

Kvaser CanKing User Guide



Kvaser CanKing - A free of charge, general-purpose CAN bus analyzer. Works with all Kvaser CAN interfaces as well as the Kvaser virtual CAN bus.

Copyright 2021-2024 Kvaser AB, Mölndal, Sweden https://www.kvaser.com

Version 1.00A

Printed Monday 2024-09-25

We believe that the information contained herein was accurate in all respects at the time of printing. Kvaser AB cannot, however, assume any responsibility for errors or omissions in this text. Also note that the information in this document is subject to change without notice and should not be construed as a commitment by Kvaser AB.

1 Installation – Kvaser CanKing Distributions

Before you can use Kvaser CanKing, you must download and install the Kvaser Drivers. Kvaser CanKing can be downloaded from our homepage: Here you can find all Kvaser downloadable software and drivers.

https://kvaser.com/download/

Instructions for how to install the Kvaser drivers are included in the respective software and not covered by this guide.

1.1 Kvaser CanKing, Windows x64

Distributed as a Windows installer, an .exe file.

Prerequisites:

• Kvaser Drivers for Windows

1.2 Kvaser CanKing, Linux for Intel x64

Distributed as a Debian package, a .deb file.

Prerequisites:

- Kvaser Drivers for Linux
- Kvaser SDK for Linux

CanKing does not work with SocketCAN, you must use the Kvaser Drivers.

1.3 Kvaser CanKing, Linux for ARM 64

Distributed as a Debian package, a .deb file.

Prerequisites:

- Kvaser Drivers for Linux
- Kvaser SDK for Linux

CanKing does not work with SocketCAN, you must use the Kvaser Drivers.

2 CanKing Layout

+ Source V	+	Target 🗸				
	UI Streams					
	Streams data an	nd status to the user interface				
Log Terminal						
Log Terminal						
Log Terminal X [] Log Level V Time	Туре	Category	Message			
Log Terminal X □□ Log Level ∨ Time 2024-09-06T08:29:51.263Z	Type Info	Category CanKingService.Services.Measure	Message Measurement setup has chan	ged		
Log Terminal X □□ Log Level ∨ Time 2024-09-06T08:29:51.263Z 2024-09-06T08:29:56.629Z	Type Info Info	Category CanKingService.Services.Measure serviceLocator	Message Measurement setup has chan Connected to CanKing service	ged 1: '("Port":61	042,"Ver	rsion":

When starting CanKing (without opening a project file), you will see the default layout.

There are four major areas:

- Control area
- Setup area
- Measurement area
- Log and Terminal area

3 CanKing Control Area

			Kvaser CanKing	🖬 🕥 🖨	- C	
[+ s	iource V	UI Streams Streams data an	Target V			
Log	Terminal					
Log × 00	Terminal					
Log × 00 Time	Terminal	Туре	Category	Message		
	Terminal	Time	Catagory			

3.1.1 Start / Stop measurement

A measurement can be started by clicking on the start button at the top-left corner of the main window, or by selecting 'More->Measurement->Start' from the main menu, or by pressing 'F9'.

A measurement can be stopped by clicking on the stop button at the top-left corner of the main window, or by selecting 'More->Measurement->Stop' from the main menu, or by pressing 'F12'.

When a measurement is started then:

- All enabled CAN Channels try to connect to their hardware interfaces.
- All enabled Traffic Generators start sending data.
- All enabled CAN Message Loggers with start triggers set to Start Measurement begin logging.

When a measurement is stopped then:

- All connected CAN Channels disconnect from their hardware interfaces.
- All started Traffic Generators stops sending data.
- All started CAN Message Loggers stops logging.



3.1.2 New Project

A new CanKing project can be created by clicking on the 'New' button in the main window's title bar, or by selecting 'More->File->New' from the main menu, or by pressing 'Ctrl + N'.

3.1.3 🕒 Open Project

A CanKing project can be opened by clicking on the 'Open' button in the main window's title bar, or by selecting 'More->File->Open' from the main menu, or by pressing 'Ctrl + O'.

3.1.4 Cave Project

The current CanKing project can be saved by clicking on the 'Save' button in the main window's title bar, or by selecting 'More->File->Save' from the main menu, or by pressing 'Ctrl + S'.

3.1.5	More
Save As	The current CanKing project can be saved to new file by selecting 'More->File->Save As' from the main menu, or by pressing 'Ctrl + Shift + S'.
Zoom In	The user interface can be zoomed in by selecting 'More->View->Zoom In' from the main menu, or by pressing 'Ctrl + +'.
Zoom Out	The user interface can be zoomed out by selecting 'More->View->Zoom Out' from the main menu, or by pressing 'Ctrl + -'.
Reset Zoom	The user interface's zoom factor can be reset by selecting 'More->View->Reset Zoom' from the main menu, or by pressing 'Ctrl + 0'.
Toggle Full Scre	The main window can enter Full Screen mode selecting 'More->View->Toggle Full Screen Mode' from the main menu, or by pressing 'F11'. The main window can leave Full Screen mode selecting 'More->View->Toggle Full Screen Mode' from the main menu, or by pressing 'F11', or by clicking on the 'Exit Full Screen' button in the top- right corner of the main window.

3.1.6 ⁽²⁾ Settings

The Edit Settings dialog can be opened by selecting 'More->Settings', or by clicking on the 'Settings' button in the main window's title bar, or by pressing 'Ctrl + ,'.

The following fields exist in the Edit Settings dialog:

Theme	A select box to select the user interface theme. Possible themes are 'Light Mode' and 'Dark Mode'.
Language	A select box to select the language to be used in the user interface.



- Numeric BaseA select box to select the default numeric base for message identifiersand message data. Possible values are 'Hexadecimal' and 'Decimal'.
- Closing Action A select box to select what action to perform when the application is closing. Possible values are 'Prompt for action', 'Stop measurement and clear setup' and 'Keep any measurement running'.

3.1.7 Cark mode/Light mode

Possible themes are 'Light Mode' and 'Dark Mode'

3.1.8 - Toggle tools panel

The 'Toggle tools panel' button either shows or hides the lower tools panel where you find the Log and Terminal views.

4 CanKing Measurement Area

		Kvaser CanKing	◎ ◎ 🔲 – 🗆
+ Source V	UI Streams Streams data an	Target V	
Log Terminal			
Log Terminal X [] Log Level V Time	Туре	Category	Message
Log Terminal X □ Log Level √ Time 2024-08-27T08:09:38.066Z	Type Info	Category CanKingService.Services.Measure	Message Measurement setup has changed

4.1 ^{CC} Open Measurement Setup

The Measurement Setup view is opened by clicking on the 'Measurement Setup' button in the navigation bar.

4.2 + Source \checkmark Source – Add a new data source

Available data sources are:

CAN Channel	A new CAN Channel node can be added by clicking on the '+ Source' button and selecting 'CAN Channel'.
All Connected CAN Ch	nannels
	All CAN channels that are connected to the computer can be added at the same time by clicking on the '+ Source' button and selecting 'All Connected CAN Channels'.
Traffic Generator	A new Traffic Generator node can be added by clicking on the '+ Source' button and selecting 'Traffic Generator'.



4.3 CAN Channel

	Add a new data source		Kvaser CanKing	🖬 🕲 🛱	- 0	×
% ⊞	+ Source V CAN Channel All Connected CAN Channels Traffic Generator	+ T Streams sams data and s	arget V			
	Log Terminal					
	Time	Type	Category	Message		
	2024-08-29T07:13:35.425Z	Info	CanKingService.Services.Measure	Measurement setup ha	as changed	
	2024-08-29T07:13:39.712Z	Info	serviceLocator	Connected to CanKing	service: '{"Po	rt":6104
	<u>ر</u>				Version 7.0.0-b	• eta.150

4.3.1 Add CAN Channel

Adding a CAN channel can be done by clicking on Source and selecting CAN Channel.

