropdown)
- Baud Rate: 115200 (dropdown)
- Parity Bit: None (dropdown)
- Data Bit: 8 (dropdown)
- Stop Bit: 1 (dropdown)

Command debugging tool Panel:

- Hex Show (checkbox)
- Pause Show (button)
- Clear Show (button)
- Save Show (button)
- 100 ms/times (input field)
- Auto Send (checkbox)
- Hex Send (checkbox)
- Send (button)
- Open File (button)
- Send File (button)
- Clear (button)

The **Command debugging tool** window displays the following initialization information:

```
Start run App...
Running App...
Uart Parameter:115200,8,1.00,N
ChnExcitationVolt is 5.011596V
LAN9252SPI_If_ReadTest Is OK...
System Init OK!
```

At the bottom of the interface, the status bar shows: info: TX:0 RX:154

③ RealTime Settings:

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: the rate of data acquisition and transmission; the dynamic sampling rate is calculated in the gray box on the right.

Unit: default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: when the engineering unit is set to **ENG**, CH1–CH6 correspond to the six-axis force sensor' s FX, FY, FZ, MX, MY, and MZ.

PointsPerPackage: Number of points per channel in each data packet

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

FM: Data acquisition card parameter, refer to the manual of the data acquisition card used

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory



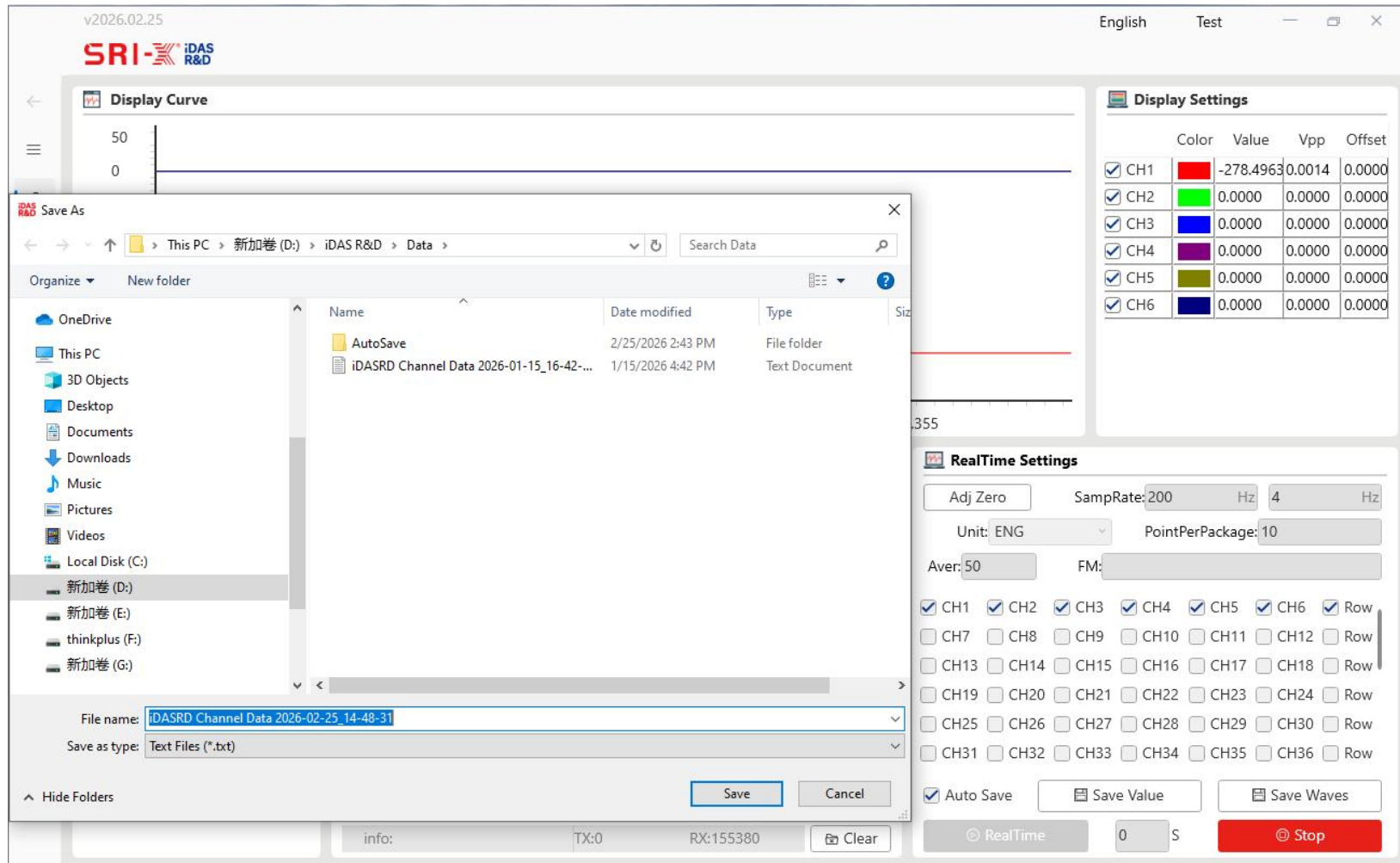
Save Value: Saves the channel value at the current moment in csv format

The screenshot shows the SRI iDAS R&D software interface. A 'Save As' dialog box is open, showing the file path 'This PC > 新加卷 (D:) > iDAS R&D > Data' and a file name 'SaveValue2026-02-25_14-48-10'. The 'Save as type' is set to 'CSV Files (*.csv)'. The background shows a 'Display Curve' window with a graph, a 'Display Settings' panel with a table of channel settings, and a 'RealTime Settings' panel with various configuration options.

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> CH1	Red	-278.4965	0.0009	0.0000
<input checked="" type="checkbox"/> CH2	Green	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH3	Blue	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH4	Purple	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH5	Olive	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH6	Dark Blue	0.0000	0.0000	0.0000

RealTime Settings:
Adj Zero: [] SampRate: 200 Hz 4 Hz
Unit: ENG PointPerPackage: 10
Aver: 50 FM: []
 CH1 CH2 CH3 CH4 CH5 CH6 Row
 CH7 CH8 CH9 CH10 CH11 CH12 Row
 CH13 CH14 CH15 CH16 CH17 CH18 Row
 CH19 CH20 CH21 CH22 CH23 CH24 Row
 CH25 CH26 CH27 CH28 CH29 CH30 Row
 CH31 CH32 CH33 CH34 CH35 CH36 Row
 Auto Save
RealTime 0 S

Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled

④ Select the data channel and click Real-time.

The screenshot shows the SRI iDAS R&D software interface. The main window displays a 'Display Curve' plot with six channels (CH1-CH6) plotted against time. The y-axis is labeled 'ENG' and ranges from -2 to 2. The x-axis shows time from 00:00:00.000 to 00:00:03.945. Each channel has a corresponding data point box showing its value and Vpp. For example, CH2 [1.08]: 1.06 and CH1 [0.07]: 0.06.

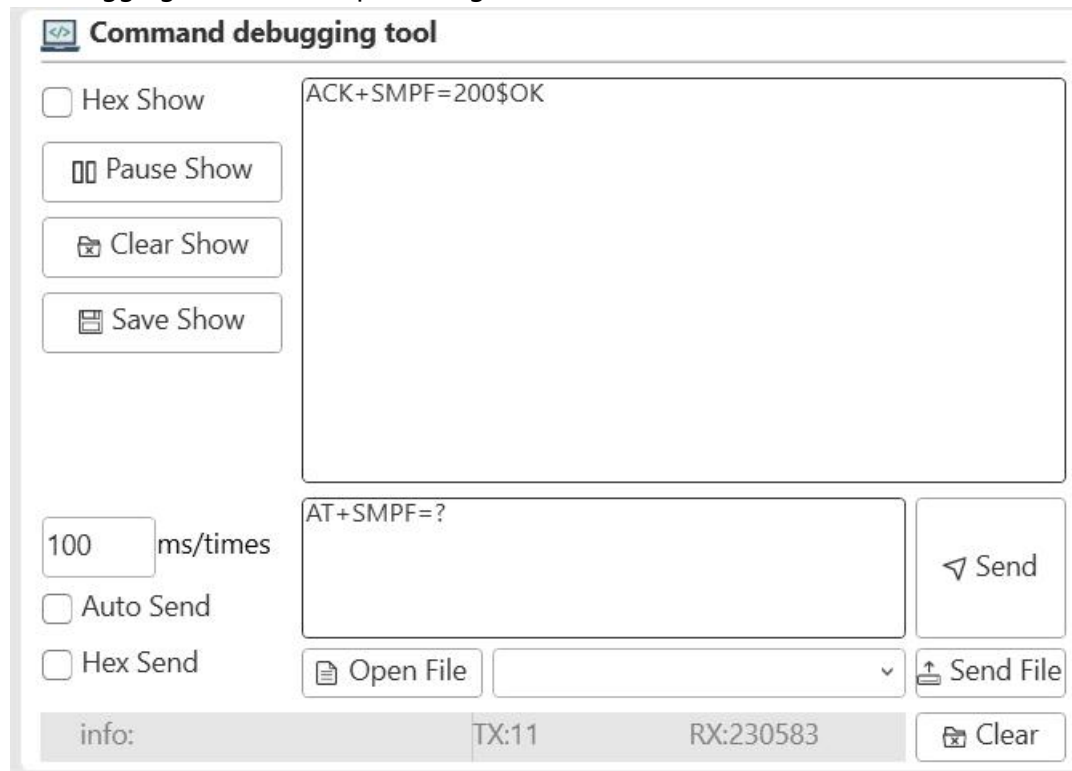
Below the plot are three configuration panels:

- Connection Configuration:** Communicate: Serial port, Protocol: Default, Port: COM11, Baud Rate: 115200, Parity Bit: None, Data Bit: 8, Stop Bit: 1.
- Command debugging tool:** Hex Show, Pause Show, Clear Show, Save Show, 100 ms/times, Auto Send, Hex Send, Send, Open File, Send File, info: TX:0 RX:201121, Clear.
- RealTime Settings:** Adj Zero, SampRate: 200 Hz, 195 Hz, Unit: ENG, PointPerPackage: 1, Aver: 1, FM: [blank], checkboxes for CH1-CH36 and Row, Auto Save, Save Value, Save Waves, RealTime, 0 S, Stop.

