

EEP Submission Tool Manual

V 1.4

San Ramon, CA, USA



REVISION HISTORY

Ver.	Editor	Change	Date
0.1	AP	Creation	07/09/2018
0.2	AP	Corrections after feedback incorporation	27.11.2018
0.3	AP	Small editorial corrections, test container and IP	09.01.2019
		representation generation added, uploading saved work	
		described	
1.4	AP	Editorial update on changes made	24.03.2022

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	Introduction



1. Introduction

1.1. General

The EEP Submission Tool is a web-based application, which helps companies designing and submitting a new EEP according to the requirements of a new or redesigned EnOcean device. As EEPs are the fundament of interoperability between EnOcean devices of all different manufacturers, profile definitions have to be clear and understandable.

The tool guides the user through the design of the EEP with the goal to reduce the workload for him and the approval process. Xml-data required for automated reading by gateways or development tools will be generated as well as a representation in a pdf file, the test containers and the IP representation.

It is mandatory to read the EEP-Guidelines in [1] to be able to define an EEP, which will be accepted by the EAC.

If you need support for defining an EEP please contact your module manufacturer or Graham Martin <u>graham.martin@enocean-alliance.org</u> who can help you finding a paid consultant. If you need help with the usage of the EEP tool or you want to report a bug, please contact Armin Pelka by mail <u>certification@enocean-alliance.org</u>.

1.2. System requirements

The EEP Submission tool is a web-based application and is optimized for the following browsers:

- Google Chrome
- Firefox
- Opera

It is NOT recommended to run the EEP-tool via Internet Explorer. Verification was not successful.

If not all data fields are shown on your screen, scroll down, please.

1.3. Terms & Abbreviations

1BS – EnOcean 1 Byte Communication

4BS – EnOcean 4 Byte Communication

Choice – Unique identification of EnOcean radio telegram types (RPS, 1BS, 4BS ...); equivalent with RORG

Client – Bidirectional SMART ACK Device

Data – Payload of ERP telegrams or ESP packets

EAC - EnOcean Equipment Profiles Approval Committee

EEP – EnOcean Equipment Profiles

ERP – EnOcean Radio Protocol

ESP – EnOcean Serial Protocol



EURID – EnOcean Unique Radio Identifier, a unique and non-changeable identification number assigned every EnOcean transmitter during its production process.

HTML – Hyper Text Markup Language; HTML can be displayed using a internet browser

MMI – Man Machine Interface

MSC – Manufacturer Specific Communication

ORG – Organizational number for EnOcean radio telegram types (out-dated with EEP 2.1; used for ESP2 interface)

RECOM – Remote Commissioning

REMAN – Remote Management

RMCC – Remote Management Control Commands

RORG – Radio ORG = organization number for EnOcean radio telegram types (new with EEP 2.1); equivalent with 'Choice'

RPC – Remote Procedure Calls, used in Remote Management

RPS – EnOcean telegram type for Repeated Switch Communication

SMART ACK – SMART Acknowledge EnOcean standard for energy-optimized bidirectional transmission

TWG – EnOcean Alliance Technical Working Group

VLD – EnOcean Variable Length Data telegram

XML – Extensible Markup Language; designed to transport and store data

XSL- Extensible Stylesheet Language; XML based language to visualize XML (data)

1.4. References

[1] EnOcean Equipment Profiles, EnOcean Alliance https://www.enocean-alliance.org/eep/

[2] Smart Acknowledge specification, EnOcean Alliance https://www.enocean-alliance.org/smartack/

[3] Security of EnOcean Networks specification, EnOcean Alliance https://www.enocean-alliance.org/sec/

[4] Remote Management, EnOcean Alliance https://www.enocean-alliance.org/reman/

1.5. EEP approval process

The EEP approval process is described in [1].



2. Basic screen description

This chapter describes principles and screens for all supported actions.

2.1. Home screen

To start the design of an EEP, enter the home URL of the EEP submission tool http://enocean-alliance.org/eep/submission/tool/

In the current version, no authentication is necessary. This is planned for future releases.