4.3.2 Remove CAN Channel

The CAN Channel node can be removed from the measurement setup by right-clicking on the CAN Channel node and selecting 'Remove' from the context menu or by clicking on the 'Remove' button inside the node.

4.3.3 Disable/Enable CAN Channel

The CAN Channel node can be disabled/enabled by right-clicking on the CAN Channel node and selecting 'Disable'/'Enable' from the context menu or by clicking on the 'Disable/Enable' toggle button inside the node.

4.3.4 Set Bus On/Off for CAN Channel

The CAN Channel can be set to 'Bus On' or 'Bus Off' by clicking on the 'Bus On/Off' toggle button inside the node.

4.3.5 Edit CAN Channel

	ů 6 8		Kvaser CanKing	o – 🔲 🤉 🕸	×
œ8	$+$ Source \vee	+	- Target 🗸		Î
	CAN 1 CAN - 500 kb***	UI Streams	ind status to the user interface		
	Edit Con Remove	figuration			Ţ
	Log X [] Log Level V				
	Time	Туре	Category	Message	
	2024-08-29T07:13:35.425Z	Info	CanKingService.Services.Measure	Measurement setup has changed	
	2024-08-29T07:13:39.712Z	Info	serviceLocator	Connected to CanKing service: '{"P	ort":6104
	2024-08-29T10:09:39.913Z	Info	CanKingService.Services.Measure	AddedDataSource	
	4				
	0%			Version 7.0.0-	beta.150

The Edit CAN Channel Configuration dialog can be opened by right-clicking on the CAN Channel node and selecting 'Edit Configuration...' from the context menu or by clicking on the 'Edit' button inside the node.

4.3.6 CAN Channel Configuration

CAN Channel				\times
Name *				
CAN 1				
interface *		S/N		
0 - Kvaser PCIEcan 2xHS v2 - te	st home 1	▼ 15117	Locked to S,	/N Rescan
CAN Mode *	Access Mode *			
CAN			- D	Silent Mode
Bus Speed *			SJW *	Bit
500 kbit/s, 75%			r 4 v	Timing
3it timing: TSeg1=11, TSeg2=4				

The following fields and functions exist in the Edit CAN Channel Configuration dialog:

Name	A name that will be used in CanKing to reference this node.
Interface	A select box to point out which hardware interface and channel to be used.



Kvaser CanKing User Guide

S/N	A read-only field displaying the serial number of the selected hardware interface.
Locked to S/N	A check box that locks the CAN Channel to the interface with the specified serial number instead of locking to the CANlib channel number. Selecting this option will guarantee that the CAN Channel always uses the same hardware interface.
Rescan	A button that triggers a rescan of the computer for added hardware interfaces.
CAN Mode	A select box to select CAN mode. Possible values are 'CAN', 'CAN FD' and 'CAN FD NONISO'.
	When 'CAN Mode' is set to 'CAN FD' or 'CAN FD NONISO' then the 'Bus Speed' will be replaced with 'Bus Speed Arbitration Phase' and a 'Bus Speed Data Phase' will be added.
Access Mode	A select box to select access mode to be used when initializing the interface. Possible values are 'Init Access', 'No Init Access' and 'Exclusive Access'.
	'Init Access' will try to initialize the interface by setting the selected bus speed. If any other application is connected to the same interface with init access, then this will fail.
	'No Init Access' will prevent CanKing from setting the interface's bus speed.
	'Exclusive Access' will make sure that only CanKing is connected to the interface.
Silent Mode	A check box that makes the interface act in silent mode. This setting is disabled if the interface doesn't support silent mode.
Bus Speed	A select box with a predefined list of bus speeds.
SJW	A select box with possible SJW values for the selected bus speed.
Bit Timing	A button that opens a table with all possible bit timing combinations for the selected bit rate.
	This table can be used to select bit timings that aren't listed in the 'Bus Speed' select box.



4.4 Traffic Generator

	Add a new data source		Kvaser CanKing	🖬 🕲 🕸	- 0	×
8	CAN Channel All Connected CAN Channel Traffic Generator	S Streams	nd status to the user interface			
	Log Terminal					
	Time	Туре	Category	Message		
	2024-08-29T07:13:35.425Z	Info	CanKingService.Services.Measure	Measurement setup h	as changed	
	2024-08-29T07:13:39.712Z	Info	serviceLocator	Connected to CanKing	service: '{'Po	rt":6104
	- C				Version 7.0.0-b	• eta.150

4.4.1 Adding Traffic Generator

Adding a Traffic Generator can be done by clicking on Source and selecting Traffic Generator.

The Edit Traffic Generator Configuration dialog can be opened by right-clicking on the Traffic Generator node and selecting 'Edit Configuration...' from the context menu or by clicking on the 'Edit' button inside the node.

4.4.2 Remove Traffic Generator

The Traffic Generator node can be removed from the measurement setup by right-clicking on the Traffic Generator node and selecting 'Remove' from the context menu or by clicking on the 'Remove' button inside the node.

4.4.3 Disable/Enable Traffic Generator

The Traffic Generator node can be disabled/enabled by right-clicking on the Traffic Generator node and selecting 'Disable'/'Enable' from the context menu or by clicking on the 'Disable/Enable' toggle button inside the node.

4.4.4 Traffic Generator Configuration

Kvaser CanKing User Guide

Traffic	Gene	rator							×
Name * Traffic G	enerato	or 1							
	- CHA	NNEL -							
CAN 1	01170								.
	- CAN I	DENTIFI							
O Con:	stant id	entifier	0						 Use extended (29-bit) identifier
⊖ Ran	dom ide	entifier	0 s	can ider	ntifier	From 0			To 7FF
CAN	FRAM	E DEFIN		\					
Data Lengt 8 Messag	h* ge Data								Randomize Data
	1	2	3	4	5	6	7	8	
0	00	00	00	00	00	00	00	00	
Con:	TRANS stant in	MISSIO terval	N INTER	VAL 🔨					ms
O Ran	dom int	erval	From 50)			m	То	500 ms
Seno	NUMB	ER OF M	ESSAGE	es 🔨 –	jes 0				
	- BURS	T SIZE /	$\sim -$						
Con:	stant b	urst size	1						
⊖ Rand	dom bu	rst size	From	1				То	5
									Create Cancel

The following fields and functions exist in the Edit Traffic Generator Configuration dialog:

Name	A name that will be used in CanKing to reference this node.
Channel	A select box to select which CAN Channel to send out CAN messages on.
CAN Identifier	A set of fields to control the CAN identifier(s) to be used in the CAN messages.
Constant Identifier	The same identifier is used for every message.
Random Identifier	Identifier to use is picked by taking a random identifier from a specified range.



Scan identifier	Identifier to use is picked from a specified range.
Frame Definition	A set of fields to control what kind of CAN frame to send out and what data it should contain.
Frame type	Possible frame types are: • CAN • CAN FD • ERRORFRAME.
For a classic CAN frame	e it's possible to select • Remote Request Frame • Single Shot
For a CAN FD frame it's	possible to select: • BRS - bit rate switch • Single Shot
Frame data	Defined by selecting message data length and by editing the message raw data by entering the value of each byte. Both the message data length and the message raw data can be randomized.
Transmission Interval	A set of fields to control the transmission interval.
Constant interval	The same interval is used between each transmission.
Random interval	Interval to use is picked by taking a random interval from a specified range.
Scan interval	Interval to use is picked from a specified range.
Number of Messages	Specifies a fixed number of messages to be sent out or an unlimited number of messages.
Burst Size	A set of fields to control the burst size, i.e. the number of messages to be sent out at every sample point.
Constant burst size	The same number of messages are sent out at every sample point.
Random burst size	Burst size to use is picked by taking a random value from a specified range.