The 'Display Settings' panel on the right shows a table of channel parameters:

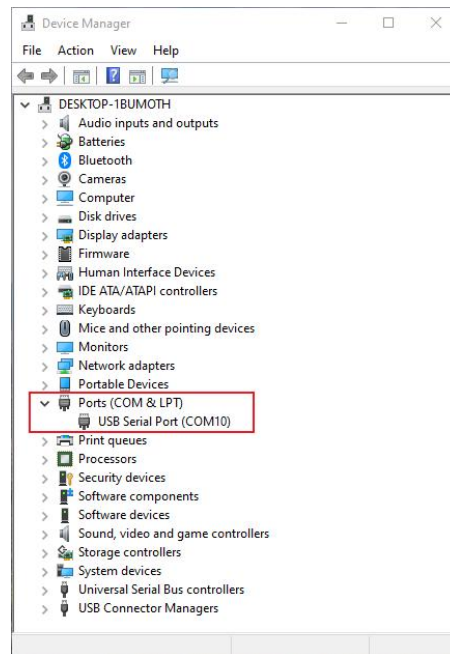
	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> CH1	Red	0.0621	0.0219	0.0000
<input checked="" type="checkbox"/> CH2	Green	1.0628	0.0825	0.0000
<input checked="" type="checkbox"/> CH3	Blue	1.7909	0.0960	0.0000
<input checked="" type="checkbox"/> CH4	Purple	1.5627	0.0926	0.0000
<input checked="" type="checkbox"/> CH5	Olive	-1.7598	0.1318	0.0000
<input checked="" type="checkbox"/> CH6	Dark Blue	-0.7530	0.0559	0.0000

- ⑤ Commands can be sent for debugging before data upload begins.



3.2 RS485

① Connect the data acquisition card to the PC computer and select Serial port for communication. According to the data acquisition card model, select the corresponding 485 protocol and baud rate. Set the parity bit to 'Even' and click Connect.



② RealTime Settings:

RealTime Settings

Adj Zero SampRate: 200 Hz 201 Hz

Unit: ENG PointPerPackage: 1

Aver: 1 FM:

CH1 CH2 CH3 CH4 CH5 CH6 Row

CH7 CH8 CH9 CH10 CH11 CH12 Row

CH13 CH14 CH15 CH16 CH17 CH18 Row

CH19 CH20 CH21 CH22 CH23 CH24 Row

CH25 CH26 CH27 CH28 CH29 CH30 Row

CH31 CH32 CH33 CH34 CH35 CH36 Row

Auto Save

 0 S

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: the rate of data acquisition and transmission. **The sampling rate input here only affects the curve display and is not transmitted to the data acquisition card for modification.** The gray box on the right displays the calculated dynamic sampling rate.

Unit: default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: **Not required for this communication method.**

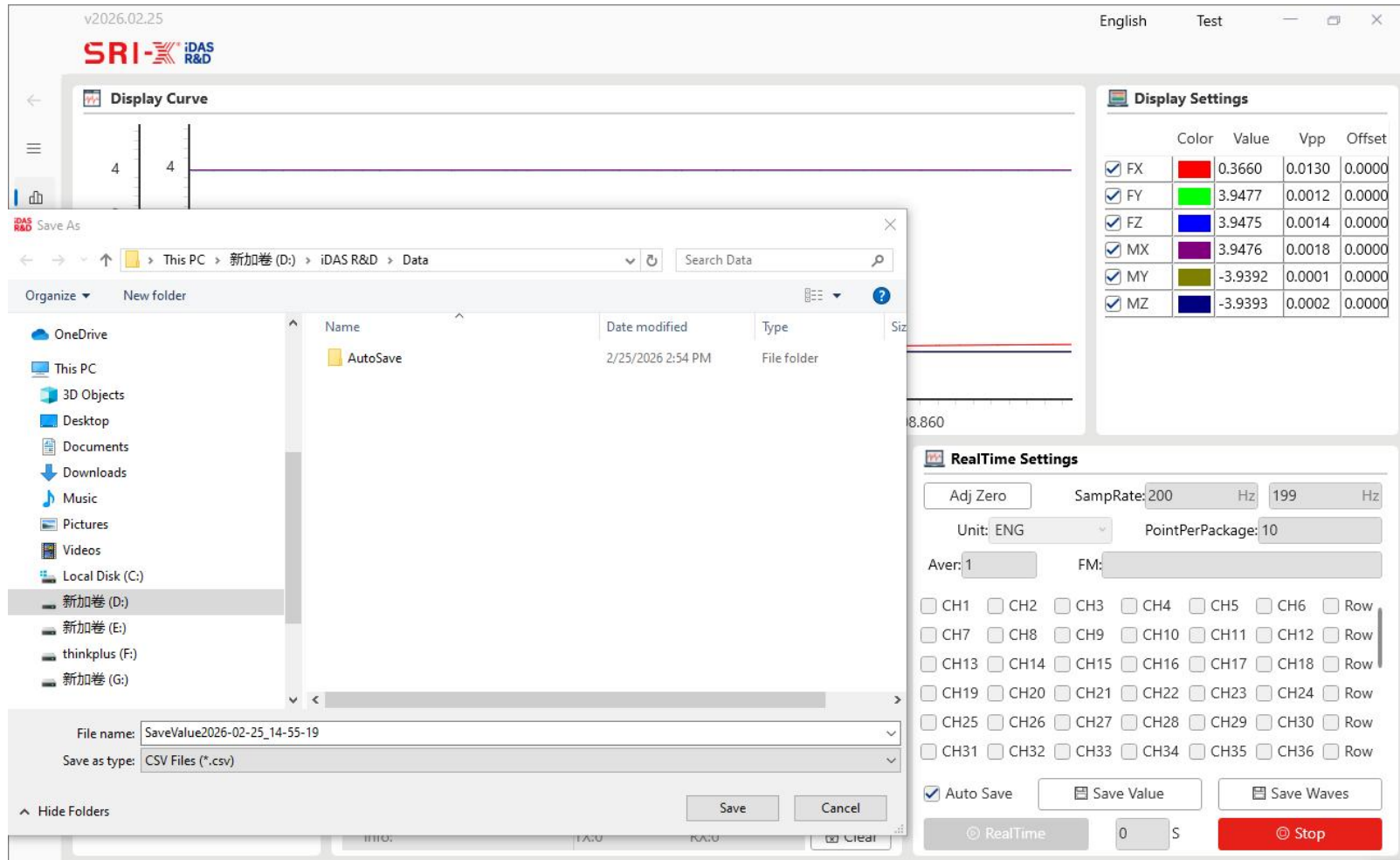
PointsPerPacket: **Not required for this communication method.**

