SLICE PRO CAN FD User's Manual

December 2025

Contents

DTS Support

The SLICE PRO CAN FD is designed to be reliable and simple to operate. If you need assistance, DTS has support engineers worldwide with extensive product knowledge and test experience ready to help. Registered users can access the DTS Help Center web portal at support.dtsweb.com.

Registration also gives you access to additional self-help resources and non-public support information. To register, go to https://support.dtsweb.com/s/login/SelfRegister.

Introduction

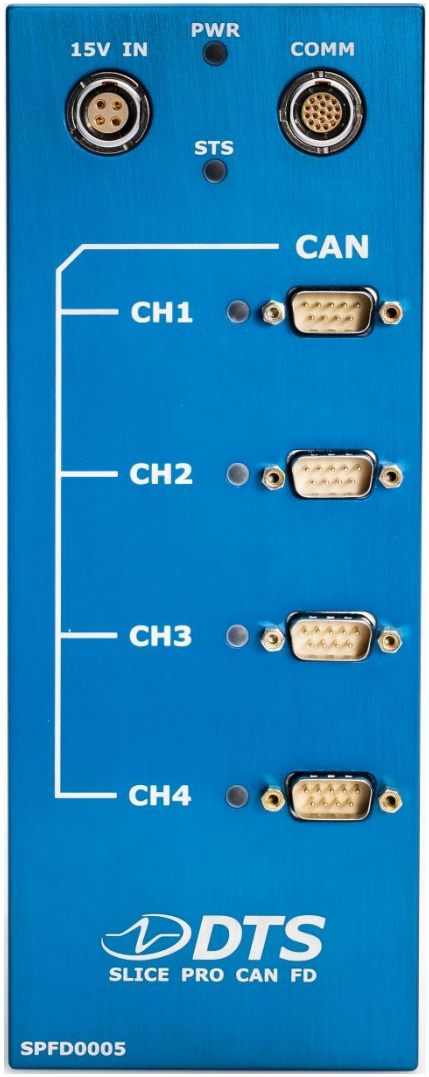
This manual supports the SLICE PRO CAN FD, part number 13000-31690.

The SLICE PRO CAN FD system is used to capture, timestamp, and log high-speed CAN FD data in rugged test environments. Four CAN FD channels adhering to the CiA 303-1 standardization support up to 8 Mbps and 20,000 msg/s/channel and use 30 GB flash for data storage.

Ethernet communications, status and event signals are supported via the COMM connector. External input power is supported via the 15V IN connector. An internal battery with a 6 hour capacity can be used for primary[1] or back-up power. Power, status and individual CAN LED indicators provide ongoing status information.

The SLICE PRO CAN FD may be used standalone or integrated as an end-of-chain device with a SLICE PRO Distributor and cables that use the standard 19-pin COM(M) connector. See Appendix A for connector information and pin assignments. Mechanical/mounting specifications are included in Appendix B.

The SLICE PRO CAN FD uses a web-based interface for configuration, operation and diagnostics. The user performs data processing after data download.



[1] External power is required to power up the unit. See pages 6 and 8 for more information.

Using the SLICE PRO CAN FD

15V IN Power Connector

This connector is used to provide primary operational power and charge the internal battery. Each unit should be powered from a high-quality 15 V power supply with a current rating of at least 2 A. Be sure to consider any power drop due to cable length. See Appendix A for pin assignments.

- To ensure the internal batteries are fully charged, the minimum input voltage received by the SLICE PRO CAN FD at its power input connector must be 9 VDC.
- DTS always recommends using an external power source during set-up and check-out. This will ensure that the internal battery is always fully charged.

Input Voltage	Maximum Power Consumption*
9-15 VDC 15 VDC nominal	14 W

* ON + charging internal battery + sending 4 channels of 20,000 mgs/s/channel CAN data. (The battery only charges when the unit is on.)

Power-up and Power-down Procedures

To power up the unit:

1. Connect a high-quality 15 V power supply with a current rating of at least 2 A from the power source to the 15V IN connector. (External power is required to power up the unit. It will not power up on battery power alone.)
2. The power-up LED sequence requires <15 s after which communication is enabled.
3. Battery power is enabled after ~2 minutes. (See page 8 for additional details.)

To power down the unit:

1. Remove input power by unplugging the power connector[2].
2. From the *Device Config* screen on the SLICE PRO CAN FD web-based interface, click the power button on the right side of the screen. The button will go from green to grey. (Unit must be in a disarmed state.)
3. Messages at the top of the page will show services are inactive. This is expected.

   - Service ServiceLogger is inactive!
   - Service SliceDiscovery is inactive!

4. The SLICE PRO CAN FD will complete a power-down LED sequence after which all LEDs turn off.

PWR LED Indicator

The PWR LED provides ongoing power and battery status. The power-up LED sequence requires <15 s after which communication is enabled.

Battery Charge Status	PWR	
	ON	
	Charging	Discharging
>90%		
50% - <90%		
20% - <50%		
<20% or FAULT		

[2] When connected to a SLICE PRO Distributor, you can also turn off the output power on the SLICE PRO Distributor via the SLICE PRO Distributor web page.

Caution	
	Do not perform any critical tests unless the PWR LED indicator is green.

Internal Battery

The SLICE PRO CAN FD contains a lithium-ion battery that operates as primary or back-up power. When fully charged, battery capacity is sufficient to provide primary power and sustain full operation for a minimum of 6 hours. The battery charges whenever sufficient external power is connected to the 15V IN connector and the unit is on. The PWR LED indicates battery status. The maximum charge time is ~6 hours from complete discharge to full capacity.

External power is required to power up the unit. The unit will switch to battery power when:

- External power is absent or insufficient (overvoltage, undervoltage, or overcurrent),
- The Battery Enable field is reported as active (*Device Info* screen)[3], and
- Battery capacity is sufficient to provide primary power.

