DP4 DIAGPROG4

CAN LOGGER

CANLOGGER is a dual channel device which offers logging Can signals on microSD card in real time. It supports both 29-bit and 11-bit CAN identifiers and ISO15765 protocols. Additionally high quality processor (200 MHz) guarantees minimum consumption of power and optimum performance.

Basic functions are:

- Logging to two CAN-BUS channels in real time.

- CAN-BUS signal generation such as Ignition, RPM, speed, switches (for programming, testing ECU's

- outside car).

- CAN-BUS messages modification and filtering.

- CAN-BUS signal convertion (for programming, testing ECU's outside car).

Description:

- CAN-BUS logging frames from two channels with same or different speeds.

- CAN-Gateway user mode - converting CAN signals with different speeds.

- CAN-BUS frames filtration - according to scrypt.txt file

- CAN-BUS frames generation - according to scrypt.txt file

- CAN-BUS frames modification - according to scrypt.txt file.

- Electronic CAN-BUS termination resistors.

- Power supply - 5 Volts or 12 Volts.

- Software update using microSD card.

- Modification and configuration via PC tool - CanLogger Manager.

- No loss of any CAN- BUS frames when logging into two channels at the same time, with maximum speed.

- Additional option for software update of the system/car using DiagProg4 diagnostic tester.

DP4 DIAGPROG4

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302

www.diagprog.com   www.elprosys.com

ELPROSYS

Components:

	CANLOGGER.
	Installation kit.
	Bridging Adapter – restoring the vehicle installation to its previous state. (used only with CAN GATEWAY user mode)
	microSDHC 32GB card
	CD – includes user manual and CANLOGGER MANAGER software

⚠️ **CANLOGGER CAN BE CONNECTED DIRECTLY BY OBDII ADDITIONAL ADAPTER IS REQUIRED.**

Installation in the vehicle

Installation kit must be mounted in the vehicle installation:

D-SUB 9pin male			
1	BROWN	-	CanL [CAN2]
2	WHITE	-	CanL [CAN1]
3	BLACK	-	GND
4	N/A	-	---------
5	N/A	-	---------
6	YELLOW	-	CanH [CAN2]
7	GREEN	-	CanH [CAN1]
8	N/A	-	---------
9	RED	-	+12V

Connect CANLOGGER to DB9 connector

In order to restore vehicle installation to its previous state Bridging Adapter must be connected

Bridging Adapter
SHORTING CAN – BUS IF PREVIOUSLY DISCONNECTED (IN CANGATEWAY MODE)
Adapter for restoring the vehicle installation to its previous state.

⚠️ **CANLOGGER CAN BE CONNECTED DIRECTLY BY OBDII**
ADDITIONAL ADAPTER IS REQUIRED.

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302
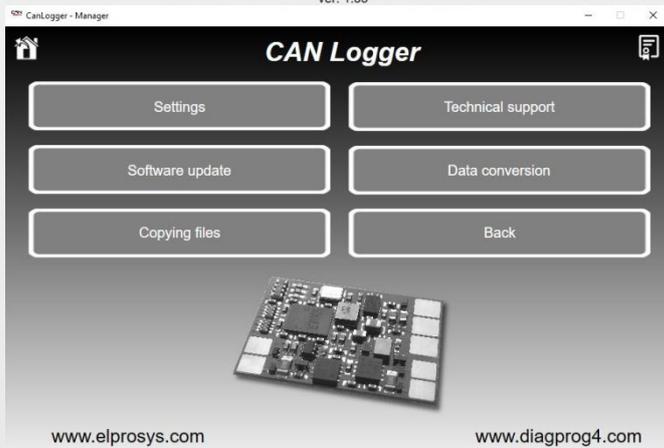
www.diagprog.com   www.elprosys.com

CANLOGGER MANAGER SOFTWARE

- − **CANLOGGER MANAGER v1.1:**
- − **Required – MS .NET FRAMEWORK 4.5 or above**
- − **Required permission to run as administrator**

CANLOGGER MANAGER software is used to configure CanLOGGER

Select appropriate product
CANLOGGER must be selected

Settings	CANLOGGER module configuration settings
Software update	Online CanGateway software update
Copy files	Copy files between microSD→PC
Technical support	Contact with our technical support team via e-mail
Data conversion	BIN → TXT conversion
Back	Back to previous screen

