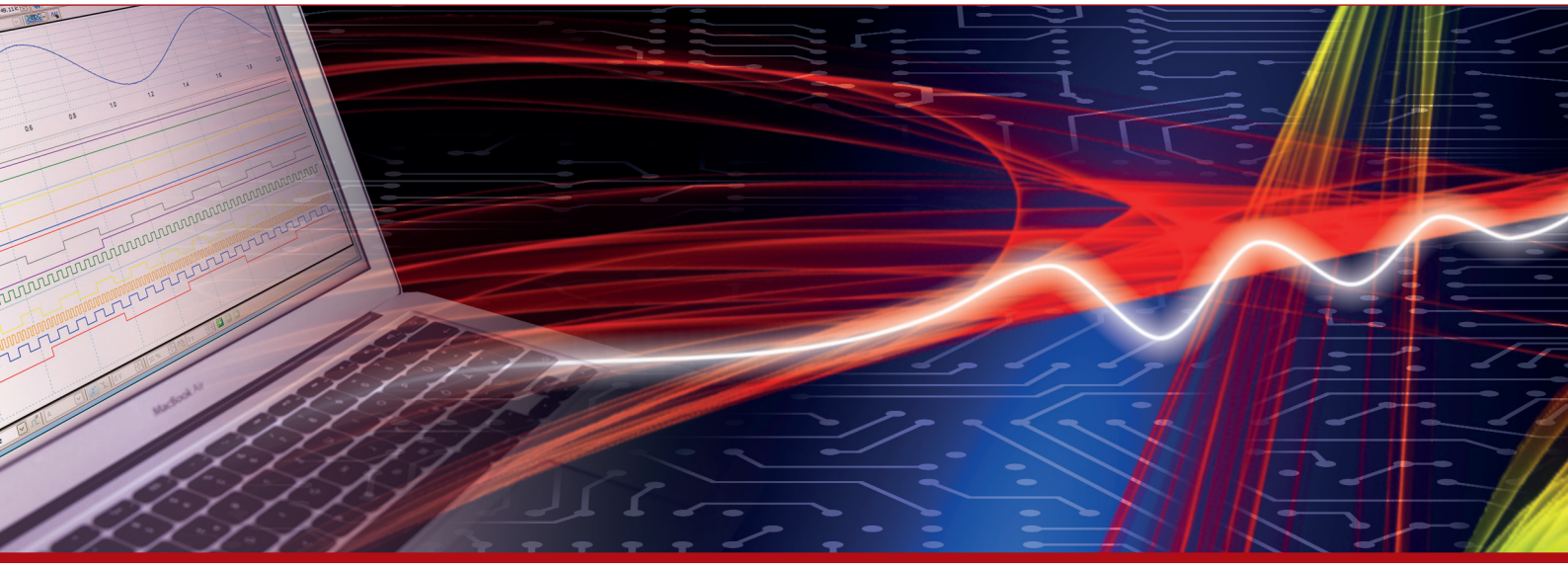
Product Datasheet - Technical Specifications



More information in our Web-Shop at ▸ **www.meilhaus.com** and in our download section.

Your contact

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Test&Measurement

YOKOGAWA

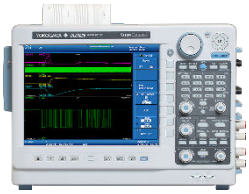
Plug-in input module for ScopeCorder series

CAN/CAN FD Monitor Module (720242)

Supports high-speed communication standard CAN FD data monitoring

SCOPECORDER

CAN/CAN FD
Monitor Module



DL850EV DL350 with /VE option

ScopeCorder main units

There is a common measurement challenge in automotive development to combine measurements of electrical signals, physical performance parameters indicated by sensors, together with in-vehicle communication data transmitted by the powertrain management system.

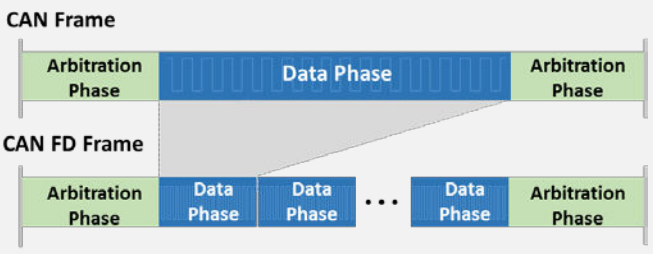
Due to growth in data traffic and urgent needs for network security, the CAN FD is considered as the next generation in-vehicle serial bus. This new module for ScopeCorder series enables extracting specified data from in-vehicle communication standard CAN and CAN FD serial signals, converting it into an analog value, and performing trend recording. This module is compatible with the next-generation high-speed communication CAN FD (CAN with Flexible Data-Rate) format as well as the conventional CAN standard.