Should the internal battery become depleted, the unit will end data recording and save the file prior to system shutdown.

Charging practices can affect the useful operational life of the battery. In addition to good charging habits, conditioning the battery may be useful—3 deep-discharge/recharge cycles may help increase battery performance. The battery's useful capacity is greatly shortened near the end of its service life and should be replaced when it has decreased to 50% of its initial capacity. The battery is not user-serviceable and should be returned to the factory for battery replacement.

Warning	
	Due to battery chemistry, do not operate the SLICE PRO CAN FD at temperatures below 0°C (32°F) or in excess of 60°C (140°F).

[3] ~2 minute wait until switch over from external power to battery. This transition is visible in the *Device Info* software screen, Battery Enable field.

STS LED Indicator

The status LED indicates communication, activity and system status. The power-up LED sequence requires <15 s after which communication is enabled.

Condition	STS
Communicating with host; downloading data	
Recording data; waiting for event signal	
Event signal received –or– system fault (low power; recording time <30 min[4])	

COMM Connector

The COMM connector allows access to all communication features, network information, hardware status and signal lines. An event signal received by this connector can be used to mark T=0. Ethernet 10/100BaseT/Tx communications and status output are also supported. (Start record and status input are not supported.) See Appendix A for pin assignments.

This connector is compatible with all SLICE PRO and TDAS COM connectors. When used with other DTS equipment, the SLICE PRO CAN FD is an end-of-chain device.

[4] Real-time moving average calculation based on available data memory and CAN data.

CAN (DB9M) Channels (CH1-CH4)

Each CAN channel supports up to 20,000 mgs/s CAN FD data and adheres to the CiA 303-1 standardization. See Appendix A for pin assignments.

CAN CH1-CH4 LED Indicators

These LEDs indicate the status of a single channel. The power-up LED sequence requires <15 s after which communication is enabled. (The power-up LED sequence is different when powering up the unit in standby/ready mode or auto-arm mode. This may include multicolored LEDs.)

Condition		CAN CH1 CH2 CH3 CH4
Channel enabled; CAN communication enabled or present	Not armed	
	Armed	
Minor fault	Not armed	
	Armed	
Major fault (repeated/continuous error frames)		

Hardware Configuration Specifications

The SLICE PRO CAN FD is typically delivered with a default IP address as follows:

IP address	192.168.2.x where x is determined based on the last two digits of the S/N: x = 1-9 for S/Ns 01-09, respectively; x = 10-99 for S/Ns 10-99, respectively
Netmask	255.255.248.0

The *Device Config* screen of the web-based CAN interface displays the unit's network specifications. The calibration data for your equipment identifies the IP address as shipped from the factory. If the calibration data is not available, try using the default address described in the table above.

If you need information on the specifics of your equipment, please submit a request through the DTS Help Center web portal (support.dtsweb.com) and include the serial number(s) of the equipment and parameters you are asking about.

Software

The SLICE PRO CAN FD uses a web-based interface for configuration and diagnostics. The simple dashboard design includes 4 menu options (*Record*, *Download*, *Device Config* and *Device Info*) providing real-time system status, CAN channel configuration, data collection initiation/termination and data download. Data processing is performed by the user after data download.

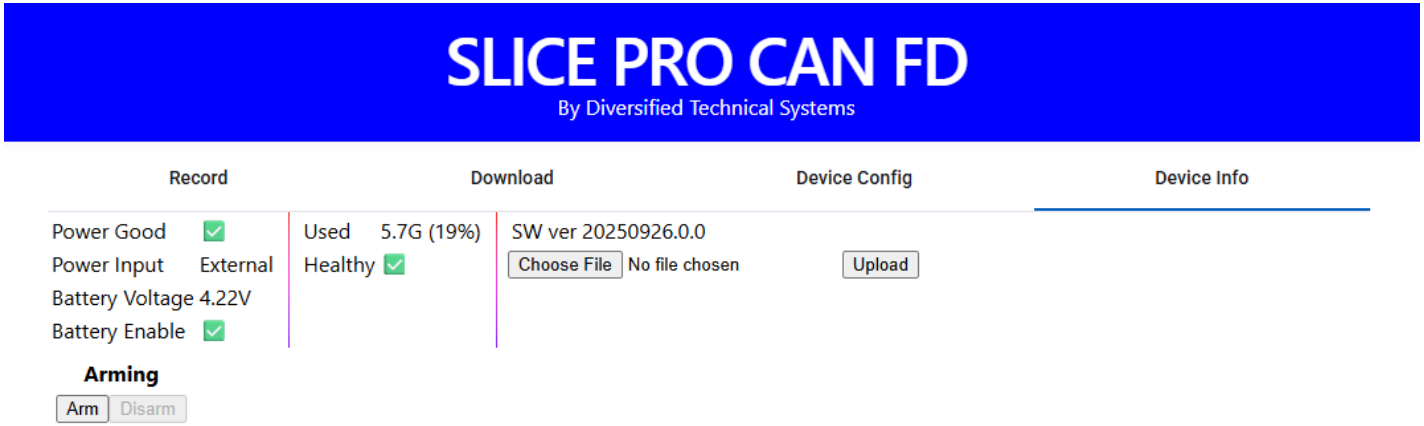
Data collection can be manually initiated or the unit can be programmed to begin data collection when the power-up sequence has completed (i.e., auto-arm). An event signal received by the COMM connector can be used to mark T=0. If data collection is not manually terminated, the system will collect data until data memory is filled, as long as sufficient power is available[5]. The 30 GB of data memory can be flexibly allocated to 1 or more channels. When recording time <30 min[6], a system fault will occur (the system will continue to record data until memory is full). Data must be manually deleted to free up the memory for reuse.