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

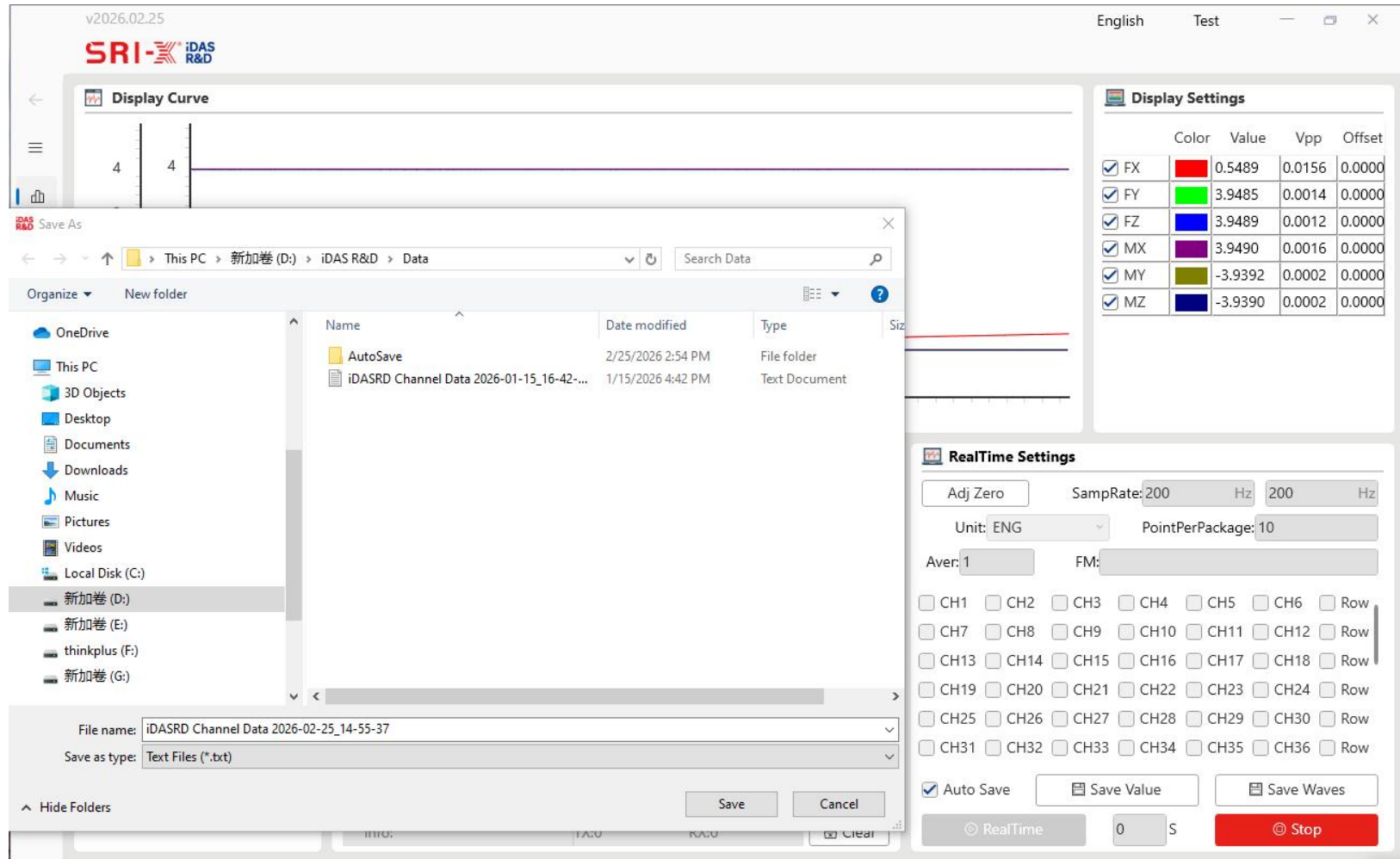
Frequency modulation: **Not required for this communication method.**

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory

Save Value: Saves the channel value at the current moment in csv format



Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled



③ Enter the sampling rate (*If uncertain, enter 1000 initially; after starting, observe the dynamically calculated sampling rate, stop to modify if necessary, and restart.*), then click Real-time.

The screenshot displays the SRI iDAS R&D software interface. At the top left, the version is v2026.05.25. The main window title is 'English Test'. The interface is divided into several sections:

- Display Curve:** A multi-axis plot showing data for channels FX, FY, FZ, MX, MY, and MZ. The Y-axis is labeled 'Nm' and ranges from -800 to 600. The X-axis shows time from 00:00:01.210 to 00:00:03.210. The plot shows step-like changes in the data with some noise.
- Display Settings:** A table with columns for Color, Value, Vpp, and Offset.

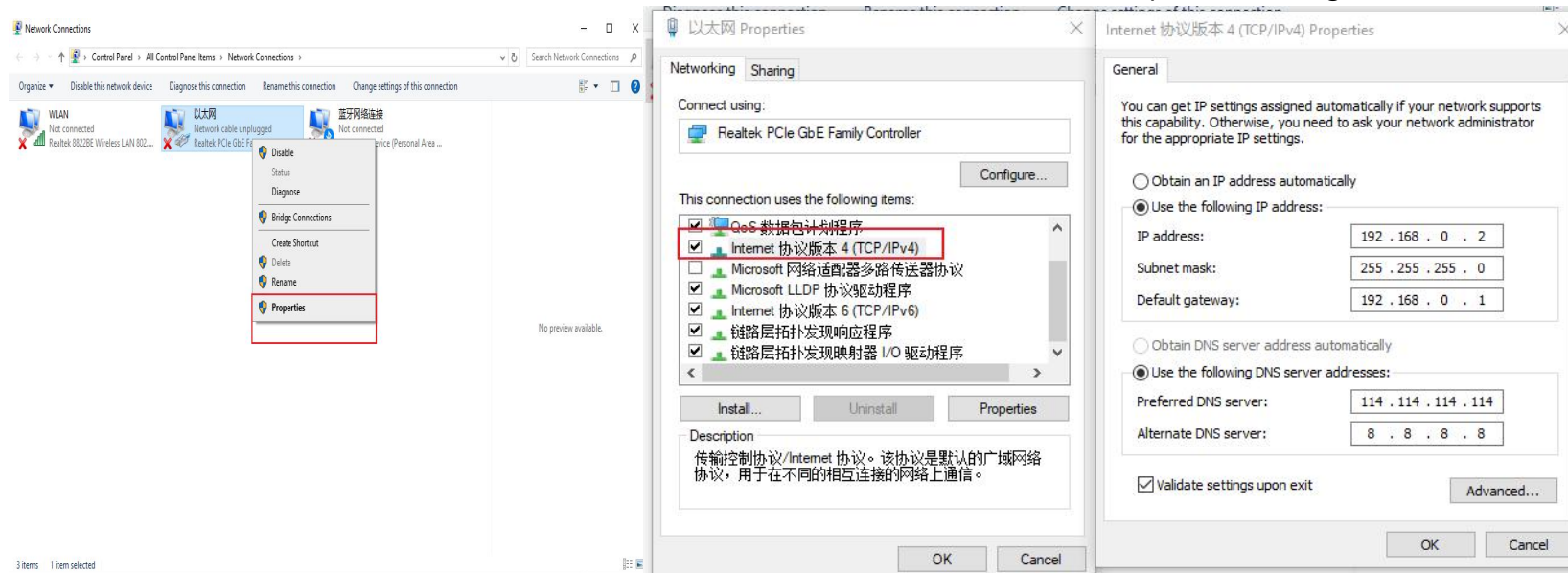
	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/>	FX	1.2000	0.0000	0.0000
<input checked="" type="checkbox"/>	FY	-0.3000	0.0000	0.0000
<input checked="" type="checkbox"/>	FZ	409.6000	0.0000	0.0000
<input checked="" type="checkbox"/>	MX	-461.1000	0.0000	0.0000
<input checked="" type="checkbox"/>	MY	206.0000	0.0000	0.0000
<input checked="" type="checkbox"/>	MZ	-5.0000	0.0000	0.0000
- Connection Configuration:**
 - Communicate: Serial port
 - Protocol: RS485_A11
 - Port: COM4
 - Baud Rate: 460800
 - Parity Bit: Even
 - Data Bit: 8
 - Stop Bit: 1
- Command debugging tool:**
 - Hex Show:
 - Pause Show:
 - Clear Show:
 - Save Show:
 - 100 ms/times
 - Auto Send:
 - Hex Send:
 - Send File:
 - Clear:
 - TX: 0, RX: 172816
- RealTime Settings:**
 - Adj Zero:
 - SampRate: 2000 Hz, 2032 Hz
 - Unit: ENG
 - PointPerPackage: 10
 - Aver: 1
 - FM:
 - Channels: CH1-CH36 (CH1-CH6 checked)
 - Auto Save:
 - Save Value:
 - Save Waves:
 - RealTime:
 - Stop:

Note: RS485 does not support command debugging!