PL	EEP tool	enocean alliance Building Smarter Connectivity
Select your action		
Create new unidirectional VLD profile		
Add a new family member to an existing V	/LD	
Create a new VLD family		
Upload a saved work file		
If you need support for defining an EEP please contact y If you need help with the usage of the EEP-Tool or you v	your module manufacturer. want to report a bug. please contact <u>Armin Pelka.</u>	

The user can select his desired action:

- <u>Create a new unidirectional VLD profile</u> Use this to create a new single VLD profile, not a family.
- <u>Add a new family member to an existing VLD</u> Use this to add a new family member to an existing VLD profile. In the next step, the family function number can be set and new type(s) can be created. If the family is not in the data base, use the "Create a new VLD family" button and enter all data for this family member there. We do not import all the legacy data in the data base.
- <u>Create a new VLD family</u> Creation of a new VLD profile family (new VLD function number)
- <u>Upload a saved work file</u> The user selects a saved work file in order to return to a previous item of work, so there is no need to repeat the whole process if a change is needed.



2.2. Submitter data

For all actions, the user starts by filling in the submitter data.

	Create a new profile	e enocean alliance
Submitter data		Building Smarter Connectivity
Alliance member *		
Company	l	
Contact person		
Mr/Mrs		
Email address		
E-mail		
Telephone number		
Telephone		
		Home page Next
User manual		

- <u>Alliance member</u>: The name of the company.
- <u>Contact person</u>: The name of the submitter.
- <u>Email address</u>: company or submitter email.
- <u>Telephone number</u>: company or submitter phone number.

All data should be filled in. This will facilitate the processing of the submission by the EAC and the TWG.

Pressing "Next" will progress to the next page, pressing "Home page" will go back to the home screen. The reader can go to the appropriate chapter for his action, but in the next chapter, the principle of creating an EEP will be explained first.



2.3. Array definition

This chapter is valid for all actions supported by the EEP-tool, and the process of creating the array definition of commands - or parameters - is the same. The following description uses the example to create a new profile data, but it is also valid when creating a new VLD family or adding members to an existing one.

The idea of designing the EEP is that pre-defined keys of EEPs existing already can be selected and reused. All pre-defined keys are in the data base and the user may select an existing key or, as an exception, add a new key if she/he does not find a fitting one for her/his entry. By working with pre-defined keys, the advantage is that automatically an IP-Representation is available when defining the array structure of a profile.

Offset	Key	Size	Description	Range min	Range max	Scale min	Scale max	Unit	Enum	trigger
-Select	t a key- the last	key	Add a new key					Pre	vious	Next
handle handle handle handle Heatin Heatin Hemis Hour Humic	Closed Closed Copene TiltedC g gChanr phere ity lityCont	Click Counte dCount ounter nel rolStatu oint shold ityFlag ide	r er IS	▲	When availa alpha appro	n the drop able pre-d ibetical or opriate on	-down list efined key der and th e.	is sele s will b e user	ected, a be show can se	list of vn in lect the



After a key is selected via the drop-down list, a new row will be filled with correlating default values.

Offset	Key	Size	Description	Range min	Range max	Scale min	Scale max	Unit	Enum	trigger	
0	temperature	8	Measurement of Temperauture	0	255	0	255	°C			Û

- <u>Offset</u>: This field is automatically calculated by the EEP-Tool depending on the size of the previous rows. It shows the bit offset of the entry.
- <u>Key</u>: Is the name of the selected pre-defined key. This field shall only be edited when adding a new key.
- <u>Size</u>: Size in Bits of the entry. Default is 8, value may be corrected by the user.
- <u>Description</u>: This is the description of the pre-defined key, which is stored in the data base. The description can be edited for a clearer view.
- <u>Range min</u>: The field contains the minimum data value of the entry. In most cases it starts with 0, but may be edited for other values.
- <u>Range max</u>: The field contains the maximum data value of the entry, depending on the adjusted size. In most cases it is the maximum value 2^(size), but may also be a different value.
- <u>Scale min</u>: Minimum scale value is the representation of the Range min entry in the unit of the entry. For temperature profiles, it is the minimum temperature of the profile. Floating point numbers are allowed.
- <u>Scale max</u>: Maximum scale value is the representation of the Range max entry in the unit of the entry. For temperature profiles, it is the maximum temperature of the profile. Floating point numbers are allowed.
- <u>Unit</u>: Is the unit of the entry. For a temperature it is in °C.
- <u>Enum</u>: This field is used for enum entries. It is important to use the following format:
 <enum value>: <enum text> Example: 0: contact open
 It is also possible to enter ranges of enums in the following format:
 <enum value min> ... <enum value max>: <enum text> Example: 17 ... 31: reserved
 It is allowed to fill the enum field also when entries in the Range and Scales fields are made for entries, where we have additional enums to range fields.
- <u>Trigger</u>: select this field if this entry may trigger a telegram transmission.