Web Interface

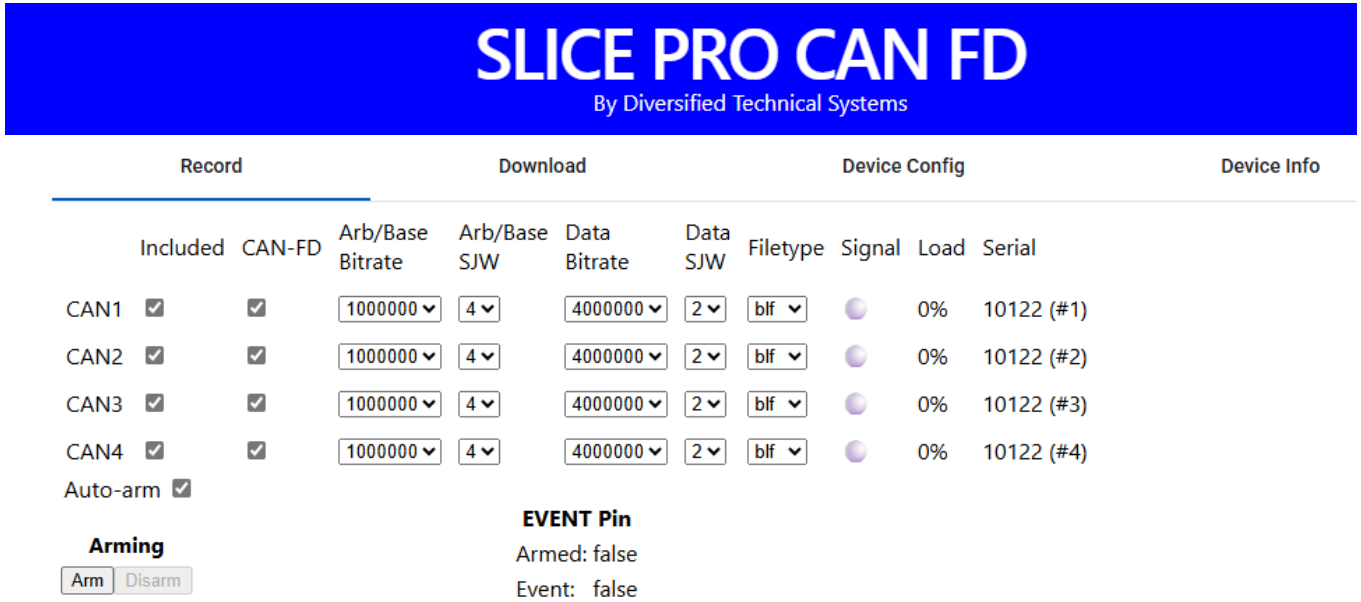
1. Connect the SLICE PRO CAN FD to the local network via Ethernet.
2. From a PC, open a web browser and navigate to "http://<device-ip>". It may take 1-2 minutes after device power up before it is found.

[5] Should the internal battery become depleted, the unit will end data recording and save the file prior to system shutdown.
[6] Real-time moving average calculation based on available data memory and CAN data.

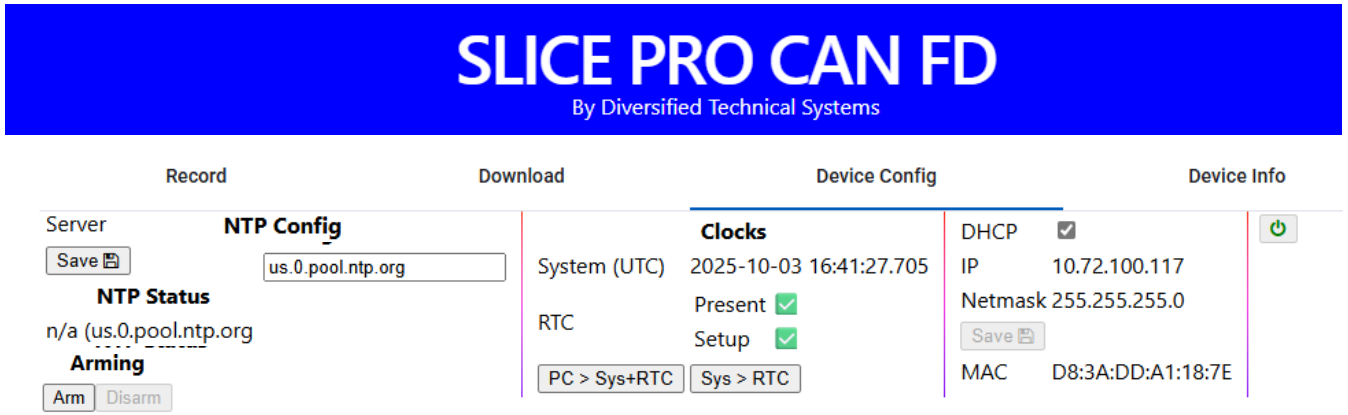
The initial screen (*Device Info*) provides general power and battery status, memory information and software version. The unit can be armed or disarmed from this screen.