Back to main screen

Licensing information

scrypt.txt	user mode selection and CAN communication parameters settings
bootconf.txt	bootconf.txt file with BOOT2 parameters in UDS standard
CanPlayer file	generating data files to work as "Can Player"
Back	Back to previous screen

Back to main screen

Licensing information

CANLOGGER CONFIGURATION SETTINGS

USER MODES

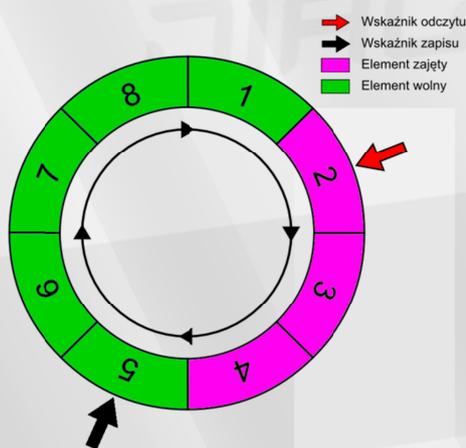| • CAN LOGGER	• CAN GENERATOR	• CAN GATEWAY	• CAN PLAYER

CAN LOGGER – user mode that offers logging Can signals on microSD card (FAT32 system).

Canlogger due to circular buffer and fast processor (200MHz) allows logging data without any loss of

CAN- BUS frames.

CAN LOGGER allows user:

- to start logging based on specific CAN frame identifier (ID), stored in scrypt.txt file
- to block specific CAN frame identifier (ID), stored in scrypt.txt file
- to filter CAN frame identifier (ID), stored in scrypt.txt file

DELAY TIME AFTER SCANNING IS 60 SEC, interruption of the scan procedure may result in data loss!!!

Circular buffer scheme

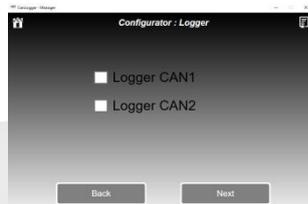## Settings – CAN LOGGER

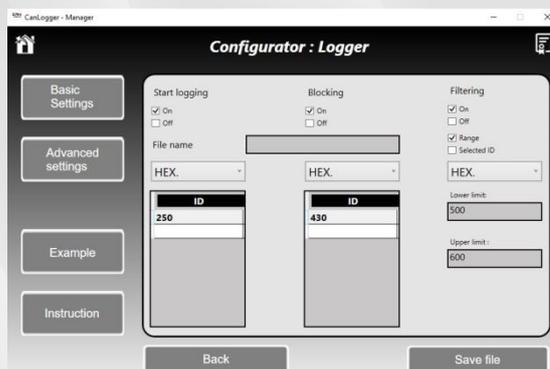**CAN LOGGER basic settings:**

CAN speed	50, 83, 100, 125, 250, 500 kbps
Termination	On/Off

CAN LOGGER advanced settings:

File name	File that stores data saved by CAN Logger
Start logging	Select specific CAN frame identifiers (ID) Once a specific CAN frame identifier occurs CAN Logger starts saving data on microSD card e.g. ID=0x250 – as shown on the photo above
Blocking	Select specific CAN frame identifiers (ID) which will be skipped by CAN Logger while saving data on microSD card e.g. ID=0x430 – identifier of a frame that was skipped – as shown on the photo above
Filtering: − Range − Selected ID	Filtering Selected ID: - Filtering Selected ID (parameter - Range) Select a range of CAN frame identifiers (ID), which will be saved on microSD card (e.g. CAN Logger will only save CAN frame identifiers (ID) from range between 0x500 and 0x600) - Filtering Selected ID (parameter - ID) Select specific CAN frame identifiers (ID) which will be saved on microSD card

DP4 DIAGPROG4

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302
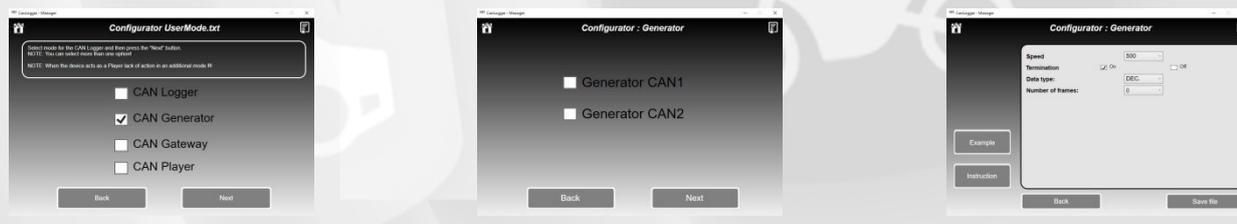
www.diagprog.com   www.elprosys.com

ELPROSYS

CANLOGGER CONFIGURATION SETTINGS

CAN GENERATOR – user mode that allows users to generate CAN frames. It is possible to generate up to 8 frames with delay time [ms] or simultaneously on one CAN channel.