Offset	Key	Size	Description	Range min	Range max	Scale min	Scale max	Unit	Enur	n	trigger	
0	temperature	8	Measurement <u>of</u> Temperature	0	250	-20	60	°C	255 •	Sensor : not 🛛 🐼 🛍 present	x	Û

After editing, the entry may look like this:



If it is necessary to add a new key, which really should be an exception, this can be done by pressing the "Add a new key" button.

The offset of the new row will be calculated by the size of the previous row(s). If it is necessary to have unused bits in the definition of the profile, just set the size of this row and keep all other columns empty.

If a new key has to be defined, enter the key with its name and fill all the other columns accordingly. Please note that, at this point, the new key will not be stored in the database. This new key will be added only after the release of the submission.

A whole row can be moved up and down by dragging the blue arrows and drop it where it shall become. To delete a row use the red waste box icon.

Anaya			1	1	1				1				
Offset	Data	Size	Description	Range min	Range max	Scale min	Scale max	Unit	Enum		trigger		
0	Humidity	8	Measurement of Relative Humidity	0	200	0	100	%	255 : Sensor not present	6		Û	÷
8	Temperature	10	Measurement of Temperature	0	800	0	80	°C	1023 : Sensor not present	6		Û	÷
18	Particulate Matter 10um	9	Measurement PM10	0	510	0	510	ug/m3	511 : Sensor not present	C 💼		ð	÷
27	Particulate Matter 2.5um	9	Measurement PM2.5	0	510	0	510	ug/m3	511 : Sensor not present	6		Û	÷
36	Particulate Matter 1um	9	Measurement PM1	0	510	0	510	ug/m3	511 : Sensor not present	6		Û	÷
45	НСНО	11	Measurement HCHO	0	2000	0	2000	ppb	2047 : Sensor not present	C 💼		Û	÷
56	TVOC	16	Measurement of TVOC	0	65000	0	65000	ppb	65535 : Sensor not present €	6		Û	÷
72	CO2	14	Measurement of CO2	0	10000	0	10000	ppm	16383 : Sensor not present	6		Û	÷
86		2	Not Used(=0)						H			۵	•

The following example screen shot shows the array definition for profile D2-14-59:



2.4. Summary

When all definitions are made, a summary will be shown and the files needed for the submission can be created.

RORG				D2	VLD Tel	egram			
FUNC				14	Multi Fu	nction Sensors			
TYPE				59	indoor N HCHO a	ultisensor with to nd TVOC	emperature, hum	idity, PM, CO2,	
Description Indoor Multis Data exchang Direction: to Mdressing: t Communicat Trigger descr Trining descr	ensor with t roadcast. ion trigger: d iption: Hearl iption: Send	emperature, humidily, PM, CO2, HCHO and vent_time_trigger, beat and On Change. ng intervals are device specific.	TVOC.						
Offset	Size	Data	Description	Valid Range		Scale	Unit	Trigger	
				Enum:					
		11		0 200 :	0	100	%	_	
D	8	Humidity	Measurement of Relative Humidity	201 254 :	Res	Reserved			
				255 :	Sen	sor not present		_	
				Enum:					
				0800:	0.	80	°C		
6 10	10	Temperature	Measurement of Temperature	801 1022 :	Re	served		-	
				1023 :	Se	nsor not present	t		
				Enum:					
18 9	9	Particulate Matter 10um	Measurement PM10	0 510 :	0 51	0	ug/m3	-	
				511 :	Sensor	not present		-	
				Enum:					
27	9	Particulate Matter 2.5um	Measurement PM2.5	0510:	0 51	0	ug/m3	-	
				511 :	Sensor	not present		-	
				Enum:					
36	9	Particulate Matter 1um	Measurement PM1	0 510 :	0 51	0	ug/m3	-	
				511 :	Sensor	not present		_	
				Enum:					
45		4040	Management HCHO	0 2000 :	٥	2000	ppb		
40		ncho	Measurement nChO	2001 2046 :	F	leserved			
				2047 :	S	ensor not prese	nt		
				Enum:					
58	18	TVOC	Massurement of TUOC	0 65000 :		0 65000	ppb		
	10	1100	measurement of 1 VOC	65001 65534	:	Reserved			
				65535 :		Sensor not pre	sent		
				Enum:					
70		000	Manual (000	0 10000 :		0 10000	ppm		
12	14	002	measurement of CO2	10001 16382	:	Reserved			
				16383 :		Sensor not pre	sent		
86	2	Not Used (= 0)							