4.5 Data Processors

		Kvaser Ca	nKing 🕸 🕲		-	o ×
*	PCIEcan 2xHS v2 - Channel 1 CAN - 500 kbit/s	CAN Message F CAN Databases CAN Databases PCI CAN PCI CAN	Target Streams ame data and status to the user interface ilter Ecan 2xHS v2 - Channel 1 - Out - 500 kbit/s Ecan 2xHS v2 - Channel 2 - Out - 500 kbit/s	,		
	Log Terminal					
	Time	Туре	Category	N	lessage	-
	2024-08-29T12:53:23.914Z	Info	CanKingService.Services.Measure	e N	leasuren	nent has s
	2024-08-29T12:53:25.662Z	Info	CanKingService.Services.Measure	e N	leasuren	nent has s
	2024-08-29T12:53:46.697Z	Info	CanKingService.Services.Measure	e N	leasuren	nent has s
	2024-08-29T12:53:53.5737 <	Info	CanKingService Services Measure	e N	leasuren	nent has s
	0%	0%	C:\Users\ADMIN\Documents\Test	l.ckproj	Version 7	.0.0-beta.159

Available data processors are:

- CAN Message Filter
- CAN Databases

4.5.1 Re-organize data processor nodes

Data processors can be re-organized in the measurement setup by changing the connections between the nodes. This can be done either by drag & drop or by editing the configuration of a receiving node and changing its sources list.

4.5.2 Data Processors - CAN Message Filter

4.5.2.1 Add CAN Message Filter

A new CAN Message Filter node can be added by clicking on a '+' button on any of the nodes in the measurement setup and selecting 'CAN Message Filter'. The new CAN Message Filter node will be connected to the node that was clicked on.



4.5.2.2 Remove CAN Message Filter

The CAN Message Filter node can be removed from the measurement setup by right-clicking on the CAN Message Filter node and selecting 'Remove' from the context menu or by clicking on the 'Remove' button inside the node.

4.5.2.3 Disable/Enable CAN Message Filter

The CAN Message Filter node can be disabled/enabled by right-clicking on the CAN Message Filter node and selecting 'Disable'/'Enable' from the context menu or by clicking on the 'Disable/Enable' toggle button inside the node.

4.5.3 CAN Message Filter Features

CAN Message Filter	\times
New * Filter 1	
Pass filter O Block filter	
Standard (11-bit) CAN Identifiers *	
The GAN IQs to be Filtered, Exemple 1.2.3.6-10 in order to Filter Qs 1.2.3 and 0 to 10.	
Extended (29-bit) CAN Identifiers *	
The DAN does to be filmend. Example: 1,2,3,610 in order to filme die 1,2,3 and 6 to 10.	
	_
	Create Cancel

The Edit CAN Message Filter Configuration dialog can be opened by right-clicking on the CAN Message Filter node and selecting 'Edit Configuration...' from the context menu or by clicking on the 'Edit' button inside the node.

The following fields and functions exist in the Edit CAN Message Filter dialog:

Name	A name that will be used in CanKing to reference this node.
Filter Type	A radio button group with one button for 'Pass Filter' and one button for 'Block Filter'
Std CAN Identifiers	A text field to list with standard (11-bit) CAN identifiers that should be filtered out. The identifiers can be listed individually as a comma separated list or in ranges, for example the string 1,2,3,6-10 will filter out identifiers 1, 2, 3 and 6 to 10.
Ext CAN Identifiers	A text field to list which extended (29-bit) CAN identifiers that should be filtered out. The identifiers can be listed individually as a comma separated list or in ranges, for example the string 1,2,3,6-10 will filter out identifiers 1, 2, 3 and 6 to 10.
Sources	A check box list with all measurement setup nodes that can be connected as sources to this node.



4.5.4 Data Processors - CAN Databases

4.5.4.1.1 Add CAN Databases

A new CAN Databases node can be added by clicking on a '+' button on any of the nodes in the measurement setup and selecting 'CAN Databases'. The new CAN Databases node will be connected to the node that was clicked on.

4.5.4.2 Remove CAN Databases

The CAN Databases node can be removed from the measurement setup by right-clicking on the CAN Databases node and selecting 'Remove' from the context menu or by clicking on the 'Remove' button inside the node.

4.5.4.3 Disable/Enable CAN Databases

The CAN Databases node can be disabled/enabled by right-clicking on the CAN Databases node and selecting 'Disable'/'Enable' from the context menu or by clicking on the 'Disable/Enable' toggle button inside the node.

4.5.5 CAN Databases Features

CAN Databases	×
Nerro 1 CAN Databases 1	
DEC Files Add	
	Create Cancel

The Edit CAN Databases Configuration dialog can be opened by right-clicking on the CAN Databases node and selecting 'Edit Configuration...' from the context menu or by clicking on the 'Edit' button inside the node.

The following fields and functions exist in the Edit CAN Databases dialog:

Field	Description
Name	A name that will be used in CanKing to reference this node.
DBC Files	An 'Add' button to browse and add database files and a list of selected files.
Sources	A check box list with all measurement setup nodes that can be connected as sources to this node.



4.6 Data Targets



Available data targets are:

UI Streams A read-only node that cannot be added or removed. It is always present and represents a data stream to the user interface in CanKing.

CAN Output Channel A read-only node that cannot be added or removed. It represents the output buffer of the 'CAN Channel' data source node. Every 'CAN Channel' data source node that isn't configured to be in silent mode will have a corresponding 'CAN Output Channel'.

CAN Message Logger A Logger node that can be added to one or more data streams.

4.6.1 CAN Message Logger

4.6.1.1.1 Add CAN Message Logger

A new CAN Message Logger node can be added by clicking on the '+ Target' button and selecting 'CAN Message Logger'.



4.6.1.1.2 Remove CAN Message Logger

The CAN Message Logger node can be removed from the measurement setup by right-clicking on the CAN Message Logger node and selecting 'Remove' from the context menu or by clicking on the 'Remove' button inside the node.

4.6.1.2 Disable/Enable CAN Message Logger

The CAN Message Logger node can be disabled/enabled by right-clicking on the CAN Message Logger node and selecting 'Disable'/'Enable' from the context menu or by clicking on the 'Disable/Enable' toggle button inside the node.

4.6.1.3 CAN Message	Logger Configuration
---------------------	----------------------

lame * Message Logger 1		
ile Format *		
ile Name *		Browse
 Append next available index to file name 	O Append timestamp to file name O Overwrite a	ny existing file
START TRIGGER 🔨		
Trigger on Start Measurement		
) Trigger on timer		m
) Trigger on message	Use extended (29-bit) identifier	Select Message
) Trigger on signal value	Use extended (29-bit) identifier	Select Signal
	= v	
STOP TRIGGER A		
Trigger on Stop Collapse Stop Trigger		
Trigger on timer		m
) Trigger on message	Use extended (29-bit) identifier	Select Message
) Trigger on signal value	Use extended (29-bit) identifier	Select Signal



The Edit CAN Message Logger Configuration dialog can be opened by right-clicking on the CAN Message Logger node and selecting 'Edit Configuration...' from the context menu or by clicking

on the 'Edit' button inside the node.