3.3 Ethernet Communication

The TCP protocol configures the PC Side Ethernet IP Address as follows:

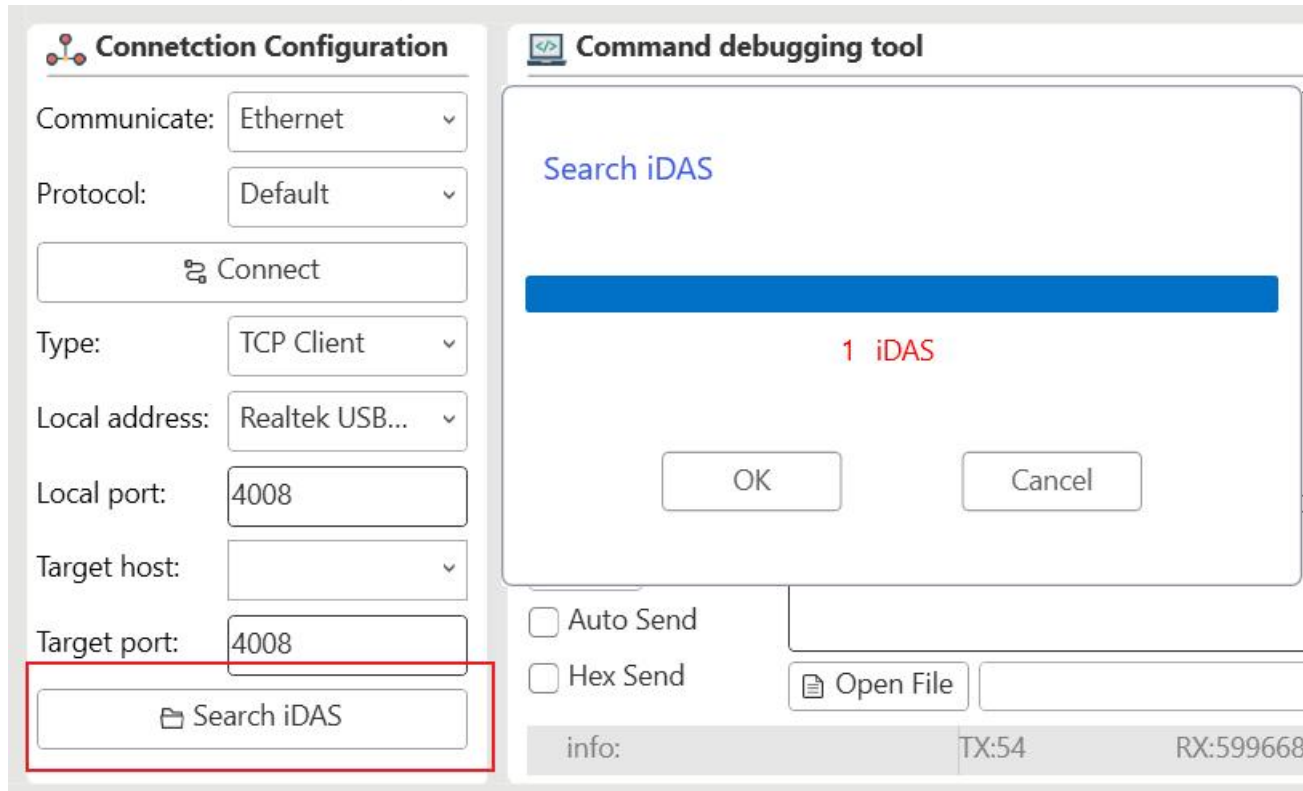
Open [Network and Sharing Center], click [Local Area Connection], the “Local Area Connection Status” window will appear. Click [Properties], opening the “Local Area Connection Properties” window. Double-click [Internet Protocol Version 4], then select [Use the following IP address]. Enter 192.168.0.2 in the [IP Address] field and 255.255.255.0 in the [Subnet Mask] field. Click OK to complete the configuration.



- ① After connecting and powering on the data acquisition card and PC computer, set the software communication to Ethernet and select



protocol Default (for M3612 data acquisition card, select M3612T1 protocol). Choose the network type according to the data acquisition card protocol, select the local address corresponding to the network adapter connected to the data acquisition card, and use the default port 4008. For TCP protocol data acquisition cards, click Search iDAS to automatically locate the IP address of the data acquisition card, then click Connect.





v2026.02.25 English Test

SRI- iDAS R&D

Display Curve

Color Value Vpp Offset

00:00:03.365 00:00:04.805 00:00:09.122

Connection Configuration

Communicate: Ethernet
Protocol: Default
Type: TCP Client
Local address: Realtek USB...
Local port: 4008
Target host: 192.168.0.108
Target port: 4008
Search iDAS

Command debugging tool

Hex Show
 Pause Show
 Clear Show
 Save Show

100 ms/times
 Auto Send
 Hex Send

AT+ETHM=?
Send

Open File Send File
info: TX:54 RX:599668 Clear

RealTime Settings

Adj Zero SampRate: 1000 Hz 0 Hz
Unit: ENG PointPerPackage: 1
Aver: 1 FM:

CH1 CH2 CH3 CH4 CH5 CH6 Row
 CH7 CH8 CH9 CH10 CH11 CH12 Row
 CH13 CH14 CH15 CH16 CH17 CH18 Row
 CH19 CH20 CH21 CH22 CH23 CH24 Row
 CH25 CH26 CH27 CH28 CH29 CH30 Row
 CH31 CH32 CH33 CH34 CH35 CH36 Row

Auto Save Save Value Save Waves
RealTime 0 S Stop

② Real-time Settings

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: the rate of data acquisition and transmission; the dynamic sampling rate is calculated in the gray box on the right.

Unit : default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: when the engineering unit is set to **ENG**, CH1–CH6 correspond to the six-axis force sensor' s FX, FY, FZ, MX, MY, and MZ.

PointsPerPacket: Number of points per channel in each data packet

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

FM: Data acquisition card parameter, refer to the manual of the data acquisition card used

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory

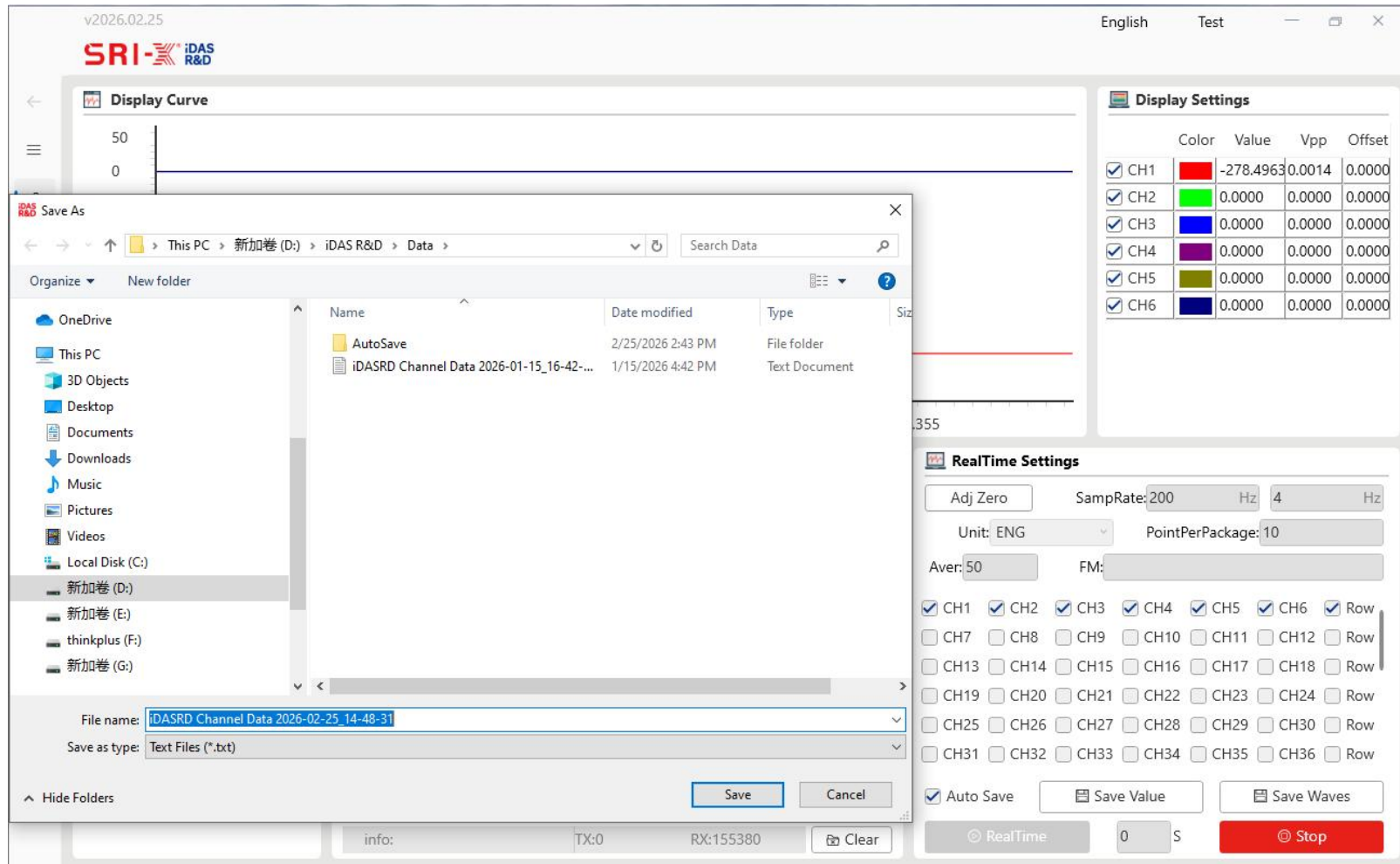


Save Value: Saves the channel value at the current moment in csv format

The screenshot displays the SRI iDAS R&D software interface. A 'Save As' dialog box is open, showing the file path 'This PC > 新加卷 (D:) > iDAS R&D > Data' and a file name 'SaveValue2026-02-25_14-48-10'. The 'Save as type' is set to 'CSV Files (*.csv)'. The background interface includes a 'Display Curve' window with a graph showing a flat line at 0. The 'Display Settings' panel on the right lists channels CH1 through CH6 with their respective colors, values, Vpp, and Offset. The 'RealTime Settings' panel shows 'SampRate: 200 Hz', 'Unit: ENG', 'PointPerPackage: 10', and 'Aver: 50'. At the bottom, there are buttons for 'Save Value', 'Save Waves', and 'Stop', along with a 'RealTime' indicator and a '0 S' timer.