2.5. Saving all necessary files for EEP submission



- <u>Previous:</u> If a mistake is found or a change is needed, the user can go back one step and re-do it. Do NOT use the "back" button of the browser, otherwise all the entered data is lost. Only use the "previous" button of the tool to navigate back.
- <u>Home page:</u> Return back to home interface. All entered data is lost!
- <u>Save work:</u> Save the current work as .xml file on the local PC. This file may be used when the submitter later wants to return back to his work. It is required by the EAC to make final changes. This file is part of the submission of the proposal.
- <u>PDF:</u> A PDF file will be generated and shown in a new tab, but WITHOUT being saved locally. It may be saved in next step using save PDF button. The PDF file is part of the submission of the proposal.
- <u>XML:</u> An XML file will be generated and saved on the local PC. This file can be used for testing of the application with tools like Dolphin View. The XML file is part of the submission of the proposal.
- <u>Test container</u>: An XML file will be generated and saved on the local PC. This file can be used for testing of the application with the Profile Checking too. The test container file is part of the submission of the proposal.
- <u>IP representation</u>: A PDF file will be generated and saved on the local PC. This file is part of the submission of the proposal.

If there are more than one types of an EEP defined, the test container and IP representation files will be packed each in a zip file.



RORG	D2	VLD Telegram
FUNC	14	Multi Function Sensors
ТҮРЕ	59	indoor Multisensor with temperature, humidity, PM, CO2, HCHO and TVOC

 $\frac{\text{Description}}{\text{Indoor Multisensor with temperature, humidity, PM, CO2, HCHO and TVOC. .$

<u>Data exchange</u> Direction: to. Addressing: broadcast. Communication trigger: event_time_trigger. Trigger description: Heartbeat and On Change. Timing description: Sending intervals are device specific.

Offset	Size	Data	Description	Valid Range	Scale	Unit	Trigge
0	8	Humidity	Measurement of Relative Humidity	Enum:			
				0 200 : 0 1	00 %		
				201 254 :Reserv	ved	_	
				255 : Senso	r not preser	nt	
8	10	Temperature	Measurement of Temperature	Enum:			
				0 800 : 0	80 °C	;	
				801 1022 :Rese	rved		
				1023 : Sens	or not prese	ent	
18	9	Particulate Matter 10um	Measurement PM10	Enum:			
				0 510 :0 510	ug/m3		
				511 : Sensor n	ot present		
27	9	Particulate Matter 2.5um	Measurement PM2.5	Enum:			
				0 510 :0 510	ug/m3		
				511 : Sensor n	ot present		
36	9	Particulate Matter 1um	Measurement PM1	Enum:			
				0 510 :0 510	ug/m3		
				511 : Sensor n	ot present		
45	11	нсно	Measurement HCHO	Enum:			
				0 2000 : 0	.2000 p	pb	
				2001 2046 :Res	erved		
				2047 : Sen	isor not pres	sent	
56	16	тиос	Measurement of TVOC	Enum:			
				0 65000 : 0	65000	ppb	
				65001 65534 :R	leserved		
				65535 : S	Gensor not p	resent	
72	14	C02	Measurement of CO2	Enum:			
				0 10000 : 0	10000	ppm	
				10001 16382 :R	leserved		
				16383 : S	Gensor not p	resent	
86	2	Not Used (= 0)					

Example of a PDF file generated be the EEP-Tool



2.6. EEP submission

Please submit the

- generated .xml file,
- the .pdf file,
- the test container file
- the IP representation file AND
- the saved work file

to the EnOcean Alliance EEP Approval Committee (EAC) via e-mail (<u>eep-proposal@enocean-alliance.org</u>).

The submission will be rejected if incomplete!

You may add a .pdf file acting as annex for this profile explaining the product or properties, e.g. providing diagrams or photos etc., to facilitate the understanding of the proposal by the EAC.



3. Create a new unidirectional VLD profile

This chapter describes all screens for creating a new unidirectional VLD profile, which is no profile family.

After filling in the submitter data (see chapter 2.2.), the profile metadata has to be defined.