The following fields and functions exist in the Edit CAN Message Logger dialog:

Name	A name that will be used in CanKing to reference this node.
File Format	A select box to select what file format the log file should use.
File Name	A text field and a 'Browse' button to enter full path to the log file to be created.
File Name Action	 A radio button group to decide what should happen if a file already exists with the specified file name. Possible options are: Append next available index to the file name. Append timestamp to the file name. Overwrite any existing file.
Start Trigger	 A radio button group to decide what detected event should start the logger. Possible triggers are: Start Measurement: The logger starts when a new measurement is started. Timer: The logger starts at a specified time after the measurement was started. Message: The logger starts when a message with a specified CAN identifier has been received. Signal Value: The logger starts when a signal value expression has been fulfilled.
Stop Trigger	 A radio button group to decide what detected event should stop the logger. Possible triggers are: Stop Measurement: The logger stops when the measurement is stopped. Timer: The logger stops at a specified time after the logger was started. Message: The logger stops when a message with a specified CAN identifier has been received. Signal Value: The logger stops when a signal value expression has been fulfilled.
Sources	A check box list with all measurement setup nodes that can be connected as sources to this node.

5 Workspaces

		Kvaser Can	001	o ×
Workspace 1 +				C
		0		
٩			atect Vew 🗸	I
Log Terminal				
Log Terminal × (1) Log Level V				
Log Terminal × ()) Log Level V Time	Туре	Category	Message	
Log Terminal × (0) Log Level > Time 2024-09-28T09:19:55.906Z	Type Info	Category CankingService.Services.Measure	Message Messurement setup has changed	

5.1 🗄 Open Workspace Setup

The Workspace Setup view is opened by clicking on the Workspace Setup button in the navigation bar.

		Kvas	er CanKing	🖨 🛛 🕸	-	0	×
с¢О	Workspace 1						0
₿							
	٥		Select View V				⊳
			CAN Periodic Send				
			CAN Trace				
	Log Terminal						
	× [] Log Level ∨						
	Time	Туре	Category		Messag	е	
	2024-08-29T14:04:45.112Z	Info	CanKingService.Service	es.Measure	Measure	ement s	setu
					Version	7.0.0-be	ta.159

There are four Workspaces available:

- CAN Bus Statistics
- CAN Periodic Send
- CAN Send
- CAN Trace



5.2 Edit Workspace

The workspace can be set in 'Edit Mode' by selecting the 'Edit' toggle button in the top-right corner of the Workspaces view.

In edit mode it's possible to:

- Rename the workspace.
- Add/Remove panes inside the workspace.
- Change type of view displayed in the panes.

'Edit Mode' is closed by deselecting the 'Edit' toggle button in the top-right corner of the Workspaces view.

5.2.1 Add Workspace

A new workspace can be added by clicking on the '+' button displayed next to the right of the last workspace tab.

5.2.2 Remove Workspace

A workspace can be removed by hovering the mouse over the workspace name and clicking on the 'x' button that appears, or by pressing 'Ctrl + F4' to remove the currently selected workspace.

5.2.3 Rename Workspace

A workspace can be renamed by double-clicking on the workspace name.

5.3 CAN Bus Statistics Features

	Ů 凸 囧 …	Kvaser Can	King	🖬 🕲 🕸	- 0	×
K0 C	Workspace 1					0
⊟	CHANNEL A					Ť
	BUS STATISTICS					
	Bus Load					
		Total	Per Secon	ıd		
	Rx Messages	0	0			
	Tx Messages	0	0			
	Error Frames	0	0			
	Error Counters	Rx: 0	Tx: 0			Ovr: 0
	Clear BUS STATUS					
	On Bus Error Passive	Overrun				
	Log Terminal					
	🗙 🔲 Log Level 🗸					
	Time	Туре	Category	1	Message	_
	<					
					Version 7.0.0	0-beta.159

The CAN Channel to present statistics for is selected in a CAN Channel select box.

The following bus statistics are displayed:

- Bus load, the bus load in percentage.
- Rx Messages, number of received messages since the counter was cleared and the average number of received messages per second.
- Tx Messages, number of transmitted messages since the counter was cleared and the average number of transmitted messages per second.
- Error Frames, number of error frames since the counter was cleared and the average number of error frames per second.
- Error Counters, the Rx, Tx and Overrun error counters.

Bus statistics can be cleared by clicking on the 'Clear' button.

Bus status can be shown 'On Bus', 'Error Passive' and 'Overrun'.



5.4 CAN Periodic Send Features

	8	3.	00				Kv	aser Ca	anKing	J			ŵ	©		_	0	×	
×0	Work	space 1	Wor	rkspace 2	2 +													0	
▣	Channe	el *	HANNEL	.^-														Ŧ	
		CA	N IDEN	TIFIER /	<u>~</u>														
	⊙ Co	nstant id	entifier	0										Use	exten	ded (2	9-bit) id	lentifier	
	O Ra	ndom ide	entifier	O s	can ider	ntifier	From 0					To 7FF							
	CAN FRAME DEFINITION													÷					
	Data Len	ndom dat ^{gth *}	ta lengti	ם י	Randor	m mess	age data											÷	
	Mess	age Data														R	andomize	ize Data	
	0	1	2	3	4	5	6	7	8										
	_		NSMIS		TERVAL	~-	00	~~	00										
	⊙ Co	nstant in	terval	50														ms	
	O Ra	ndom int	erval I	From 50)					ms	To 50	0			ms				
	□ Ser	nd out a f	MBER O	F MESS/ mber of	AGES 🖍	jes 0													
		BL	JRST SIZ	ΣΕΛ-															
	O Ra	ndom bu	rst size	From	1						To 5								
	Sta	rt																	
	Lo	9	Termin	al															
	$\times 0$	Cog Le	evel 🗸																
	Time				Туре		Cat	egory				Message							
	2024-	08-29T14	1:04:45.	112Z	Info		Car	hKingSei	rvice.Se	rvices Me:	acture.	Measuremen	t coti	un ha	is char	nned			

The following fields exist in the CAN Periodic Send view:

Channel	A select box to select which CAN Channel to send out CAN messages on.
CAN Identifier	A set of fields to control the CAN identifier(s) to be used in the CAN messages.



Constant Identifier	The same identifier is used by every message.
Random Identifier	ldentifier to use is picked by taking a random identifier from a specified range.
Scan identifier	Identifier to use is picked from a specified range.
Frame Definition	A set of fields to control what kind of CAN frame to send out and what data it should contain.

Frame type is selected from a select box.

Possible frame types are:

- CAN
- CAN FD
- ERRORFRAME

For a classic CAN frame it's possible to select:

- remote request frame
- Single shot

For a CAN FD frame it's possible to select:

- BRS bit rate switch
- Single shot

Both classic CAN and CAN FD frames can be sent out as:

Frame data	Is defined by selecting message data length and by editing the message raw data by entering the value of each byte. Both the message data length and the message raw data can be randomized.
Transmission Interval	A set of fields to control the transmission interval.
Constant interval	The same interval is used between each transmission.
Random interval	Interval to use is picked by taking a random interval from a specified range.
Scan interval	Interval to use is picked from a specified range.
Number of Messages	Specifies a fixed number of messages to be sent out or an unlimited number of messages.
Burst Size	A set of fields to control the burst size, i.e. the number of messages to be sent out at every sample point.
Constant burst size	The same number of messages are sent out at every sample point.
Random burst size	Burst size to use is picked by taking a random value from a specified range.
Start periodic sender	Click on the 'Start' button.
Stop periodic sender	Click on the 'Stop' button.