Color	Value	Vpp	Offset
CH1	-278.4965	0.0009	0.0000
CH2	0.0000	0.0000	0.0000
CH3	0.0000	0.0000	0.0000
CH4	0.0000	0.0000	0.0000
CH5	0.0000	0.0000	0.0000
CH6	0.0000	0.0000	0.0000

Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled

③ Select the data channel and click Real-time.

The screenshot displays the SRI iDAS R&D software interface. At the top left, the version is v2026.02.25 and the language is set to English. The main window is titled "Display Curve" and shows a graph with a red line at approximately -70 and a blue line at 0. The x-axis represents time from 00:00:00.000 to 00:00:01.984. The y-axis is labeled "ENG" and ranges from -80 to 10.

On the right side, there is a "Display Settings" panel with a table of channel configurations:

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> CH1	Red	-68.9456	0.1734	0.0000
<input checked="" type="checkbox"/> CH2	Green	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH3	Blue	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH4	Purple	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH5	Olive	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH6	Dark Blue	0.0000	0.0000	0.0000

At the bottom, there are three main panels:

- Connection Configuration:** Shows settings for communication (Ethernet), protocol (Default), type (TCP Client), local address (Realtek USB...), local port (4008), target host (192.168.0.108), and target port (4008). A "Search iDAS" button is also present.
- Command debugging tool:** Contains a text area with the command "ACK+SMR=1000\$OK", buttons for "Pause Show", "Clear Show", and "Save Show", and a "Send" button. It also shows "100 ms/times" and "Hex Send" options.
- RealTime Settings:** Includes "Adj Zero", "SampRate: 1000 Hz", "995 Hz", "Unit: ENG", and "PointPerPackage: 10". It features a list of channels (CH1-CH36) with checkboxes, and buttons for "Auto Save", "Save Value", and "Save Waves". A "RealTime" button is active, and a "Stop" button is visible.

- ④ Commands can be sent for debugging before data upload begins.

Command debugging tool

Hex Show

Pause Show

Clear Show

Save Show

100 ms/times

Auto Send

Hex Send

ACK+SMPF=200\$OK

AT+SMPF=?

Send

Open File

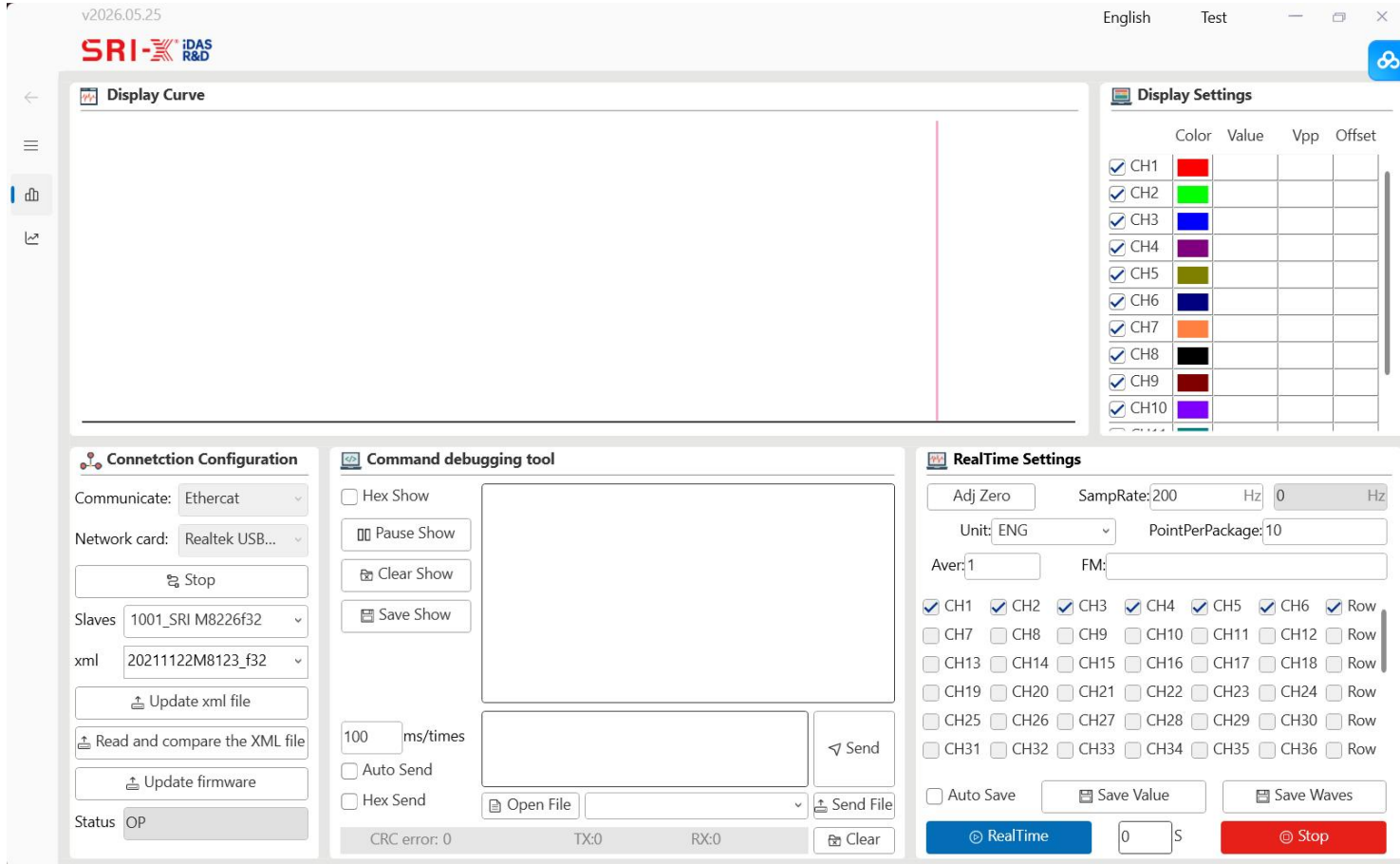
Send File

info: TX:11 RX:230583

Clear

3.4 EtherCAT Communication

① Power on after connecting the data acquisition card to the PC computer. Select the network card connected to the data acquisition card, click Connect, and it will scan for slave devices.



② Real-time Settings:

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: The rate of data acquisition and transmission. **This communication method supports a maximum sampling rate of 1000Hz.**

The gray box on the right calculates the dynamic sampling rate.

EUnit: default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: **This communication method does not require selection, and the number of channels = the number of slave stations * 6.**