Key Features

- It allows monitoring a network intermingled with CAN and CAN FD by automatically discriminating between these two formats.
- Compatible with ISO 11898-1:2015 and non-ISO standard for CAN FD protocols.
- Simultaneous monitoring of up to 120 signals (60 signals/port)
- Manual output of any CAN/CAN FD data or remote frame.
- In-vehicle network definition file is available by using free software

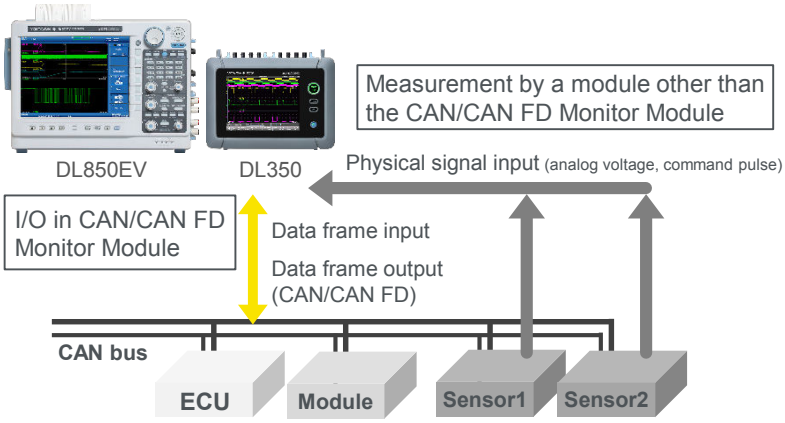
CAN FD (CAN with Flexible Data rate)

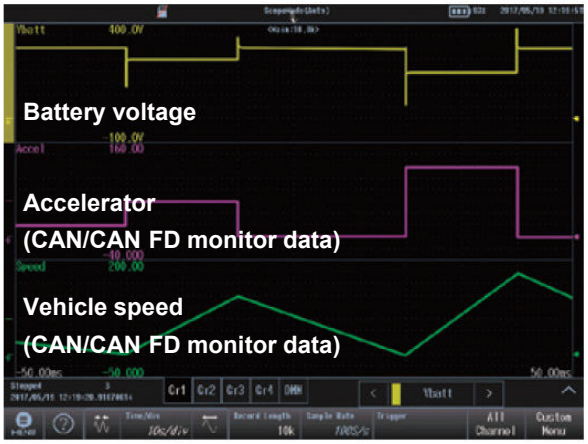
"CAN FD" is a communication protocol to transmit more data at a high speed extending the CAN protocol. CAN FD was created as one of in-vehicle networks faster than CAN, as it was expected that CAN communication speed would not be sufficient to realize further advancement of a car safety driving system, automated driving function, security measure, etc. The CAN FD is backward compatible with CAN.



Comparison and verification of a measured signal and CAN/CAN FD signal

It enables to decode the CAN FD signal and display information on physical data, like engine temperature, vehicle speed and brake-pedal position as analog waveforms and compare them with the data coming from real sensors. The result is a considerable time saving compared to other approaches such as analysis on PC or other software.
(The 720242 module supports all functions of the existing 720240 CAN Bus Monitor Module.)

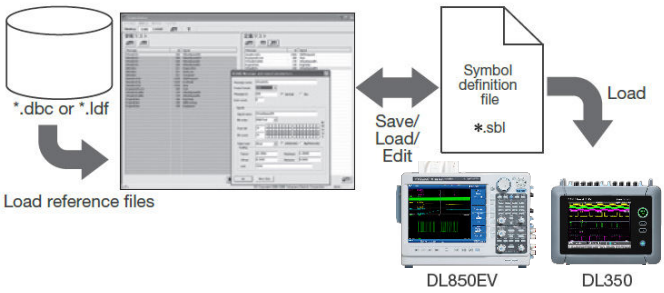




Screen Example

Using vehicle installed network definition file (CAN DBC)

Data to be monitored (acquired) can not only be specified in digital codes (hexadecimal or numeric), but can also be loaded from each network definition file (CAN DBC).



Using Yokogawa's free Windows PC software, "Symbol Editor", you can convert these definition files to our proprietary symbol definition file (.sbl format) and import that file to the main unit.

Model	Description
720242	CAN/CAN FD Monitor Module

Major Specifications	
Number of input ports	2
Number of sub channels	60 signals/port
Maximum sampling rate	100 kS/s (10 µs)
Input type	Isolated (across port and main unit, across each port)
Supported protocol	CAN, CAN FD (ISO 11898-1:2015 or non-ISO) Physical Layer: ISO 11898 (High Speed Communication)
Bit rate	10 k, 20 k, 33.3 k, 50 k, 62.5 k, 66.7 k, 83.3 k, 00 k, 125 k, 200 k, 250 k, 400 k, 500 k, 800 k,1 Mbps
Flexible bit rate for CAN FD	1 M, 2 M, 3 M, 4 M and 5 Mbps
Sample point setting	65% −90% in unit of 1%
Allowable voltage range	−3 to 10 V (between CAN_H, CAN_L – GND)
Maximum rated voltage to earth	(1 kHz or less) 42 V (DC + ACpeak) (CAT, 30 Vrms)
Input connector	D-Sub 9-pin (male)
One shot output	Frames can be output in single shot Maximum CAN FD data frame size is 64-byte.