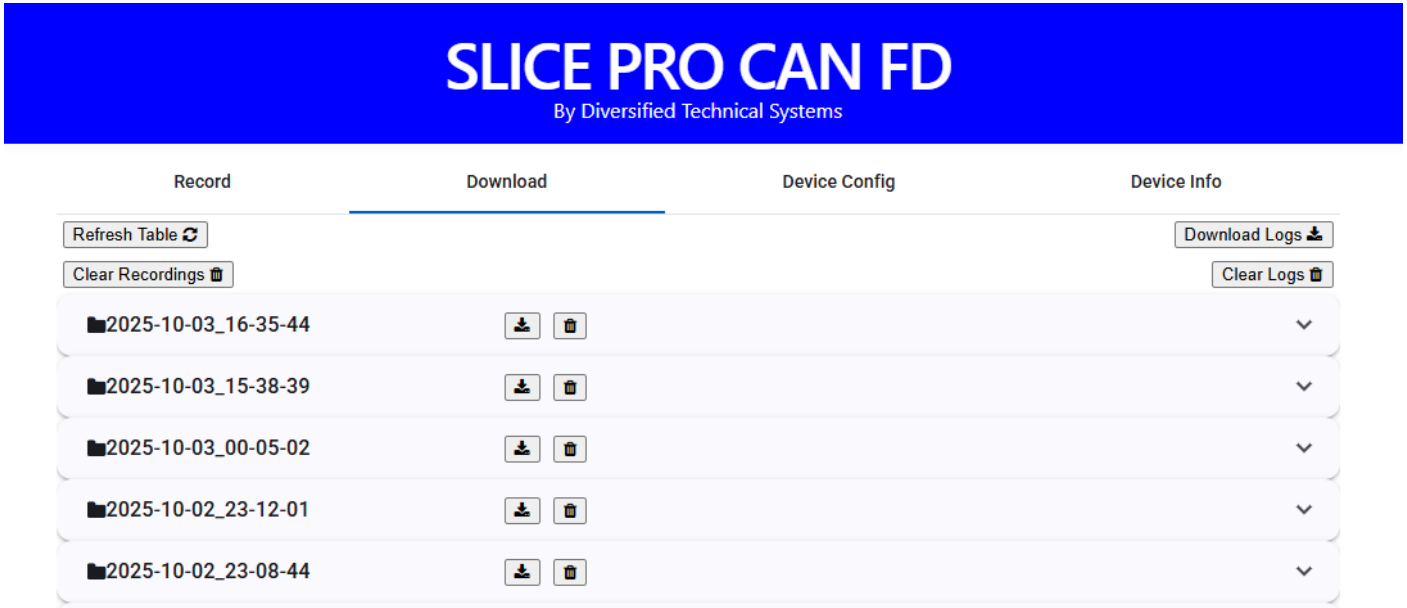
The *Record* screen provides individual CAN channel information and access to configurable parameters including CAN channel count and data bitrate. The unit can be armed or disarmed from this screen.



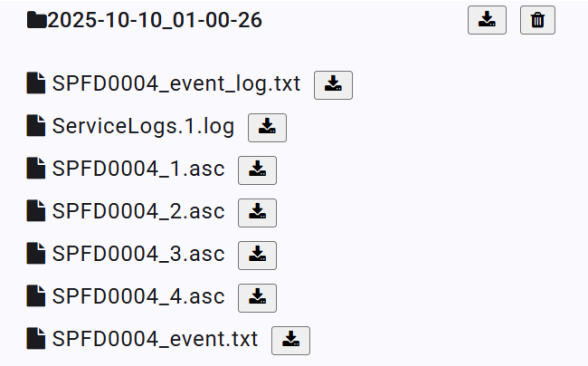
The *Device Config* screen provides system network and clock information. The unit can be armed or disarmed from this screen.



The *Download* screen lists the data recordings available for download or deletion.



Each data folder contains the entire data package for a recording session. The **_event_log.txt* file is a record of all events logged during the session. The *ServiceLogs.1* file is a system file used for debugging. The **_event.txt* file is a record of the last event logged during the session. The remaining files (**.asc*) are the CAN channel data. Only the channels programmed are recorded; e.g., 2 channels programmed = 2 CAN data files.



CAN data is logged using 24 hour local time. Events are logged using UTC time. The user identifies the event that corresponds to T=0 and uses this to create their own reference. Data processing is performed by the user after data download. Data must be manually deleted to free up the memory for reuse.

Known Issues

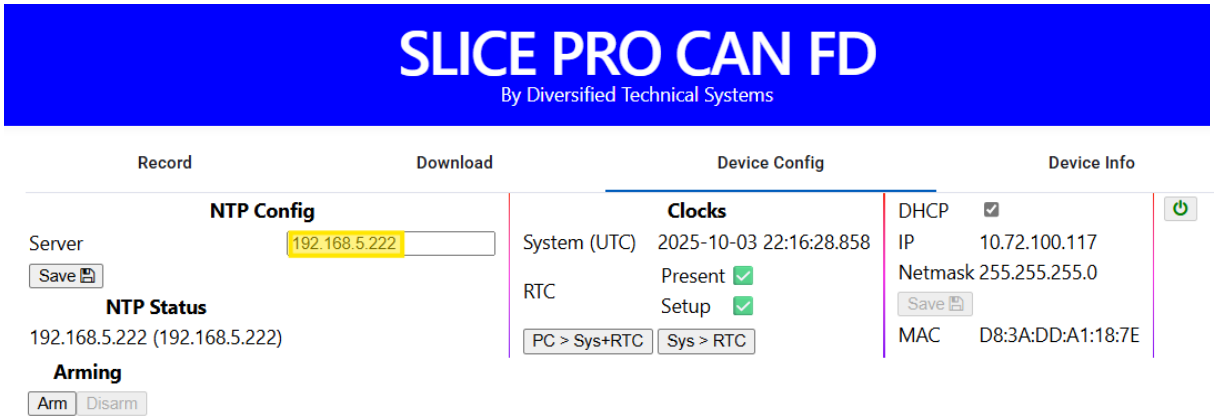
NTP Timestamping

Enabling the Network Time Protocol (NTP) service may shift the starting timestamp of CAN channels and the event pin. The delta timestamps of CAN frames are not affected; the device will continue to provide correct relative timing in the collected data. To correct this issue, disable the NTP service on the device.