CAN Generator settings:

CAN GENERATOR basic options:

CAN speed	50, 83, 100, 125, 250, 500 kbps
Termination	On/Off
Data type	Data type HEX/DEC (input data by user)
Number of frames	Fill in the fields: number of frames, number of bytes in the message (DLC), information (D0-D7) and delay time (TIME) in [ms]

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302

www.diagprog.com   www.elprosys.com

DP4 DIAGPROG4

ELPROSYS

CANGATEWAY LOGGER CONFIGURATION SETTINGS

CAN Gateway – user mode that uses two CAN-BUS channels. Data between CAN-BUS channels (CAN1↔CAN2) can be transferred at the same or different data transmission speed. Data can be also modified based on sctypt.txt file.
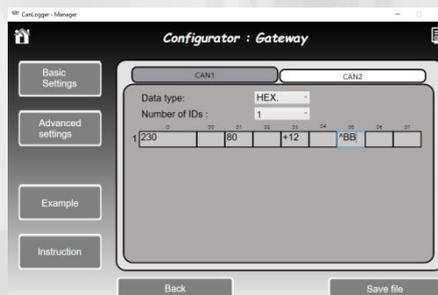

CAN Gateway – settings:

CAN GATEWAY basic options:

Speed for both CAN-BUS channels	50, 83, 100, 125, 250, 500 kbps
Termination for both CAN-BUS channels	On/Off

CAN GATEWAY advanced settings:

Data type	Data type HEX/DEC (input data by user)
Number of IDs for modification (up to 8 on one CAN-BUS channel)	Selecting data modification type of up to 8 different CAN frame identifiers (ID) Following mathematical operations can be performed on selected CAN frame data: • Conversion to constant value, Multiplication, Division, Addition Subtraction, AND operation (&), OR operation (I), XOR operation (^), Division of Modules (%),

⚠️ **IT IS RECOMMENDED TO USE BRIDGING ADAPTER AFTER FINISHING WORK WITH CAN LOGGER IN CANGATEWAY MODE (FOR RESTORING THE VEHICLE INSTALLATION TO ITS PREVIOUS STATE)**

DP4 DIAGPROG4

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302
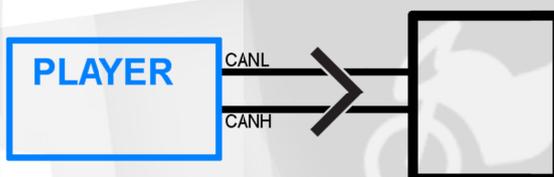
www.diagprog.com   www.elprosys.com

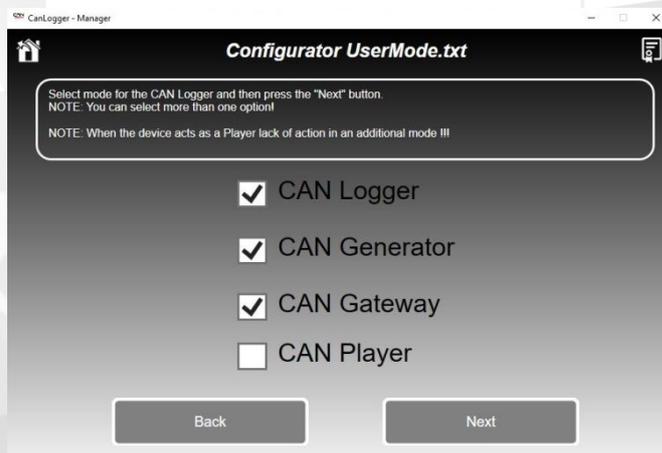ELPROSYS

CANGATEWAY LOGGER CONFIGURATION SETTINGS

CAN PLAYER – user mode that allows users to restore CAN frames saved in file (with appropriate structure) on one or both CAN channels.