5.5 CAN Send Features

	8	8.	00				ŀ	Kvaser C	anKin	9		ŵ	© 🗖	-	0	×
œ0	Work	space 1	Wo	rkspace	2 V	Vorkspace	3	+								0
₿	Channe	el *	HANNE													Ť
	0	0 0												nded (2	29-bit) id	entifier
			AME DE	EINITIO	N A -											
	CAN		AMC DE	rinditio												¥
	Ref	mote rec	juest fra	me	Use	bit rate si	vitch	□ Si	ngle Sh	ot, try to send once,	no retransmiss	ion				
	Data Len 8	gth *														Ŧ
	Messa	age Data	1											R	andomize	Data
		1	2	3	4	5	6	7	8							
	0	00	00	00	00	00	00	00	00							
	Sen	d														
	Lo	a	Termin	al												
	× n	n Log L	evel V													
	Time	o coje			Type		0	Category			Message					
	2024-0	08-29T1	4:22:34.	787Z	Info		0	CanKingSe	rvice.Se	ervices.Measure	Measuremer	nt has	s stopped			
														Versio	on 7.0.0-b	eta.159

The following fields exist in the CAN Send view:

ChannelA select box to select which CAN Channel to send out CAN messages
on.CAN IdentifierA set of fields to control the CAN identifier to be used in the CAN
message.Frame DefinitionA set of fields to control what kind of CAN frame to send out and what
data it should contain.Frame type is selected from a select box.
Possible frame types are:
• CAN

- CAN FD
- ERRORFRAME

For a classic CAN frame it's possible to select:

- remote request frame
- Single shot

For a CAN FD frame it's possible to select:

- BRS bit rate switch
- Single shot



Frame dataIs defined by selecting message data length and by editing the message
raw data by entering the value of each byte. The message raw data can
be randomized by clicking on the 'Randomize Data' button.

The message is sent out on the selected CAN Channel by clicking on the 'Send' button.

5.6 CAN Trace Features

Workspace 1	Workspace 2	Workspace 3	Workspace 4	+			
$\Xi \times 00 \nabla$	Channel: All	🖓 Dir: All 🗸					
Message	Channel	Id	Flags	DLC	Data		Time
	PCIEcan	00000380		4	D0 53 20	A2	0.250
	PCIEcan	00000380		4	D0 53 20	A2	0.250
	PCIEcan	0000009F		2	A1 50		0.500
	PCIEcan_	00000095		2	A1 50		0.500
	PCIEcan_	0000075B		4	15 D2 A6	39	0.750
	PCIEcan	00000758		4	15 D2 A6	39	0.750
	PCIEcan_	00000587		1	92		1.000
	PCIEcan	00000587		1	9E		1.000
	PCIEcan	00000686		6	1C 4C 66	EF 44 16	1.250
	PCIEcan	000006B6		6	1C 4C 66	EF 44 16	1.250
4							
Log Ter X () Log Level	minal						

Fixed Position Mode	Chosen by selecting the 'Fixed Position' toggle button in the toolbar.In 'Fixed Position Mode it is possible to expand each message row to display signal values. Signal values can only be displayed if a CAN Database's node has been added to the measurement setup.
Scrolling Mode	Chosen by deselecting the 'Fixed Position' toggle button in the toolbar.
The trace can be:	
Cleared	by clicking on the 'x' button in the toolbar.
Paused	by clicking on the 'Pause' button in the toolbar.
Filtered	by channel name by selecting a channel name from the 'Channel Filter' select box in the toolbar.
Filtered by direction	by selecting 'Tx' or 'Rx' from the 'Dir Filter' select box in the toolbar.



6 CanKing Tools Area

		Kvaser CanKing	(() (()	- 🔲	
+ Source \checkmark	+	Target 🗸			
	UI Streams Streams data an	d status to the user interface			
Log Terminal					
Log Terminal					
Log Terminal X [] Log Level V Time	Туре	Category	Message		
Log Terminal X □□ Log Level ✓ Time 2024-08-27T08:09:38.066Z V	Type Info	Category CanKingService.Services.Measure	Message Measurement setup has chang	ged	

6.1 Log View Features

	<u> </u>		Kvaser CanKing	🕸 🕜 🗖 – 🛛 🗙
œ0	Workspace 1 Workspace	2 Workspace 3	Workspace 4 Workspace 5 -	+ 0
	4			⊳
	Log Terminal			
	🗙 🔲 Log Level 🗸			
	Time	Туре	Category	Message
	2024-08-29T14:04:45.112Z	Info	CanKingService.Services.Measure	Measurement setup has changed
	2024-08-29T14:22:22.001Z	Info	CanKingService.Services.Measure	Measurement has started
	2024-08-29T14:22:31.201Z	Error	ipc	3 INVALID_ARGUMENT: No node with the specified
	2024-08-29T14:22:33.226Z	Error	ipc	3 INVALID_ARGUMENT: No node with the specified
	2024-08-29T14:22:34.787Z	Info	CanKingService.Services.Measure	Measurement has stopped
	4			Vareion 7.0 O.hata 150
				Version 7.0.0-beta. 159

The Log view displays log messages from both the CanKing application and from the CanKing service.

The Log view can be:

Cleared By clicking on the 'x' button in the toolbar.

Paused By clicking on the 'Pause' button in the toolbar.



Set Log Level

Possible levels are:

- Trace
- Debug
- Info
- Warn
- Error
- Critical
- None

6.2 Terminal Features

	068	D	ł	Kvaser CanKing	I		🖬 🕲 🕸	-		×
œ0	Workspace 1	Workspace 2	Workspace 3	Workspace 4	Workspace 5	+				0
_	4			\sim						D 🖡
	Log	Terminal								
	CanKing CLI CK C:\Users\	ADMIN\Docume:	nts> []							1
							1	Version 7	7.0.0-bet	ta.159

The Terminal view can be used to control the CanKing service using the CanKing CLI application.

Enter 'ck --help' to display help for the CanKing CLI.

7 Status bar

	6 6 6 ···		Kvaser CanKing	🖬 🕲 🕸	-		×
88	$+$ Source \vee		$+$ Target \checkmark				
	CAN 1 CAN FD - 500/2000 kbit/s ご 回 の ぷ	CAN T CAN T CAN T	eams Is data and status to the user interface I - Out D - 500/2000 kbit/s 2 - Out D - 500/2000 kbit/s				
	too Versied						
	Time	Type	Category	Message			
	2024-09-06T09:17:51.145Z	Info	CanKingService.Services.Measure	Measurement setup has changed			
	2024-09-06T09:17:53.287Z	Info	serviceLocator	Connected to CanKing service: '("Port":61	042,"Ve	rsion":"	7.0
	2024-09-06T09:18:08.632Z	Info	CanKingService.Services.Measure	AddedDataSource			
	2024-09-06T09:18:24.397Z	Info	CanKingService.Services.Measure	AddedDataSource			
_	0%				Version	7.0.0-be	ta.159

7.1 Status bar, Traffic gauge

Shows bus load for each channel.

Yellow error passive

Red bus off'

7.2 Status bar, Project filename

In the Status Bar, you will find the CanKing version number, and also (if you have opened/saved) the Project Filename.

8 Closing CanKing

		Kvaser CanKing	
$+$ Source \vee		$+$ Target \checkmark	
CAN 1 CAN - 500 kbit/s	UI Streams Streams data	a and status to the user interface	
CAN 2 CAN - 500 kbit/s ∂ ⊕ ⊗ s ^G	CAN 1 - Ou CAN - SOO ki	t Clear Measurement Setup bit/s Do you want to clear the m	easurement setup before closing?
)	CAN 2 - Ou CAN - SOO ki	t Don't show this dialog again (Settings)	save answer to Ja Nej
Log Terminal	CAN 2 - OU CAN - SOO K	t Don't show this dialog again (Settings)	save answer to Ja Nej
Log Terminal X ()() Log Level V Time	CAN 2 - OU CAN - 500 kt	t Don't show this dialog again (Settings) Category	save answer to Ja Nej Message
Log Terminal X 00 Log Level √ Time 2024-08-30T09:14:07.070Z	CAN 2 - OU CAN - SOO KI	t Don't show this dialog again (Settings) Category CanKingService.Services.Measure	save answer to Ja Nej Message Measurement setup has changed
Log Terminal X □□ Log Level ∨ Time 2024-08-30T09:14:07.070Z 2024-08-30T09:14:11.237Z	CAN 2 - OU CAN - SOO KI	t bit/s Category CanKingService.Services.Measure CanKingService.Services.Measure	save answer to Ja Nej Message Measurement setup has changed Measurement has started
Log Terminal X □□ Log Level Time 2024-08-30T09:14:07.070Z 2024-08-30T09:14:11.237Z 2024-08-30T09:14:11.713Z 2024-08-30T09:14:11.713Z	CAN 2 - OU CAN - SOO KI Type Info Info Info	t bit/s Category CanKingService.Services.Measure CanKingService.Services.Measure ServiceLocator	save answer to Ja Nej Message Measurement setup has changed Measurement has started Connected to Canking service: '("Port":6104

When the CanKing application is closed, the workspaces will close since they only exist in the application, but the measurement setup is actually a setup of what is executing in the CanKing service. So when the CanKing application closes, the user needs to then decide if he wants the measurement setup to be kept in the service or not.