Disabling NTP

1. Connect the SLICE PRO CAN FD to the local network via Ethernet.
2. From a PC, open a web browser and navigate to "http://<device-ip>".

3. Navigate to the *Device Config* screen and enter an incorrect (dummy) server address in the NTP settings (e.g., 192.168.5.222).

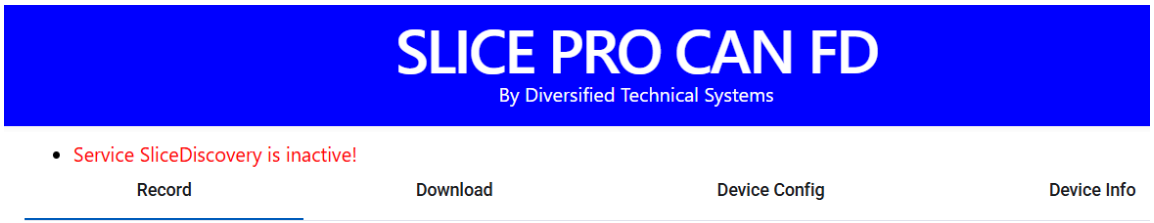


Event Trigger Logging Issue

On initial power-up, the SLICE PRO CAN FD does not log the first event trigger. Subsequent event triggers are logged without issue. The initial event signal is received by the system, but it is not written to either of the event TXT output files. To correct this issue, a validation event should be issued after each power-up cycle to ensure system readiness. This can be accomplished by asserting an event from a SLICE PRO Distributor (P/N 13000-31541) or using a Test Device Interface (TDI +) (P/N 10700-00332) during bench testing.

SliceDiscovery Service Message

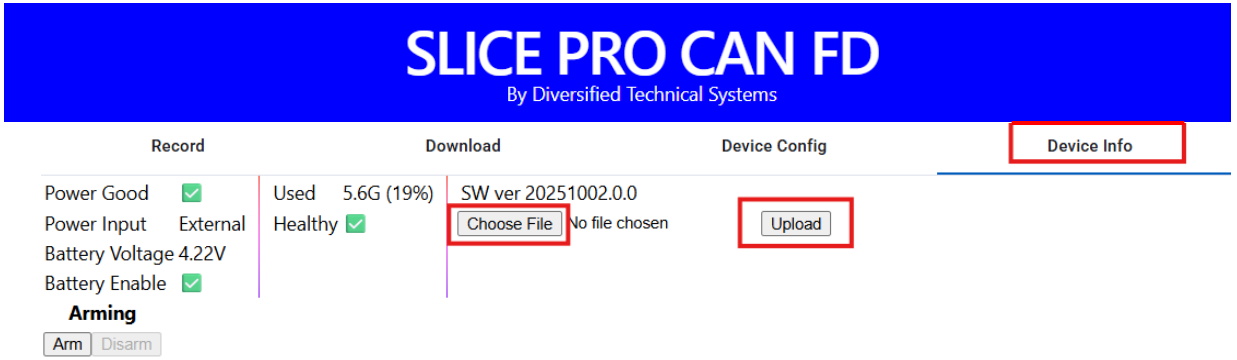
The text "Service SliceDiscovery is inactive" will appear in the *Record* screen of the SLICE PRO CAN FD software. This does not impact normal CAN logging operations and testing, but is meant as an indicator that the device is not currently supported with SLICE Discovery.



Updating Device Software over the Network

When an updated image is available, it can be applied through the SLICE PRO CAN FD web interface.

1. Connect SLICE PRO CAN FD to the local network via Ethernet.
2. From a PC, open a web browser and navigate to "http://<device-ip>".
3. Navigate to the *Device Info* screen, select "Choose File" and upload the file provided (e.g., Update20250921.zip).



4. The device will automatically flash the image and restart.
5. After reboot, confirm the software version under *Device Info*.

For additional assistance, contact DTS.

Care and Handling

The SLICE PRO CAN FD is designed to operate reliably in dynamic testing environments. While it is resistant to many environmental conditions, you should not subject the unit to harsh chemicals, submerge it in water, or drop it onto any hard surface.

Caution	
	Electronic equipment dropped from desk height onto a solid floor may experience up to 10,000 g. This is likely to cause damage to the exterior and/or interior of the unit.

The Lithium battery pack contained within the unit should not be allowed to fully discharge. If you plan to store the unit, fully charge the battery, and then place it in a location with ambient temperatures below 30°C, low relative humidity, and free from dust and direct sunlight. While in storage, the unit should be charged at least once every three months. Avoid storing the unit for longer than six months. The SLICE PRO CAN FD should be fully recharged before use after any time in storage.

The SLICE PRO CAN FD is non-spillable and safe for transportation by truck, rail, ocean, and air. When transporting the unit, treat it as you might a laptop computer. When not in use or if shipping is required, we suggest that you place the unit in the padded carrying case provided with your system.

Each SLICE PRO CAN FD is supplied with calibration data from the factory. DTS recommends annual recalibration to ensure that the unit is performing within factory specifications. The SLICE PRO CAN FD is not user-serviceable and should be returned to the factory for service or repair.

Safety

The SLICE PRO CAN FD contains a lithium battery. Under normal operating conditions, contact with the battery will never occur. However, lithium battery chemistry is volatile and users should be aware of first aid safety should contact

occur. Please take common-sense measures and observe safety precautions when exposed to a potentially harmful situation.

Shock Rating

The SLICE PRO CAN FD is rated for and fully tested to 100 g, 12 ms duration, in 5 axes.

Mounting Considerations

Securely bolt the unit to the test article or dynamic testing device to provide the best shock protection. Mounting methods and hardware selection should be calculated to withstand expected shock loading and allow proper grounding.