CAN PLAYER settings

CAN PLAYER basic options:

Speed for both CAN-BUS channels	50, 83, 100, 125, 250, 500 kbps
Termination for both CAN-BUS channels	On/Off
Advanced settings:	
File name	Name of binary file from which data will be sent
Delay between frames [ms]	Delay time for sending frames [ms]

CAN LOGGER Configurator allows user to combine user modes:

Possible module types:

- CAN Logger
- CAN Generator
- CAN Gateway
- CAN Logger + CAN Generator
- CAN Logger + CAN Gateway
- CAN Logger + CAN Generator + CAN Gateway
- CAN Generator + CAN Gateway
- CAN Player

‼ ATTENTION ! ! !

WHEN USING CAN LOGGER IN COMBINED USER MODE WITH CANGATEWAY FUNCTION

(e.g. CAN Logger + CAN Gateway) CANGATEWAY HAS THE HIGHEST PRIORITY ABOVE ALL MODES,

TO MAINTAIN COMMUNICATION BETWEEN MODULES

Elprosys Sp. z o.o.
ul. Tarnogórska 140, Gliwice 44-102, Polska
tel. +48 32 301-2-301, fax. +48 32 301-2-302

www.diagprog.com   www.elprosys.com

INITIAL STARTUP

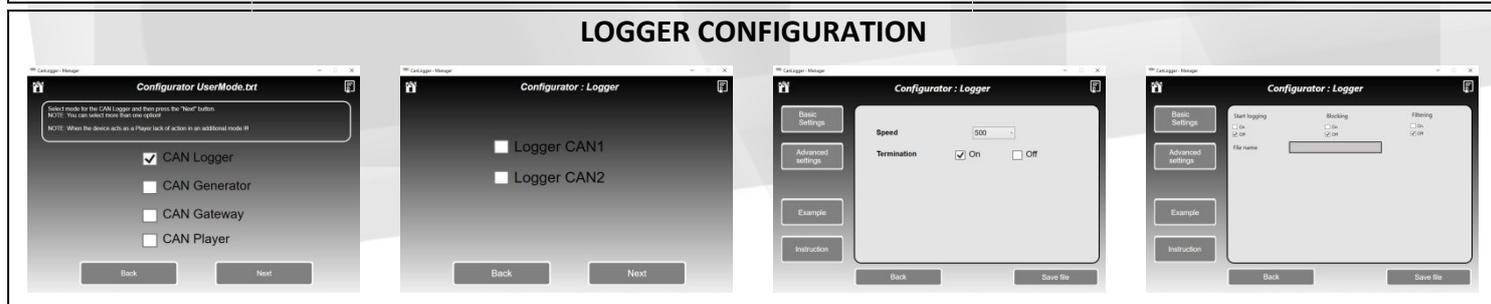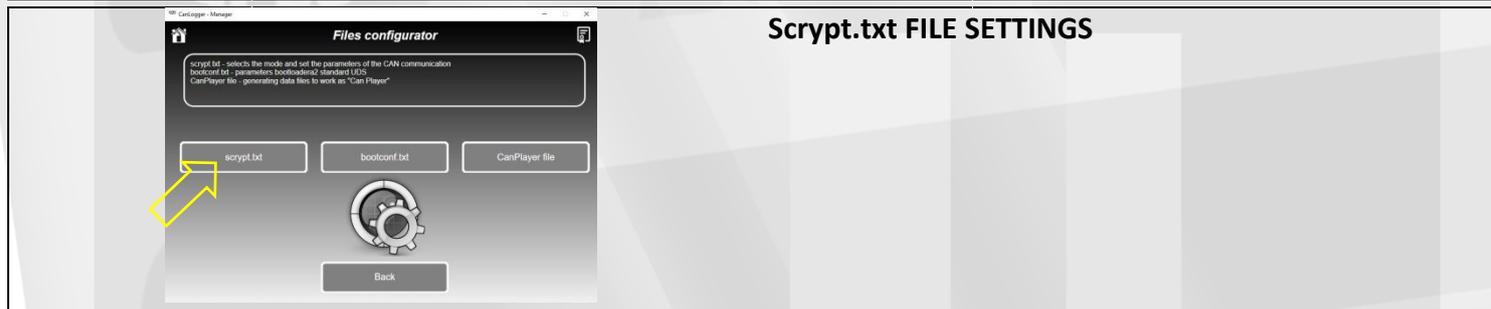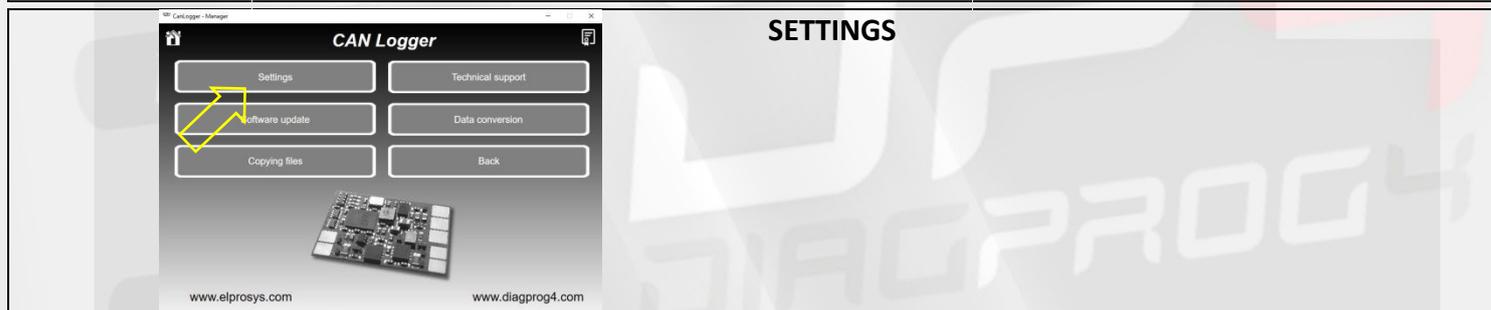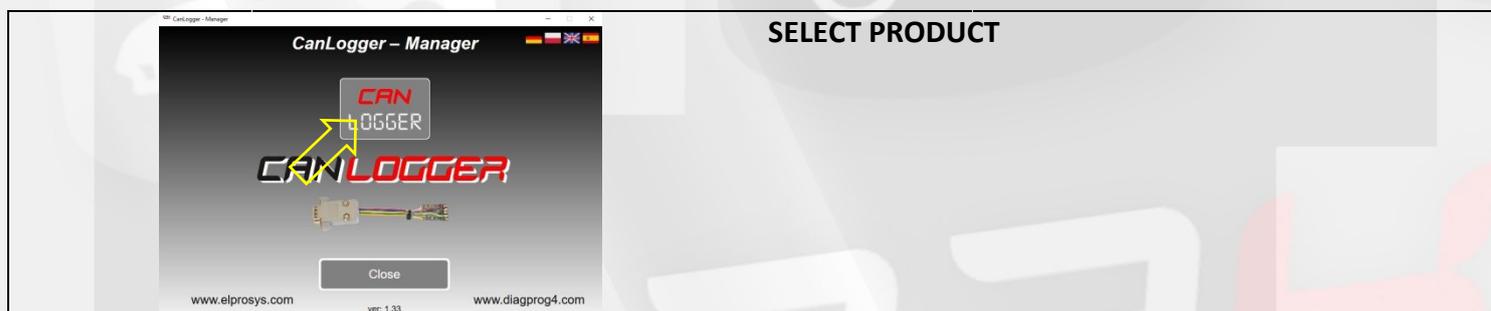**Attention:**
- MicroSD card has to be formatted in FAT32 system. FAT32 system is not immune to any power supply interruption so data saved on card may be lost in case of a sudden power supply interruption.
- Before first startup it is required to make configuration using CANLOGGER MANAGER and select user mode
- Save configuration files on microSD card
- Instert microSD card in CANLOGGER

Exemplary Configurator:

	SELECT PRODUCT
	SETTINGS
	Scrypt.txt FILE SETTINGS

LOGGER CONFIGURATION

Configuration files have to be saved on microSD card which must be inserted in CANLOGGER

MESSAGES – DESCRIPTION

⚠️ Once CAN LOGGER is used possible errors may occur which will be saved in errors.txt file on microSD card.
ATTENTION!! Format SD card in FAT32 system and reconfigure device again if errors.txt file is not on SD card.