A use case could be that you use CanKing application to configure a setup in the service, you start the measurement and then you close the application because you don't want to look at any data in real-time, but you want to keep the measurement going to create log files for you.

So clicking 'Yes' will stop any running measurement and clear the setup in the service and clicking 'No' will leave any setup and state as it is.

The checkbox will prevent this dialog from coming up every time. The selection will be saved to the user settings and can be configured in the Settings dialog.

9 Typical use case Project Trace_2ch_Virtual

	<u> </u>		Kvaser CanKing	÷ 🖬 🤉	\times
	$+$ Source \vee		$+$ Target \checkmark		
	CAN 1 CAN - 500 kbit/s ⊘ ⊕ ⊗ ∞ ³	UI Streams Streams data	a and status to the user interface		
	CAN 2 CAN - 500 kbit/s ⊘ ⊕ ⊗ ∞ ³	CAN 1 - Out CAN - 500 kb	t it/s		
		CAN 2 - Out CAN - 500 kb	t it/s		
ł	Log Terminal				
- [\times [] Log Level \checkmark				
- L	Time	Туре	Category	Message	

This sample project uses two Kvaser Virtual CAN interfaces.

Kvaser Virtual CAN interfaces are installed when installing the Kvaser Drivers.

By default (on Windows), there are two Virtual interfaces installed. It is possible to install more Virtual CAN interfaces.

The purpose of the Virtual Interface is that it should be possible to try Kvaser Software without having access to physical CAN interfaces.

: KVASER

9.1 Step 1, Create new project

			Kvaser CanKing	× - 🗆 🔊 🕸
New p		+ Targ	pet 🗸	
		UI Streams Streams data and sta	tus to the user interface	
	Log Terminal			
	Time	Туре	Category	Message
	2024-08-30T09:19:52.482Z	Info	CanKingService.Services.Measure	Measurement setup has changed
	2024-08-30T09:19:56.923Z	Info	serviceLocator	Connected to CanKing service: '{"Port":61042,"
	4			Version 7.0 0-beta 150

Start CanKing and press "New Project"

Save the project with "Save As" (•••/File/Save As), select a nice name for your project.

	<u> </u>		Kvaser CanKing	× • - 🔲 🔊 🕸
~ 8	$+$ Source \vee	+ Tar	$_{ m get} \sim$	
		UI Streams Streams data and sta	itus to the user interface	
	Log Terminal			
	X [] Log Level V			
	Time	Туре	Category	Message
	2024-08-30T09:19:52.482Z	Info	CanKingService.Services.Measure	Measurement setup has changed
	2024-08-30T09:19:56.923Z	Info	serviceLocator	Connected to CanKing service: '{"Port":61042,"
	4		C:_2010_Projects	MyFirstCanKingProject.ckproj Version 7.0.0-beta.159

The filename shall now be visible in the lower-right status area.

Make sure that you are in the Measurement area, you can select it by clicking on the icon

9.2 Step 2, Designing Measurement Setup

		Kvaser CanKing	© 🖬 🗕 –	o ×
$+$ source \checkmark	+	- Target 🗸		
CAN Channel				
All Connected CAN Chan	nels atreams			
Traffic Generator	ams data a	nd status to the user interface		
	_			
Log Terminal				
Log Terminal X [0] Log Level V				
Log Terminal X (0) Log Level V	Туре	Category	Message	
Log Terminal X (0) Log Lovel V Time 1024-08-301709:19:52.4822	Type Info	Category CankingService.Services.Measure	Message Measurement setup has chan	ged

Press "Source", and select "CAN Channel"



**' N 1	
rfise * Kvaser PCIEcan 2xHS v2 - Channel 1	5.N 15117 C Locked to S/N Rescan
Kisser PCIEcan 2xHS v2	🗸 🗌 Silent Mode
0 - Channel 1	S.M.*
1 - Channel 2	• 4 • Timing
Kvaser Virtual CAN Driver	
2 - Channel 1	
3 - Channel 2	

Press on the line "Interface", and select the Kvaser Virtual Interface "2 – Channel 1"

Please note, the layout above depends on what type of Kvaser Interfaces you have installed and connected. Kvaser Virtual interfaces are normally always available and are always listed at the end.

Set the other parameters as you like, for the moment we will use default values.

CAN 1					
manfaca *		5.5			
2 - Kvaser Virtual CAN Driver - Channel 1		¥ 0	0.0	icked to S/N	Rescar
AN Mode *	Access Mode *				
5AN	✓ Init Access			- C SH	int Mode
un Speed *			5,01 *	E	Bit
00 kbit/s, 75%			+ 4	*	Timing
t timing: TSeg1+11, TSeg2+4					
54 0919g T34g1+11, T34g2+4					
				Create	Can

Press "Create."

	888		Kvaser CanKing	\$ C 🖬	- 0	×
04 <u>0</u>	$+$ Source \checkmark	+	Target 🗸			
	CAN 1 CAN - 500 kBR/k グロンダ	UI Streams Streams data and	status to the user interface			
	(CAN 1 - Out CAN - SOD Holt/S]			
	to Paris					
						_
	Time	Type	Calegory	Message		_
	2024-08-30T09:19:52:4822	Info	CanKingService.Services.Measure	Measurement setup has o	changed	_
	2024-08-30T09:19:56.9232	Info	serviceLocator	Connected to CanKing se	nice: ("Port":61	042,"
	2024-08-30T09:33:15.0102	Info	CanKingService.Services.Measure	AddedOataSource		_
	-		C) 2010 Points	Autoritani individual cineri	Variation 7.0 (Libratio	+
	V I		C.C.20102Project	rada e tricanerada, i diace orbiol	version 7.0.0-beta	1.129

CanKing will now add CAN 1 to the Workspace layout.

It also added "CAN 1 - Out." It represents the Output at CAN 1.

Repeat this step and add the second Virtual channel.

Please note, when adding the second channel, the first channel you added will not be available. It is only possible to add a specific channel once.





Layout when two channels have been added.

9.3 Step 3, Designing Workspace Setup



Switch to Workspace Setup, this is done by pressing the icon 🚽

Press "Select View", and select "CAN Trace."

<u>37(44)</u>

Kvaser CanKing User Guide

	<u> </u>		Kvaser	CanKing			② ②	-		×
ax0	Workspace 1 +									0
_	⊞ × 00 7 Channel	: All 🗸 🏹 Dir: A	• V							
⊞	Message Cl	hannel Id		Flags	DLC	Data		Tim	e	
	4									
	Log Terminal									
	X [] Log Level 🗸									
	Time	Туре	Catego	ory			Message			-
	2024-08-30109.19.32.482	z mo	Canikir	igservice.s	services.	measure	measurement setup	ias criang	ea	
	2024-08-30T09:19:56.923	Z Info	service	eLocator			Connected to CanKin	g service:	"{"Port":	6104
	2024-08-30T09:33:15.010	Z Info	CanKir	ngService.S	Services.	Measure	AddedDataSource			
	2024-08-30T09:41:16.306	Z Info	CanKir	ngService.S	Services.	Measure	AddedDataSource			÷
	•									•
	0%	0%			C:_	2010_Projects	\MyFirstCanKingProject.ck	proj Versio	n 7.0.0-b	eta.159

A trace window is now added to the Workspace.