PointsPerPacket: **Not required for this communication method.**

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

FM: **Not required for this communication method.**

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory

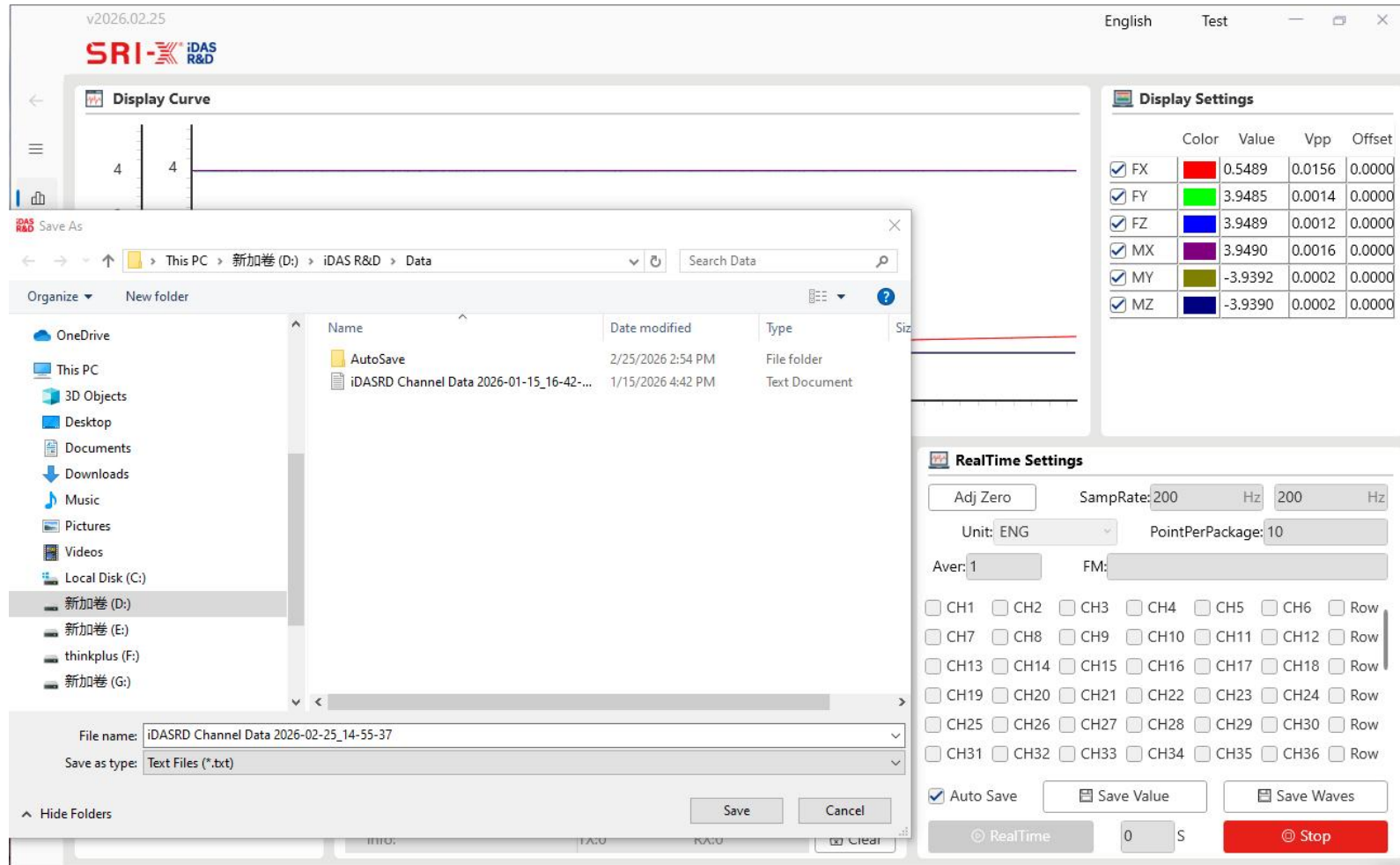


Save Value: Saves the channel value at the current moment in csv format

The screenshot displays the SRI iDAS R&D software interface. A 'Save As' dialog box is open, showing the file path 'This PC > 新加卷 (D:) > iDAS R&D > Data' and a file name 'SaveValue2026-02-25_14-55-19'. The 'Save as type' is set to 'CSV Files (*.csv)'. In the background, the 'Display Curve' window shows a graph with a value of 4. The 'Display Settings' panel on the right lists channels FX through MZ with their respective colors, values, Vpp, and Offset. The 'RealTime Settings' panel shows 'Adj Zero', 'SampRate: 200 Hz', 'Unit: ENG', 'PointPerPackage: 10', and a list of channels from CH1 to CH36. At the bottom, there are buttons for 'Auto Save', 'Save Value', 'Save Waves', 'RealTime', and 'Stop'.

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> FX	Red	0.3660	0.0130	0.0000
<input checked="" type="checkbox"/> FY	Green	3.9477	0.0012	0.0000
<input checked="" type="checkbox"/> FZ	Blue	3.9475	0.0014	0.0000
<input checked="" type="checkbox"/> MX	Purple	3.9476	0.0018	0.0000
<input checked="" type="checkbox"/> MY	Olive	-3.9392	0.0001	0.0000
<input checked="" type="checkbox"/> MZ	Dark Blue	-3.9393	0.0002	0.0000

Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

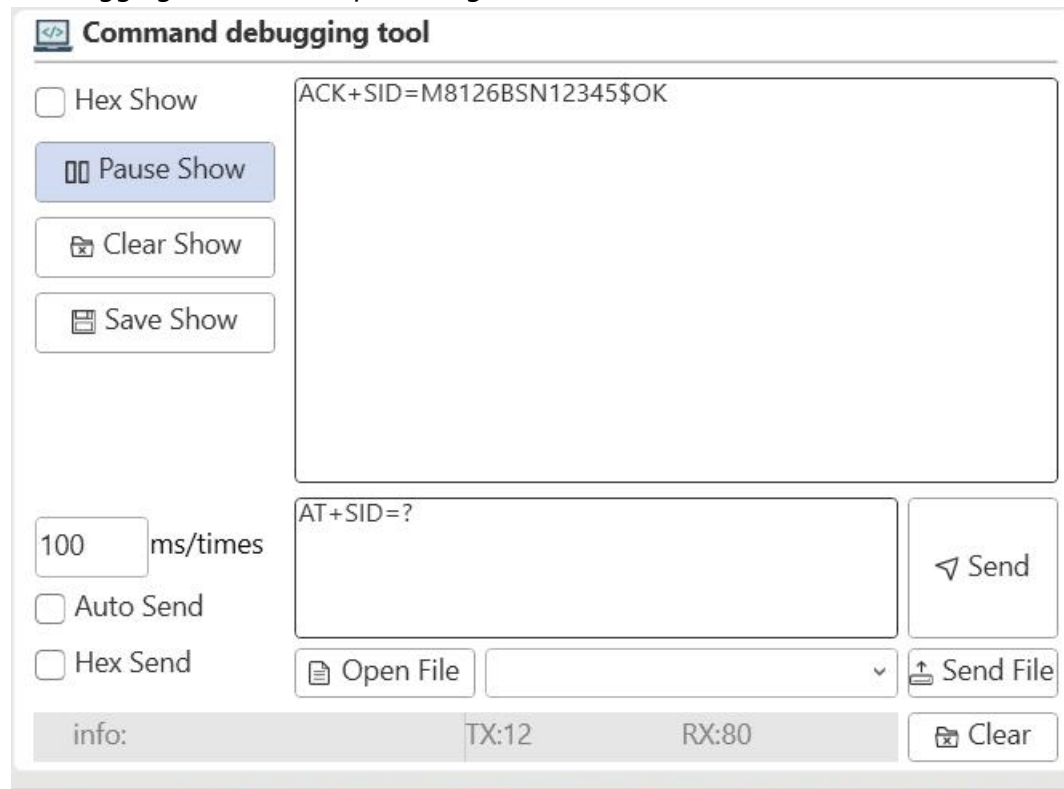
Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled

③ Input the sampRate and click "Realtime".

The screenshot displays the SRI iDAS R&D software interface. The main window is titled "v2026.05.25" and "English Test". The central "Display Curve" panel shows a multi-channel waveform with a time scale of 00:00:06.285. The y-axis ranges from -15 to 15. The "Display Settings" panel on the right lists 10 channels (CH1-CH10) with their respective colors, values, Vpp, and offsets. The "Connection Configuration" panel shows the communication method set to "Ethercat" and the network card as "Realtek USB...". The "Command debugging tool" panel shows the command "ACK+SMPR=200\$OK" and a "Send" button. The "RealTime Settings" panel shows the sampling rate set to 200 Hz and the "RealTime" button highlighted.

Color	Value	Vpp	Offset
CH1	-10.2316	0.4452	0.0000
CH2	-7.0824	0.4179	0.0000
CH3	10.1979	6.8109	0.0000
CH4	0.6774	0.0355	0.0000
CH5	0.6183	0.0337	0.0000
CH6	-0.0669	0.0497	0.0000
CH7	-12.8931	0.4668	0.0000
CH8	5.0503	0.5646	0.0000
CH9	0.8010	5.1918	0.0000
CH10	0.1150	0.0181	0.0000

- ④ Commands can be sent for debugging before data upload begins.



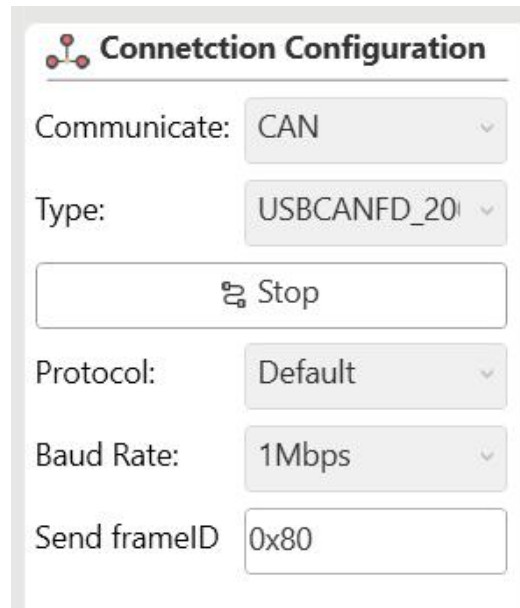
3.5 CAN/CANFD Communication

This software only supports connection testing with ZLG (Zhou Ligong)' s **USBCANFD_200U** and **USBCAN_2E_U** devices.

There are two protocols: Default and M8232B3. Please select according to the model of the acquisition card.

3.5.1 Default Protocol

① Connect the data acquisition card and PC computer, select CAN for communication, choose the CAN device, select Default Protocol, with the baud rate defaulting to 1 Mbps, and enter the Send Frame ID (if unknown, send AT+CFIDL=? via Serial Communication first to query, the default is NULL (empty), 0x80 can be used), then click Connect.



Connetction Configuration

Communicate: CAN

Type: USBCANFD_200U

Stop

Protocol: Default

Baud Rate: 1Mbps

Send frameID: 0x80

② Real-time Settings:

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: the rate of data acquisition and transmission; the dynamic sampling rate is calculated in the gray box on the right.