Check bolt tightness periodically to ensure the unit is securely fastened to the baseplate and the baseplate is securely fastened to the testing platform. See page 23 for mechanical specifications.

Environmental Considerations

The SLICE PRO CAN FD is a low-power device with negligible self-heating and it is unlikely that self-heating will be an issue in real-world testing.

Should you have any questions about using the device in your environment, please contact DTS.

Warning	
	Due to battery chemistry, do not operate the SLICE PRO CAN FD at temperatures below 0°C (32°F) or in excess of 60°C (140°F).

Grounding

DTS strongly recommends that the all equipment be properly grounded to minimize any data noise due to high-current transients. The test vehicle or dynamic testing device should be connected to earth ground. Test equipment should be grounded to each other and bolted to the test article. DTS recommends checking continuity between the enclosures of each unit to confirm resistance readings of <1 ohm.

If the installation does not permit bolting the SLICE PRO CAN FD and connected DAS to a common ground, DTS recommends connecting ground wires between the various enclosures.

Contact DTS if you have any questions regarding proper methods to ground the system.

Appendix A: Connector Pin Assignments

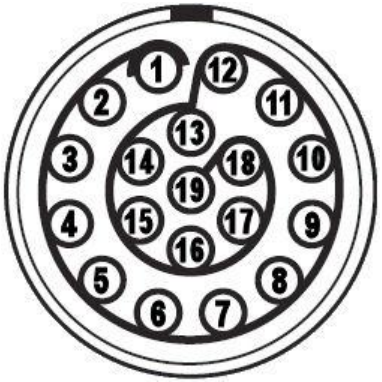
15V IN connector
(EEG.2B.304.CLL)

(panel view)

Suggested cable connector P/N:
FGG.2B.304.CLADxx*

Pin	Function
1	+VDC in
2	Ground
3	No connection
4	No connection

COMM connector
(EEG.2B.319.CLN)



(panel view)

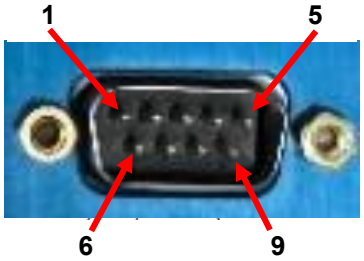
Suggested cable connector P/N:
FGG.2B.319.CLADxx*

Pin	Function
1	Reserved
2	Arm status output (5 V = on)
3	Ground
5	Ground
6	Status output, referenced to pin 5 (5 V = recording, 0 V = not recording or system fault)
8	Ethernet Tx (-) (10/100BaseT/Tx)
9	Ethernet Tx (+) (10/100BaseT/Tx)

Pin	Function
15	+Event in, isolated, CC to pin 19
16	Ground
17	Ethernet Rx (-) (10/100BaseT/Tx)
18	Ethernet Rx (+) (10/100BaseT/Tx)
19	-Event in, isolated, contact closure (CC) to pin 15
4, 7, 10-14	No connection

* xx denotes diameter of cable to be used; e.g., 52 = 5.2 mm. See www.lemo.com for more information.

CAN CH1-CH4 connectors
(DB9M)



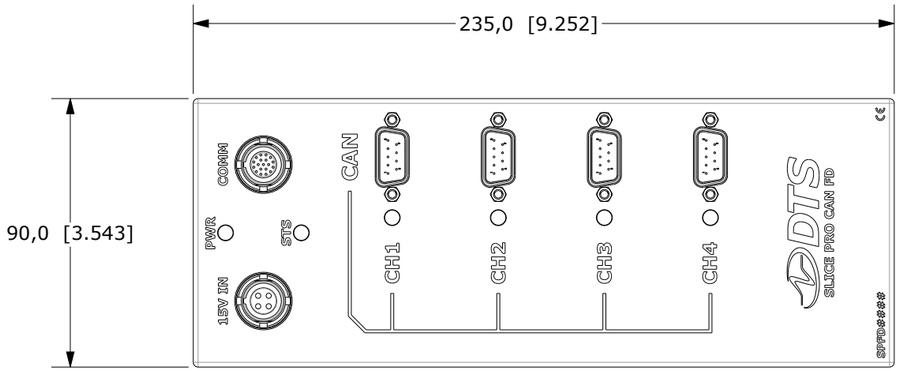
(panel view)

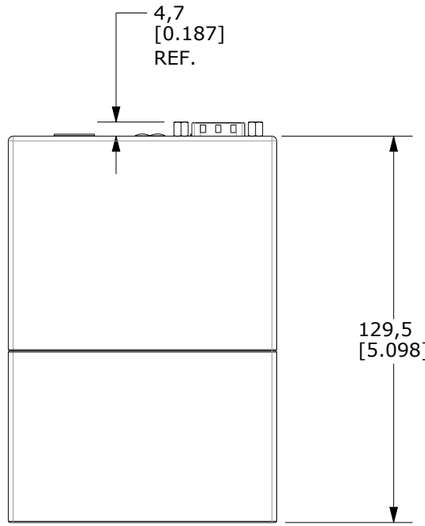
Suggested cable connector P/N:
80000-01025-R (DB9F, solder cup; NorComp 172-E09-203R001) +
80000-01005-R (plastic backshell; NorComp 977-009-010R031)