BOOT1 STATUS (update.cgu file)

Update.cgu on microSD - wrong signature !	Wrong RSA signature
RECOMMENDED:	Format microSD card in FAT32 system. Download latest update.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Update.cgu on microSD - checksum error !	Wrong checksum in header
RECOMMENDED:	Format microSD card in FAT32 system. Download latest update.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Update.cgu on microSD - wrong size !	Wrong file size
RECOMMENDED:	Format microSD card in FAT32 system. Download latest update.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Update.cgu on microSD same as current version	LOGGER update actualization on microSD card is the same as current update version saved in memory
RECOMMENDED:	Correct configuration
Update.cgu on microSD - too old version !	LOGGER update actualization on microSD card is older than current update in device
RECOMMENDED:	Download latest update.cgu file from Elprosys server, save update file on microSD card
Incorrect product application file update.cgu on microSD !	Incorrect product application file update.cgu has been saved on microSD
RECOMMENDED:	Download latest update.cgu file from Elprosys server, save update file on microSD card.
No valid product application programmed !	No valid product application programmed
RECOMMENDED:	Download latest update.cgu file from Elprosys server, save update file on microSD card

MESSAGES – DESCRIPTION

BOOT2 STATUS (boot2.cgu file)	
Boot2.cgu on microSD - wrong signature !	Wrong RSA signature
RECOMMENDED:	Format microSD card in FAT32 system. Download latest boot2.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Boot2.cgu on microSD - checksum error !	Wrong checksum in header
RECOMMENDED:	Format microSD card in FAT32 system. Download latest boot2.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Boot2.cgu on microSD - wrong size !	Wrong file size
RECOMMENDED:	Format microSD card in FAT32 system. Download latest boot2.cgu file from Elprosys server, save update file and configuration files (bootcof.txt, usermode.txt, scrypt.txt) on microSD card
Boot2.cgu on microSD same as current version	BOOT2 update actualization on microSD card same as current update version saved in memory
RECOMMENDED:	Download latest boot2.cgu file from Elprosys server, save update file on microSD card
Boot2.cgu on microSD - too old version !	BOOT2 update actualization on microSD card is older than current update in device
RECOMMENDED:	Download latest boot2.cgu file from Elprosys server, save update file on microSD card
Incorrect product application file boot2.cgu on microSD !	Incorrect product application file has been saved on microSD card e.g. CAN SMART or CAN FLEX
RECOMMENDED:	Download latest boot2.cgu file from Elprosys server, save update file on microSD card
No valid Boot2 programmed !	No valid BOOT2 file in memory
RECOMMENDED:	Download latest boot2.cgu file from Elprosys server, save update file on microSD card
No errors in boot1	No errors
BOOT2 configuration (BOOT2 CONFIGURATION STATUS:)	
Wrong number of configuration parameters (must be 6) !	Wrong BOOT2 configuration (Wrong number of configuration parameters)
RECOMMENDED:	Configure bootconf.txt file with CANGATEWAY MANAGER Save bootconf.txt file on microSD card
No errors in BOOT2 configuration !	No errors in BOOT2 configuration

LOOGGER MESSAGES – DESCRIPTION	
GATEWAY configuration	
GENERATOR configuration	
GATEWAY + GENERATOR configuration	
PLAYER configuration	Information about product configuration
LOGGER configuration	
GATEWAY + LOGGER configuration	
GENERATOR + LOGGER configuration	
GATEWAY + GENERATOR + LOGGER configuration	
WRONG USER MODE !!!!!!!!!!!!!!!!!!!!!!!!	WRONG USER MODE
RECOMMENDED:	Configure usermode.txt file with CANGATEWAY MANAGER Save usermode.txt file on microSD card

SCRYPT.TXT ERROR MESSAGES – DESCRIPTION	
CAN1 terminator is not configured	CAN1 terminator is not configured
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
CAN2 terminator is not configured	CAN2 terminator is not configured
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
CAN1 speed is not configured	CAN1 speed is not configured
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
CAN2 speed is not configured	CAN2 speed is not configured
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
Wrong user mode from usermode.txt file	WRONG LOGGER configuration
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
Generators are not configured - Please configure at least one, or change the mode of the application	Generators are not configured - Please configure at least one, or change the mode of the application
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
CAN Loggers are not configured - Please configure at least one, or change the mode of the application	WRONG LOGGER configuration for CANGATEWAY LOGGER mode
RECOMMENDED:	Configure scrypt.txt file with CANGATEWAY MANAGER Save scrypt.txt file on microSD card
All necessary parameters are configured	All necessary parameters are configured