3.1. Profile metadata

	Create a new profile	e	enocean alliance
Profile metadata			Building Smarter Connectivity
Teach in method			
Universal teach-in (UTE)	~		
Function*			
FF Lights, Temperature, Humidity,			
Туре'			
FF Sensor for Temperature, Mechanic	cal Handle,		
Description*			
description			
		Previous	Next
User manual			

In this screen, the user defines the **profile metadata**.

- <u>Teach-in method</u>: it can be UTE or Smart-Ack teach-in.
- <u>Function- and Type-Numbers</u>: If they are known while entering the submission, they shall be entered here. Otherwise keep the default "FF" and the EAC will assign the numbers during the approval process. Never invent own numbers!
- <u>Function title</u>: If you add a further type of an existing function EEP, copy the same text here. If you assume that a new function will be assigned, find a proper text i.e. the headline or overview of the product



- <u>Type title</u>: finding the text for the type is the responsibility of the submitter. Find a proper description of this special type of device.
- <u>Description</u>: This is the description of this specific type. It would be good to describe the properties of the profile or changes to other types of the same EEP.

3.2. Functionality definition

	Create a new profile	enocean alliance
Functionality definition		Building Smarter Connectivity
telegram definition		
Adressing		
Broadcast		
Communication trigger		
Event trigger		
 Time trigger 		
Event and time trigger		
trigger communication description*		
Trigger description		
timing description		
response time description		

The next step is **functionality definition**, where the submitter defines the telegram characteristic and array structure.

- Addressing: This cannot be changed and is always broadcast.
- <u>Communication trigger</u>: Definition of when a telegram will be sent. This could be an event (i.e. temperature change or pressing a key, a time (heartbeat timeout), a combination of both.
- <u>Trigger communication description</u>: Detailed description of under what conditions a telegram will be sent.
- <u>Timing description</u>: Detailed description about the timing of the telegrams if a time trigger is selected. The timing is to be defined in [ms].

Then the submitter defines the array structure. See chapter 2.3.

When this is done, the summary will be shown and all necessary files for the submission can be created. See chapters 2.5. and Ohow to submit the designed EEP proposal.



4. Add a new family member to an existing VLD

This chapter describes all screens for adding a new family member to an existing VLD family. After filling in the submitter data (see chapter 2.2.), the profile data has to be defined.

4.1. Profile data

Profile data	Add a new family member	enocean alliance Building Smarter Connectivity
Profile		
D2 - Select a function - - Select a function - 00 01 02 03 04 05 06 07 0A 10 11 11 14 15 20 30 31 32 33 34	Previous	Next

In this screen the user defines the **profile data**.

- <u>Select a function</u>: The user has to select the function number of the existing VLD profile family she/he wants to add a new type. Not all existing families are currently in the data base refer to EEPs in the EEP-Viewer, please. If the family does not appear, return to the home screen and chose "create a new family" to perform the submission process with this action.
- <u>Direction</u>: either unidirectional or bidirectional for the new type to add.
- <u>Set the profile</u>: After setting the profile by pressing the button *set the profile*, the profile data of the family will be shown. The commands and parameters of the existing data will be listed.

Note: when selecting an extensive family of profiles it might take a few seconds until all data are loaded by the EEP-Tool. You might be required to scroll down.



Next step is to add a new type to the family by pressing the "Add type" button.

Add a new type			
Delete the added type			
Command overview			
commands/types	00	01	02
Status of monocolor LED controller	x	-	P
Status of RGB LED controller	-	х	C
Add a new command			

The type number can be edited. As default, the next available type number will be set.

Command overview			
commands/types	00	01	02
Status of monocolor LED controller	x	-	P
Status of RGB LED controller	-	x	0
Enter command name) -	-	X
Add a new command			
Delete the last command			

Now it is possible to add a new command to the new type by pressing the "Add a new command" button. Edit the new command name and set the check boxes of the new type column for that command, which the new type will support. It is possible to delete the last command by pressing the "Delete the last command" button.