Unit: default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: when the engineering unit is set to **ENG**, CH1–CH6 correspond to the six-axis force sensor’ s FX, FY, FZ, MX, MY, and MZ.

Points per Packet: Number of points per channel in each data packet

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

FM: Data acquisition card parameter, refer to the manual of the data acquisition card used

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory



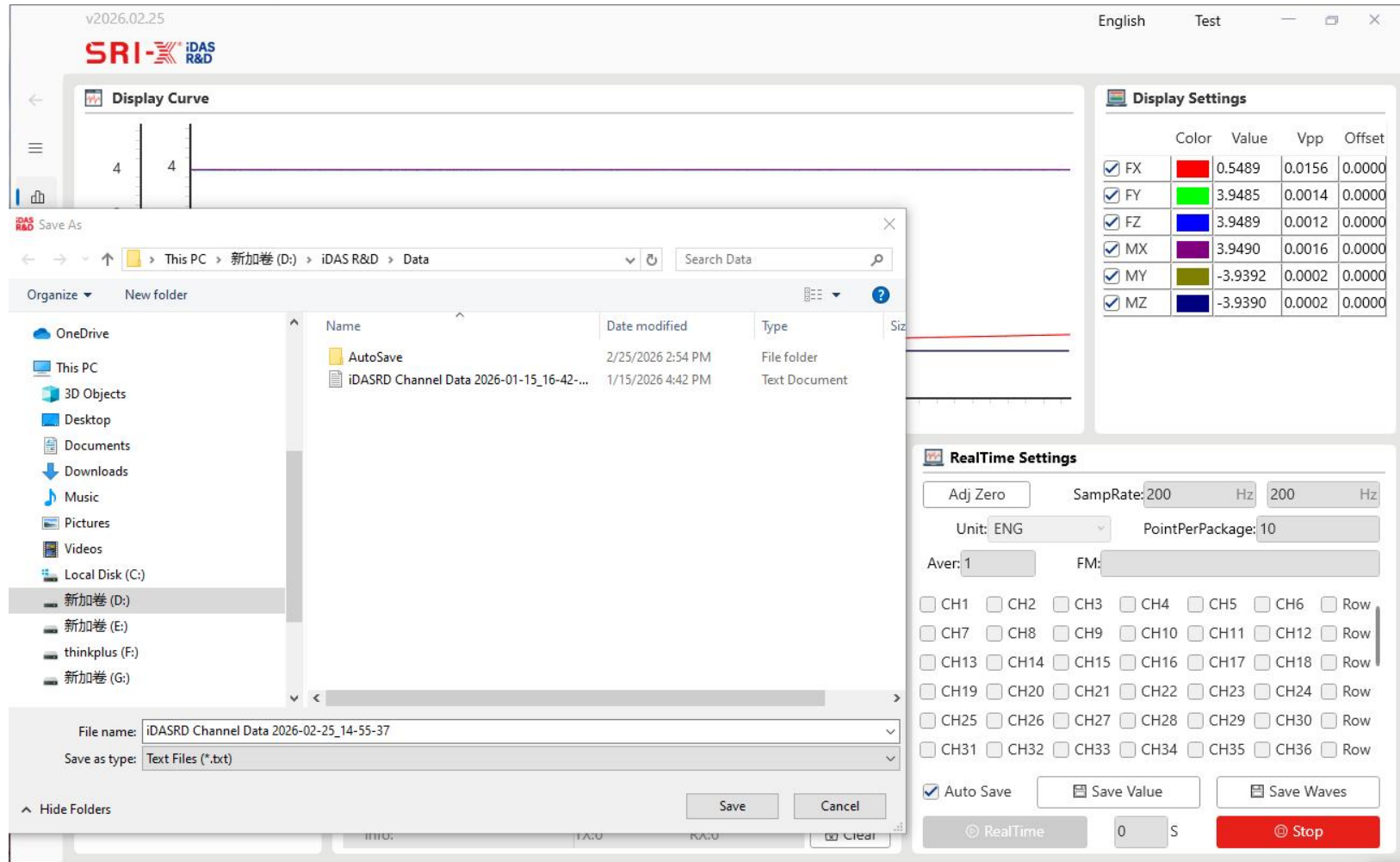
Save Value: Saves the channel value at the current moment in csv format

The screenshot displays the SRI iDAS R&D software interface. A 'Save As' dialog box is open, showing the file path 'This PC > 新加卷 (D:) > iDAS R&D > Data' and a file name 'SaveValue2026-02-25_14-48-10'. The 'Save as type' is set to 'CSV Files (*.csv)'. The background interface includes a 'Display Curve' window with a graph showing a value of 50. The 'Display Settings' panel shows a table of channel configurations:

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> CH1	Red	-278.4965	0.0009	0.0000
<input checked="" type="checkbox"/> CH2	Green	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH3	Blue	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH4	Purple	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH5	Olive	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH6	Dark Blue	0.0000	0.0000	0.0000

The 'RealTime Settings' panel shows 'SampRate: 200 Hz', '4 Hz', 'Unit: ENG', 'PointPerPackage: 10', 'Aver: 50', and 'FM:'. It also includes checkboxes for channels CH1 through CH36 and 'Row', and buttons for 'Auto Save', 'Save Value', and 'Save Waves'. At the bottom, there are 'RealTime' and 'Stop' buttons.

Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled

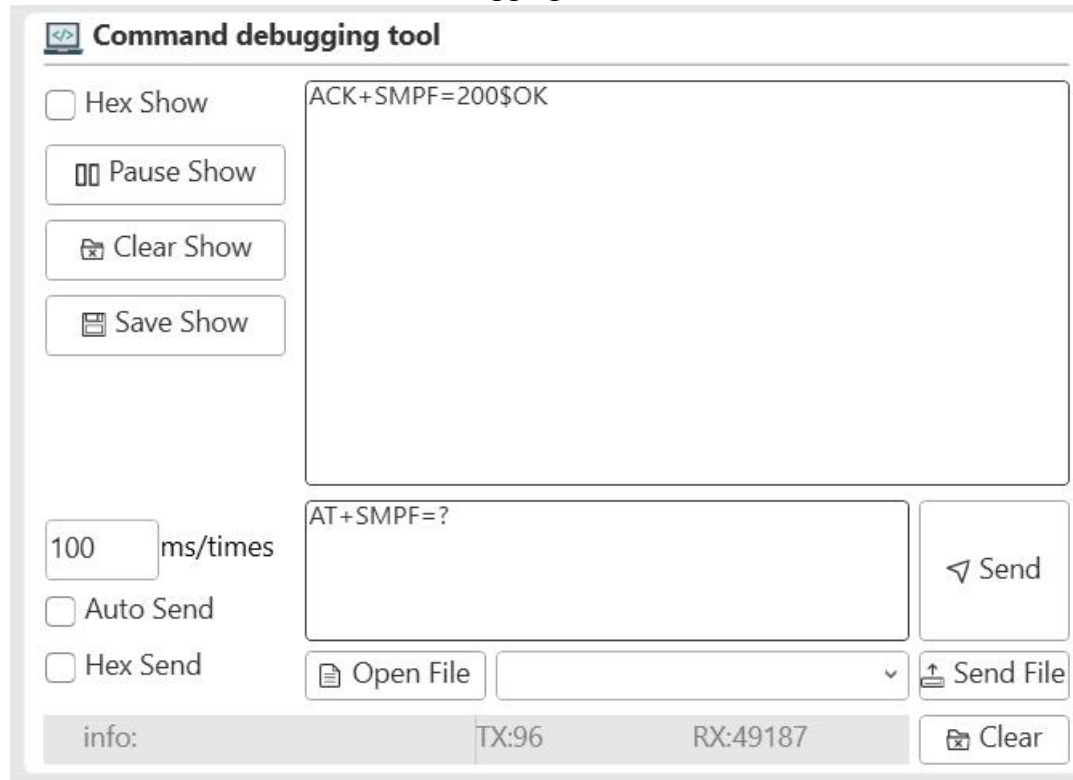
③ Select the data channel and click Real-time

The screenshot shows the SRI software interface with the following components:

- Display Curve:** A graph showing two data channels. The y-axis is labeled 'ENG' and ranges from -100 to 20. The x-axis shows time from 00:00:00.000 to 00:00:03.927. A blue line is at 0 and a red line is at approximately -95.
- Display Settings:** A table with columns: Color, Value, Vpp, Offset.

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/> CH1	Red	-95.3421	1.0491	0.0000
<input checked="" type="checkbox"/> CH2	Green	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH3	Blue	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH4	Purple	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH5	Olive	0.0000	0.0000	0.0000
<input checked="" type="checkbox"/> CH6	Dark Blue	0.0000	0.0000	0.0000
- Connection Configuration:**
 - Communicate: CAN
 - Type: USBCANFD_20
 - Stop: [Button]
 - Protocol: Default
 - Baud Rate: 1Mbps
 - Send frameID: 0x80
- Command debugging tool:**
 - Hex Show:
 - Pause Show: [Button]
 - Clear Show: [Button]
 - Save Show: [Button]
 - 100 ms/times
 - Auto Send:
 - Hex Send:
 - Open File: [Button]
 - Send File: [Button]
 - info: TX:70 RX:23482
 - Clear: [Button]
- RealTime Settings:**
 - Adj Zero: [Button]
 - SampRate: 200 Hz
 - Unit: ENG
 - PointPerPackage: 10
 - Aver: 1
 - FM: [Field]
 - Channels: CH1-CH36 (CH1-CH6 checked)
 - Auto Save:
 - Save Value: [Button]
 - Save Waves: [Button]
 - RealTime: [Button]
 - 0 S
 - Stop: [Red Button]

- ④ Before starting data upload, commands can be sent for debugging.