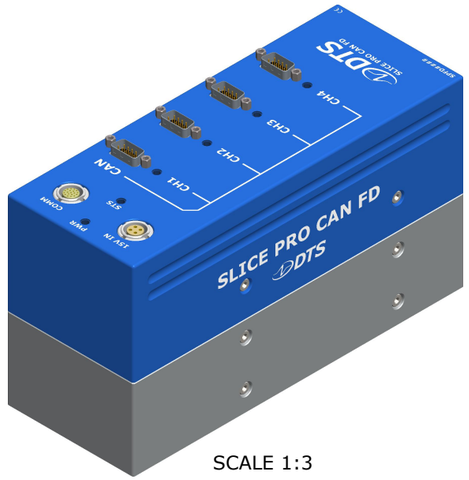
Pin	Function
1	No connection
2	CAN_L
3	Ground (isolated)
4	No connection
5	No connection
6	No connection
7	CAN_H
8	No connection
9	No connection

RoHS
Manufacture/fabricate to meet the EU RoHS Directive 2011/65/EU and RoHS Annex II phthalates

REV	ZONE	DESCRIPTION	DATE	BY
0		INITIAL RELEASE	2025-10-08	GD

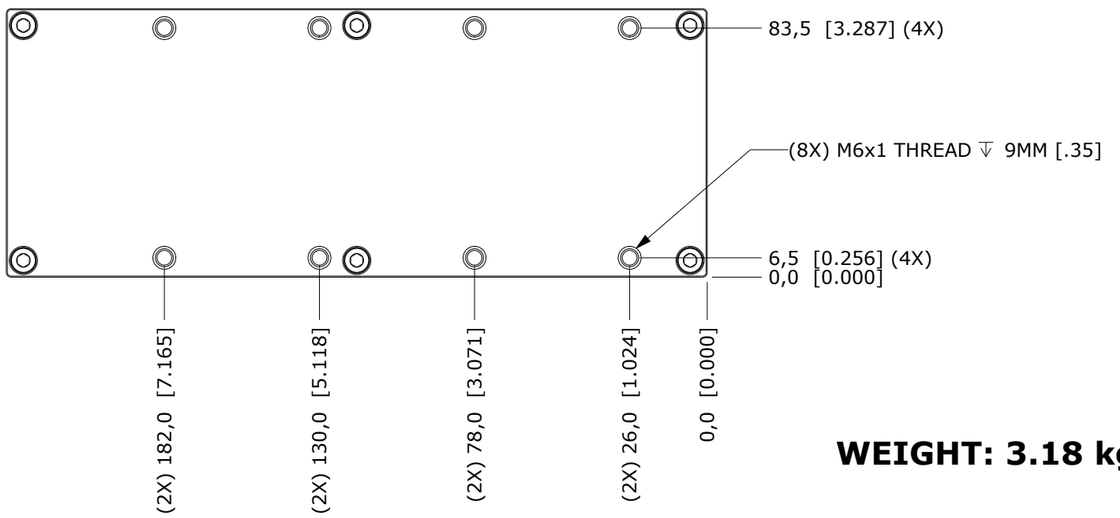






SCALE 1:3

SCALE 1:3



WEIGHT: 3.18 kg (7.02 LBS)

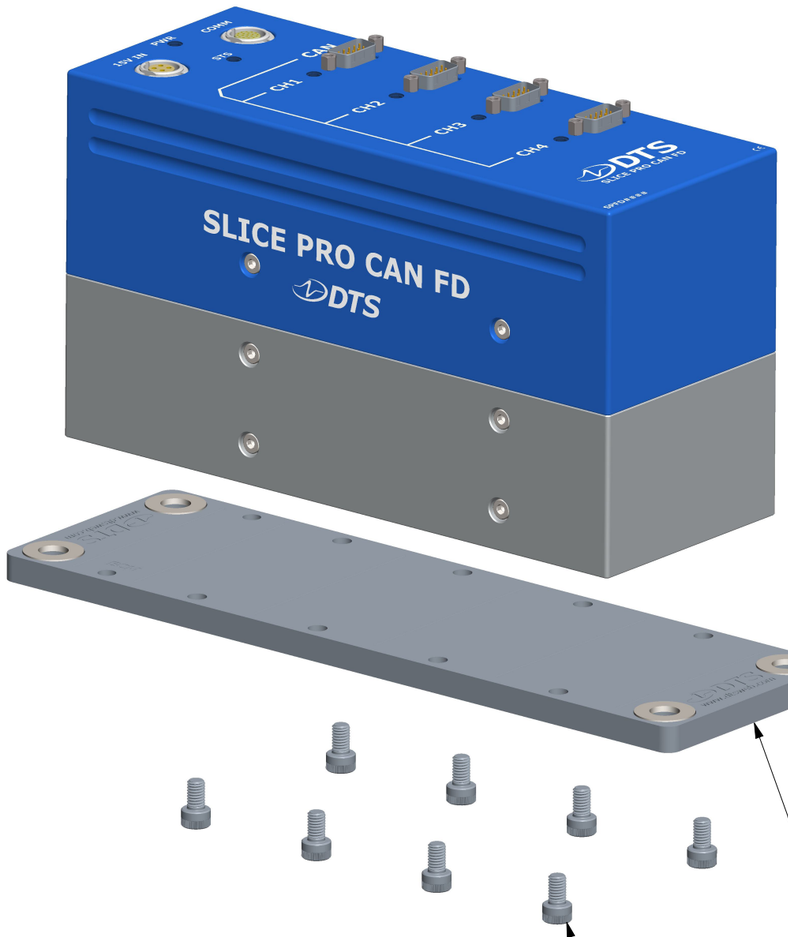
DTS SEAL BEACH, CA 90740
562-493-0158
www.dtsweb.com

MATERIAL: 6061-T6 ALUMINUM W/ BLUE ANODIZE

UNLESS OTHERWISE SPECIFIED:
UNITS = MM [INCH]
DIMENSIONAL TOLERANCES ±.254 [0.010"]
INTERPRET PER ASME Y14.5. DO NOT SCALE.