It is possible to add multiple Workspaces, but for the moment we will use only this one.

		ĸ	(vaser CanKing	9		愈	C 🗖	-	0
Workspace 1 +									
$\Xi \times \triangleright \nabla$ chann	el: All 🗸	∑ Dir: All ∨							
Message (Channel	Id	Flags	DLC	Data			Time	
-									
4									
< Log Terminal									
Log Terminal X [] Log Level									
Log Terminal X [] Log Level V Time	Ту	pe	Category			Message			
	Ty	pe D	Category CankingService.	Services	weasure	Message AddedDatasc	surce		
Log Terminal X □□ Log Level ✓ Time 2024-08-30109:41:16:30	102 III 102 III	pe 0	Category CamkingService. CanKingService.	Services.	measure	Message AddedDataSd	ource		
Log Terminal Log Level ✓ Time 2024-08-30T09:33:15:01 2024-08-30T09:50:07.12	102 Inf 102 Inf 232 Inf	pe 0 0	Category CankingService. CanKingService. CanKingService.	Services. Services. Services.	weasure Measure Measure	Message AugegDataso AddedDataSo Measuremen	ource ource t has started	d	
Log Terminal X □ Log Level Time 2024-08-30109:33:15:01 2024-08-30109:31:16:30 2024-08-30109:50:07.12 2024-08-30109:50:07.12 2024-08-30109:50:11.45	102 Inf 23Z Inf 33Z Inf	pe 0 0 0	Category CankingService. CanKingService. CanKingService. CanKingService.	Services. Services. Services. Services.	Measure Measure Measure Measure	Message AugegDataso AddedDataso Measuremen Measuremen	purce purce t has started t has stoppe	d	

9.4 Step 3 Start/Stop Measurement

By pressing the "Start Measurement" icon at the top left corner, the measurement phase will start.

		Kvaser CanKin	g		\$	C 🗖	-	
Horkspace 1 +								
⊞ × 00 ⊽ Channel	: All 🗸 🏹 Dir:	All 🗸						
Message Cl	hannel Id	Flags	DLC	Data			Time	
4 Log Terminal								
Log Terminal								
Log Terminal X □□ Log Level ✓								
< Log Terminal X □□ Log Level ✓ Time	Туре	Category			Message			
< <tr> Log Terminal X []] Log Level Time 2024-08-30109.41.10.300 2024-08-30109.50.07.133</tr>	Type 2 Info	Category CarikingService	.bervices.w	easure	Message AddedDataSt	purce	4	
< <tr> Log Terminal X []] Log Level Time 2024-08-30109.41:10.300 2024-08-30109:50:07.123 2024-08-30109:50:07.123 2024-08-30109:50:07.123 2024-08-30109:50:07.123</tr>	Type 2 IIII0 Z Info Z Info	Category CanKingService CanKingService	.Services.W .Services.M	ieasure leasure	Message AddedDataSt Measuremen	ource t has started	1	
< <tr> Log Terminal X []] Log Level Z024-08-30109.41:10.300 2024-08-30109:50:71.123 2024-08-30109:50:11.453 2024-08-30109:50:11.453</tr>	Z Info Z Info Z Info	Category CankingService CanKingService CanKingService	.services.w .Services.M .Services.M	ieasure leasure leasure	Message AddeduataSk Measuremen Measuremen	ource t has started t has stoppe	d ed	

The icon at the top left corner, will change to a "Stop Icon" and a circle will be animated around it. This indicated that CanKing has opened the interfaces and runs in Measurement Phase.

Most likely, nothing will be visible in the trace window, for the moment we do not have any traffic on the Virtual CAN bus.

If you have selected one of your Kvaser CAN interfaces, and it is connected to a CAN bus with traffic, then you can expect to see frames in the trace window.

Stop the measurement! We must add a data source.

9.5 Step 4 Add a Traffic Generator

- Stop the measurement (if started)
- Switch to Measurement Setup

►	Alf a new first source		Kvaser CanKing	ê 🛛 🗖 -	0	\times
*	CAN 2 CAN 2 Connected CAN Channel All Connected CAN Channel Traffic Generator	CAN 1 - OJ CAN 1 - OJ CAN - SOEH	traget to the user interface			
	Log Terminal X []] Log Level ↓ Time 2024-09-301104 30109 14262 2024-09-30109 5011 4532 2024-09-30109 5012 9512 2024-09-30109 50 54 642 *	Type mo info info	f attv Calegory Carologiservice Services Measure. Carologiservice Services Measure. Carologiservice Services Measure.	Message Negativement has burned Measurement has stopped Measurement has stopped		ļ
_	- 03	- 05	C1_201_Protect	/MyRestCanKingProject.chproj Versk	n 7.0.0-04	eta 159

Press "Source", and select "Traffic Generator"

	: Gene	rator										>
Same *												
Vix Test	DataGer	3										
	- CHA	NNEL -										
CAN 2												*
	- CANI	CENTIF										
O Cor	istant id	lentifier	0						0 Use	extended	(29-bit)	identifier
O Rat	xdom idi	entifier		can ider	tifer	From 1	01		To	105		
	- FRAM	E DEFIN		<u> </u>								
CAN												
Parson version engine Parson intersegie versi												
												~
o Messa	ge Data								_	(kandumi	e Data
o Messe 0	ge Data	2	3	4	5	6	7	8	Ē	(Randomi	e Data
o Messa O	ge Deta	2	3 00	4	5 00	6 00	7 00	8 00		(Randomio	ze Data
o Messe 0	ge Deta 1 00 TRANS	2 00 MISSIO	3 00 N INTER 250	4 00 NAL ^	5 00	6 00	7 00	8 00		(Randsmin	ar Data
o Messa O Cor	ge Data 1 00 TRANS	2 00 SMISSIO	3 00 N INTER 250	4 00 WAL ^	5 00	6 00	7 00	8 00		(Randsmi	er Data
0 0 0 Cor 0 Rat	ge Deta 1 00 TRANS rotant in dom int	2 00 MISSIO Iterval	3 00 N INTER 250 From 50	4 00 NVAL ^	5 00	6 00	7 00	00 00	500	(Randamia	nte me
o Messa o Cor	ge Data 1 00 TRANS sptant in scions int - NUMB	2 00 MISSIO terval terval ER OF M	3 00 N INTER 250 From 5 RESSACE	4 00 NAL ^	5 00	6 00	7	8 00	500	(Randumi	e beta mg
o Messa O Cor O Rat	rge Data 1 00 TRANS rstant in storn int - NUMB rd out a	2 00 Interval terval ER OF M	3 00 N INTER 250 From 50 RESSAGE	4 00 NAL ^ ES ^ -	5 00	6 00	7 00	00 5 To	500		Randomi	ar Data
o Messa O Cor O Rati	rge Deta 1 00 • TRANS rstant in storn int • NUMB id out a — BURS	2 00 terval terval ER OF M fixed nu traces	3 00 N INTER 250 From 2 RESSACE mber of	4 00 NVAL ^ ES ^	5 00	6 00	7	8 00	500	(Randomi	e Data
 Messa Cor Ran Sen Sen 	ige Deta 1 00 TRANS istant in idom int - NUMB id out a - BURS istant b	2 00 sterval terval terval terval terval troved nu troved nu troved nu troved nu	3 00 NINTER 250 From 5 ESSACE mber of	4 00 NAL ^ ES ^ -	5 00	6	7 00	8 To	500	(Randomi	me me
5 Messa 0 © Cor 0 Ran 0 Ran	ge Deta 1 00 TRANS stant in dom int NUMB id out a - BURS istant b	2 00 Iderval terval ER OF M fixed nu it size unst size	3 00 NINTER 250 From 5 RESSACE mber of	4 00 NAL ^ messag	5 00	6	7	8 00	500		Randomi	ma
o Messa 0 ● Cor O Ran ● Cor 0 Ran	ge Data 1 00 TRAAE Instant in NUMB Id out a BURS Instant b Idom bu	2 00 IMESSIO Iterval ER OF N fixed nu rst size	3 00 NINTER 250 From Si essado mber of 1 From	4 00 0 ES ^ - messag	5 00	6	7	8 00 5 <u>To</u>	500		Randpino	mi mi
S Messa 0 Cor O Ran Sen O Ran	ige Data 1 00 - TRANS istant in idom int - NUMB id out a - BURS istant b idom by	2 00 Iterval ER OF N fixed nu T SIZE / unst size	3 00 NINTER 250 From 5 MESSAGE mber of 1 From	4 00 0 ES ^ - messag	5 00	6 00	7	8 00 5 To	5		harduni	e Deta
S Messa 0 Cor Cor Ran Sen Cor Ran	INCOMENTATION INCOMENTATIONI INCOMENTATIONI INCOMENTATIONI INCOMENTATIONI INCOMENTATIONI INCOMENTI INCOMENTATIONI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTATI INCOMENTATI INCOMENTATI INCOMENTATI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTATI INCOMENTI INCOMENTI INCOMENTI INCOMENTI INCOMENTATI INCOMENTI INCOMENTI INCOMENTATI INCOMENTI INCOMENTATI INCOMENTATI INCOMENTATI INCOMENTATI INCOMENTATI INCOMENT	2 00 Iterval terval ER OF N fixed nu It size	3 00 NINTER 250 From 32 RESSACI mber of Prom	4 00 0 ES ^ messag	5 00	6	7 00	8 00 5 To	5		Randjeni	e Deta