3.5.2 M8232B3 Protocol

① Connect the data acquisition card and PC computer, select CAN for communication, choose the CAN device, select Default Protocol, with the baud rate defaulting to 1 Mbps, and enter the data acquisition card Send Frame ID (if unknown, send AT+CFIDL=? via Serial Communication first Query, default is NULL (empty), can use 0x80. Enter the data acquisition card (if unknown, first send AT+CTXIDL=? via Serial Communication). Query, default receive frame IDs are 0x291, 0x292, 0x293. Click Connect.

Connection Configuration

Communicate: CAN

Type: USBCANFD_20

Stop

Protocol: M8232B3

Baud Rate: 1Mbps

Send frameID: 0x80

FxFy frameID: 0x291

FzMx frameID: 0x292

MyMz frameID: 0x293

② Real-time Settings:

Adj Zero: record the current data as offset; displayed value = raw value – offset.

SamplingRate: The rate of data acquisition and transmission. **This communication method supports a maximum sampling rate of 1000Hz.**

The gray box on the right calculates the dynamic sampling rate.

Unit: default **ENG** ; the uploaded channel data units will be N and Nm.

Channel: **Not required for this communication method.**

PointsPerPacket: **Not required for this communication method.**

Aver: Default is 1. When greater than 1, averages the N input data points for display and saving

FM: **Not required for this communication method.**

Auto-save: When checked, clicking Real-time will automatically save data to the Data\AutoSave folder in the installation directory

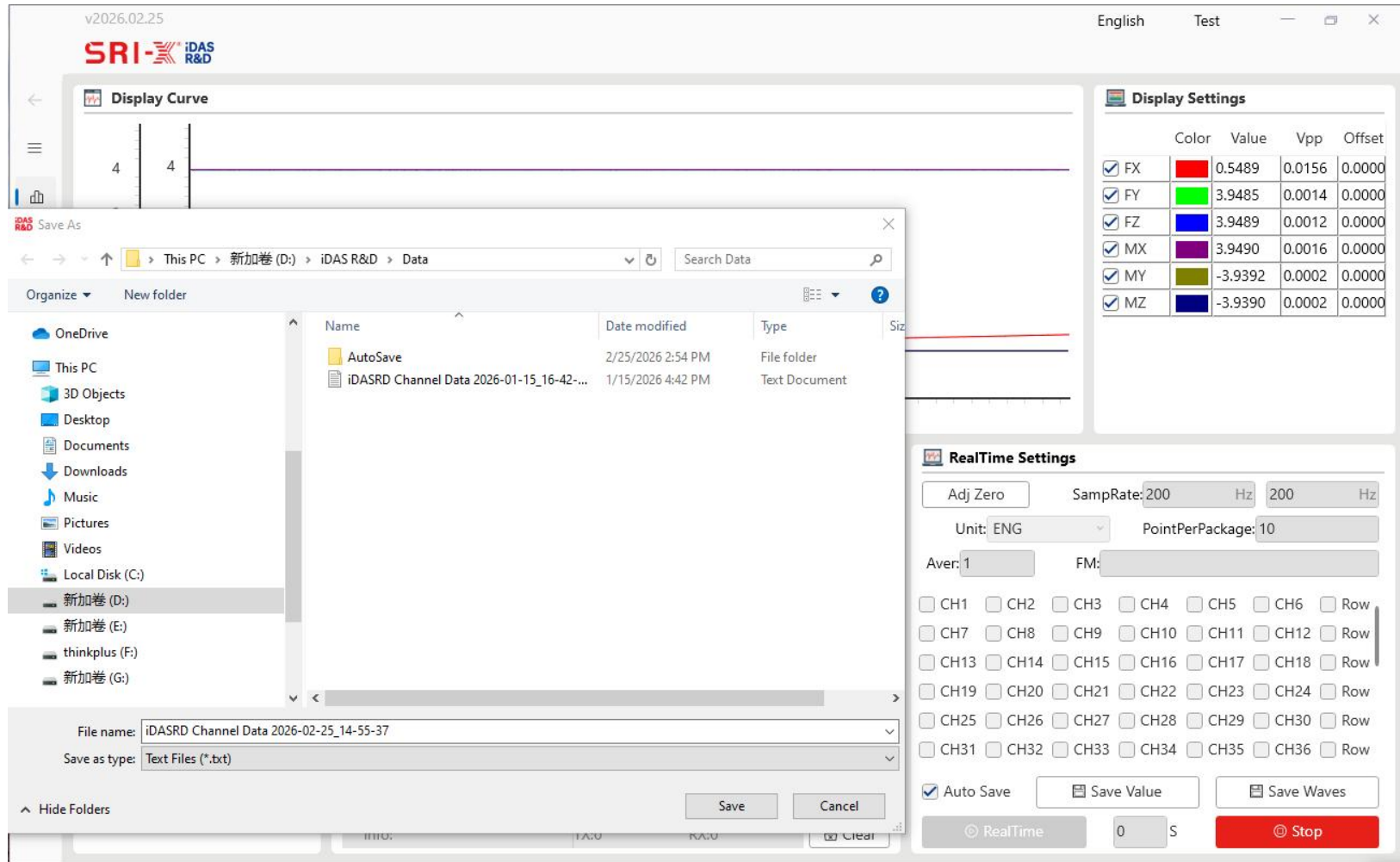


Save Value: Saves the channel value at the current moment in csv format

The screenshot displays the SRI software interface with the following components:

- Display Curve:** A graph showing a flat line at a value of 4. The x-axis is labeled with '4' and '4'.
- Display Settings:** A table with columns for Color, Value, Vpp, and Offset. It lists channels FX through MZ with their respective values and offsets.
- RealTime Settings:** A panel with various controls including 'Adj Zero', 'SampRate: 200 Hz', 'Unit: ENG', 'PointPerPackage: 10', and a list of channels (CH1-CH36) with checkboxes. It also features 'Auto Save', 'Save Value', and 'Save Waves' buttons.
- Save As Dialog:** A file explorer window showing the path 'This PC > 新加卷 (D:) > iDAS R&D > Data'. It lists a folder named 'AutoSave' with a date of '2/25/2026 2:54 PM'. The 'File name' field contains 'SaveValue2026-02-25_14-55-19' and the 'Save as type' is 'CSV Files (*.csv)'.

Save Waves: Saves the currently received data curve



Real-time: Start uploading data

Stop: Stop uploading data

Timing: Enter the time in seconds to the right of Real-time. Uploading will automatically stop when the time is reached. Default is 0, disabled

③ Select the data channel and click Real-time.

The screenshot shows the SRI iDAS R&D software interface. The main window displays a 'Display Curve' with a red signal fluctuating around a value of 10. The x-axis represents time from 00:00:00.420 to 00:00:03.359. The y-axis is labeled 'Nm' and ranges from 0 to 10. To the right of the curve is a 'Display Settings' table:

	Color	Value	Vpp	Offset
<input checked="" type="checkbox"/>	FX	9.5845	0.5520	0.0000
<input checked="" type="checkbox"/>	FY	0.0978	0.5469	0.0000
<input checked="" type="checkbox"/>	FZ	-33.1563	0.6805	0.0000
<input checked="" type="checkbox"/>	MX	-0.2359	0.0145	0.0000
<input checked="" type="checkbox"/>	MY	0.1061	0.0121	0.0000
<input checked="" type="checkbox"/>	MZ	1.0699	0.0134	0.0000

Below the curve are three configuration panels:

- Connection Configuration:** Communicate: CAN, Type: USBCANFD_20, Protocol: M8232B3, Baud Rate: 1Mbps, Send frameID: 0x80, FxFy frameID: 0x291, FzMx frameID: 0x292, MyMz frameID: 0x293.
- Command debugging tool:** Includes options for Hex Show, Pause Show, Clear Show, Save Show, and a Send button. The status bar shows TX:0 and RX:0.
- RealTime Settings:** Includes buttons for Adj Zero, SampRate: 200 Hz, Unit: ENG, PointPerPackage: 10, Aver: 1, and FM. A list of channels (CH1-CH36) is shown with checkboxes. At the bottom, there are buttons for RealTime, 0 S, and Stop.

Note: The M8232B3 protocol does not support command debugging!

3.6 Data processing

The saved curves and automatically saved TXT files can be loaded and displayed in the View interface.



4. Others

The software interface also has other buttons. As a debugging tool, iDAS R&D has many buttons and functions that are reserved or yet to be developed. Do not operate any buttons not described in this manual.