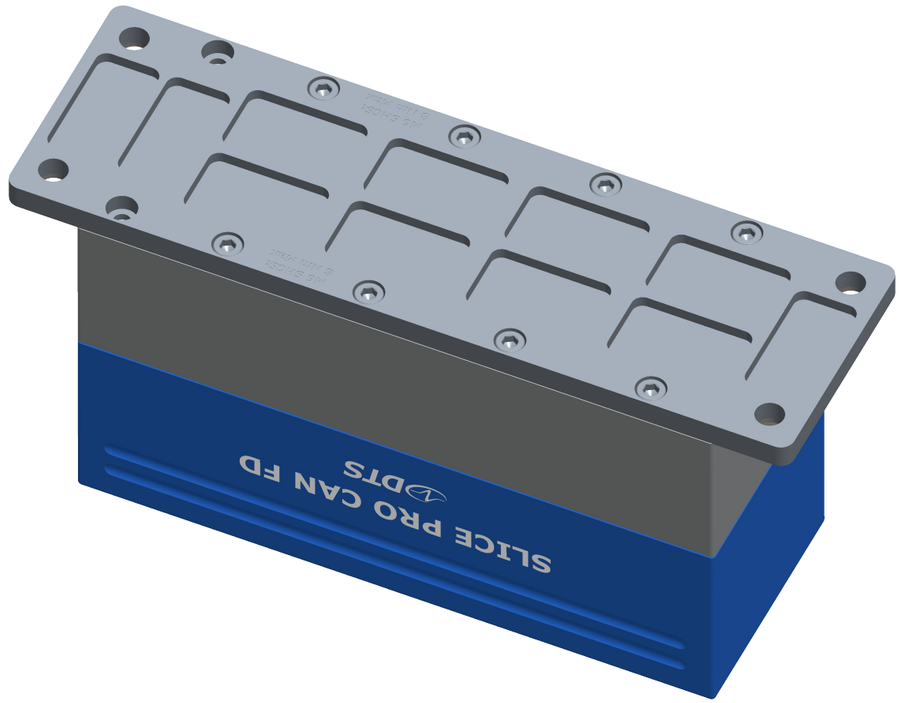
DESCRIPTION: SLICE PRO CAN FD, MOUNTING DRAWING
DTS P/N: 13000-31690
REV: 0
DRAWN: G DAVIDSON
DATE: 2025-04-02
SIZE: B
SCALE: 1:2
SHEET: 1 OF 2

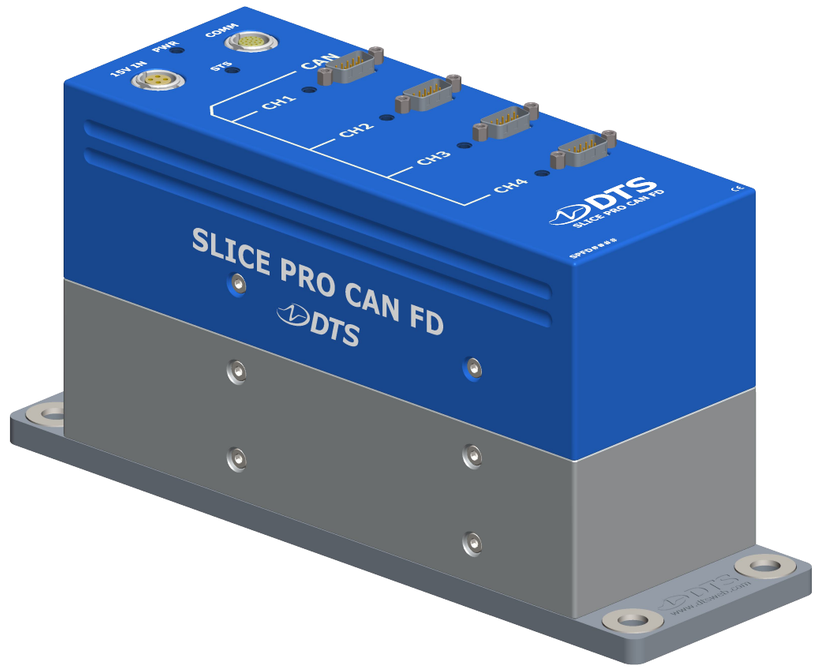
MDL: DTS_SLICE_PRO_CAN-FD_ALONE



MOUNT PLATE
DTS P/N 13000-40360

(8X) FASTEN TO MOUNT PLATE USING
M6 X 10 SHCS. TIGHTEN TO 53 IN-LB (6 N-M)





DESCRIPTION:	SLICE PRO CAN FD, MOUNTING DRAWING
DTS P/N:	13000-31690
REV:	0
DRAWN:	G DAVIDSON
DATE:	2025-04-02
SIZE:	B
SCALE:	1:2
SHEET:	2 OF 2

Accessories

DTS recommends that you use the equipment and cables we supply to ensure compatibility and performance. See below for a list of available cables or contact your DTS representative.

Description	DTS Cable Part Number
SLICE PRO Distributor	13000-31540
SLICE PRO Baseplate Kit for Ethernet Controller + 4 SIMs - includes baseplate and 10 screws (SHC, 18-8; M6 x 10 mm)	13000-40360
Cable, SYSTEM port to COM port + POWER port (CPY)	10600-0003x[7]
Cable, COM port daisy chain (RDC)	10700-0014x[7]
Cable, PC comm, Ethernet via COM port (REC)	10700-0015x[7]
DB9F connector; solder cup, 20-26 AWG (NorComp 172-E09-203R001)	80000-01025-R
DB9 backshell; plastic, gray, with screws (NorComp 977-009-010R031)	80000-01005-R

[7] x = multiple lengths available

Revision History

Rev	Date	By	Description
0	17 Dec 2025	E. Kippen	Initial release.