Now you can configure your traffic generator.

I edited:

Name: MyTestDataGen

CHANNEL: CAN 2



CAN IDENTIFIER: Selected "Scan Identifier" from 101 to 105

Random data length: True

Random message data: True

Transmission interval: 250ms

Press "Create"

CAN 1 Ul Streams CAN 1 Streams data and status to the user interface CAN 2 CAN 1 - Out CAN 2 CAN 1 - Out CAN 3 CAN 2- Out CAN 2 CAN 2- Out CAN 500 kbit/s Can 500 kbit/s	\times	- 0	\$ © 🗖	Kvaser CanKing		088	
CAN 1 CAN 500 kbits CAN 2 CAN 2 CAN 2 CAN 1 - Out CAN 1 - Out CAN 300 kbits MyTestDataGen CAN 2 - Out CAN 2 - Out CAN - 500 kbits CAN 2 - Out CAN - 500 kbits CAN 2 - Out CAN - 500 kbits CAN - 500 kbits				Target 😒	+	$+$ Source \sim	œ
CAN 2 CAN 500 kbr/s CAN 1 - Out CAN 500 kbr/s MyTestDataGen CAN 2 - Out CAN - 500 kbr/s CAN - 500 kbr/s Log Terminal X 00 Log Level ∨ Time Type Category Message				d status to the user interface	UI Streams Streams data and	CAN 1 CAN - 500 kbit/s ノ 白 〇 点 ³	
MyTestDataGen CAN 2 · Out Image: Canonic constraints Canonic constraints Log Terminal X Displayed Time Type Category Message					CAN 1 - Out CAN - 500 kbit/s	CAN 2 CAN - 500 kb/l/s ノ 音 〇 点	
Log Terminal X 00 Log Log Log X Time Type Category Message]	CAN 2 - Out CAN - 500 kbit/s	MyTestDataGen	
X () Log Level ∨ Time Type Category Message						Log Terminal	
Time Type Category Message						X [] LogLevel V	
	^		Message	Category	Туре	Time	
2024-04-30119-30, 11:4532 IIIIO Canvingservice services measure Measurement has stopped			measurement has stopped	canvingservice.services.measure	mio	2024-08-30109-30.11.4332	
2024-08-30T09:51:20.951Z Info CanKingService.Services.Measure Measurement has started	- 1		Measurement has started	CanKingService.Services.Measure	Info	2024-08-30T09:51:20.951Z	
2024-08-30T09:56:05.464Z Info CanKingService.Services.Measure Measurement has stopped			Measurement has stopped	CanKingService.Services.Measure	Info	2024-08-30T09:56:05.464Z	
2024-08-30T10:05:03:332Z Info CanKingService.Services.Measure AddedDataSource			AddedDataSource	CanKingService.Services.Measure	Info	2024-08-30T10:05:03.332Z	
4						()	

CanKing have now added the Traffic Generator: MyTestDataGen

It shows in the measurement setup, with a connection to the "CAN 2 – Out"

9.6 Step 5 – Explore Trace Window

- Switch to Workspace
- Start the measurement

Wwitspace 1 +									
≡ × 00 ¥	Council All 🗸	Variation							
Message	Channel	14	Flags	DLC	Data		Time		
	CAN 2	00000163		3	21 00		9.500		
	CAN 1	00000104		6	12 17 17 AT 4	6 CB	9.750		
	CAN 2	00000104		6	82 17 83 AL 4	6 CE	9.750		
	CAN 1	00000105		4	02 37 DF #1		10.000		
	CAN 2	00000105		4	02 37 DF #5		10 000		
	CAN 2	00000101		6	58 A0 09 A7 8	1 #2	10.250		
	CAN 1	00000101		.6	18 AD 09 AT 8	1.82	10.250		
	CAN-1	00000102			19 18 10		10.500		
	CAN 2	00000102		3	49 43 40		10.500		
	CAN 2	00000163		.8	14 32 39 44 8	0 18 1# 17	10.750		
	CAN 1	00000348		8	14 12 21 44 1	D 18 17 17	10.750		
+ K	i i Herbitati i			-	ant estate en a tre	See and the second second	10	+	
Log Termin#									
X III Leptond V									
Time Journal of Tolky	32.3042 B	ype U	Calegory Carocoglevics	services	Mess	inge Landringens Tours Socialization			
2024-08-30T10-07-36-078Z Info		no	CankingService.	Services	Measure, Meas	e. Measurement has started			
2024-08-30710-07	45.068Z In	60	Cankingfervice	Services	Measure. Meas	oure. Measurement has stopped			
2024-08-30710111	57.5272 M	fo	CankingService.	Services	Measure. Meas	urement has started			
· Boltanie occurring literature and a local			and the second						

The "Trace Window" will now show the CAN bus data.

Please feel free to play around with the Trace controls.

9.7 Step 6 – Close CanKing

Important! Before closing CanKing, please remember to SAVE your project.



10	Quick	Button Guide
F1		
F2		
F3		
F4		
F5		
F6		
F7		
F8		
F9		Start Measurement
F10		
F11		Toggle Full Screen Mode
F12		Stop Measurement
Ctrl +		Zoom In
Ctrl -		Zoom Out
Ctrl 0(zero)	Zoom Reset
Ctrl N		New Project
Ctrl O		Open Project
Ctrl S		Save Project
Ctrl Sh	ift S	Save Project As
Ctrl ,		Settings

11Document Revision History

Version history for "User Guide CanKing7.DOCX":

Revision	Date	Changes/Comments
1.00A	2024-09-10	Initial version