Parameter overview			
parameterstypes of	00	01	02
4Phenylcyclohexene	х	x	P
AbsoluteRelativePowerUsage	-	x	O
Acetaldehydeue	-	x	0
AceticAcid	-	х	0
ButtonA0	х	x	0
buttonRight	х	х	0
DateDayMonth	х	х	0
DaylightHarvesting	х	x	X
DemandResponse	х	x	O
Dim value	х	-	x
dimValueBlue	-	х	0
dimValueGreen	-	x	0
dimValueRed	-	x	0
LEDOutputEnabled	x	-	O
Msgld	х	x	
Occupancy	x	х	O
Status tx reason	х	x	G

Now it is possible to add a new parameter to the new type by selecting an existing key. If there is no existing key possible, you can add a new key by pressing the "Add a new key" button. Edit the new key name and then set the check boxes of the new type column for those parameters, which the new type will support. It is possible to delete the last parameter by pressing the "Delete the last key" button.

Add a new key

Each TYPE has to support all telegrams and parameters marked in its column



4.2. Functionality definition

Add a new family member	enocean alliance Building Smarter Connectivity
Type title'	
title	
Type Description*	
description	
Command: bla type: 02	
Addressing	
 Unicast Broadcast Unicast or broadcast (application specific) 	
Communication trigger	
 Event trigger Time trigger Event and time trigger Response to CMD 	
trigger event description	
Trigger description	
timing description*	
response time description	

The next step is **functionality definition**, where the submitter defines the telegram characteristic and array structure <u>for each defined command for the new type</u>.

- <u>Type title</u>: Find a proper text which summarizes the functionality of the new type
- <u>Description</u>: This is the description of the new type.
- <u>Addressing</u>: Specify if the type requests communication addressed (unicast, Adressed Data Telegram) or broadcast or application specific both.
- <u>Communication trigger</u>: Definition of when this command will be sent. Could be an event (i.e. temperature change or pressing a key, a time (heartbeat timeout), a combination of both, or a response to a previously sent CMD request.
- <u>Trigger communication description</u>: Detailed description of under which conditions this command will be sent.
- <u>Timing description</u>: Detailed description about the timing of the telegrams if a time trigger is selected. The timing is to be defined in [ms].



Then the submitter defines the array structure for each command. See chapter 2.3. When this is done, the summary will be shown and all necessary files for the submission can be created. See chapters 2.5. and Ohow to submit the designed EEP proposal.

5. Create a new VLD family

5.1. Profile metadata

	Create a new family		enocean alliance
Profile metadata			Building Smarter Connectivity
Direction			
 Unidirectional 			
Bidirectional			
Teach in method			
Universal teach-in (UTE)			
Function*			
FF Flux compensation sensor			
Description*			
This family sends data from a time machine!			
		Previous	Next
User manual			

In this screen the user defines the **profile metadata**.

- <u>Direction</u>: Define if this family has unidirectional profiles or if they are bidirectional
- <u>Teach-in method</u>: it could be UTE or Smart-Ack teach-in.
- <u>Function number</u>: If the number of the new VLD family is known at the moment of the submission, it shall be entered here. Otherwise, keep the default "FF". The EAC will review and assign the number during the approval process. Don't invent own numbers.
- <u>Function title</u>: Find a proper text which summarizes the functionality of the new family
- <u>Description</u>: This is the description of the profile family.



5.2. Tables definition

	Create a new family
Tables definition	
Number of types*	
Number of types*	
Number of commands*	
Number of commands*	
Number of parameters'	
Number of parameters*	
Command overview	
Create command table	
Parameter overview	
Create parameter table	
Each TYPE has to support all telegrams and parameters marked in its column	

In this screen the user defines the **tables** of the new family.

- <u>Number of types</u>: Enter the number of family members.
- <u>Number of commands</u>: Enter the number of commands this family will have. It is allowed that a family or single members of a family have no commands
- <u>Number of parameters</u>: Enter the number of parameters for ALL members. In the next screen these parameters are available for filling in the arrays.

When all the numbers are set, press "Create command table" and "Create parameter table" to create both tables.



commandstypes of	00	01
Get current date and time		œ
Set target date and time	O	x
Parameter overview		
Create parameter table		
Create parameter table parameterstypes of	00	01
Create parameter table parameterstypes of DateDayMonth	00	01
Create parameter table parameterstypes of DateDayMonth Time24	00 (X) (X)	01 (X) (X)
Create parameter table parameterstypes of DateDayMonth Time24 Cmdld	00 (X) (X) (X) (X)	01 (X) (X) (X)

Enter all the command and parameter names and adjust the selection of commands and parameters for each type. Use existing keys by selecting and the next empty parameter field will be filled with the key selected. If defining a new key edit it in the table directly.



5.3. Functionality definition

Functionality definition	enocean alliance Building Smarter Connectivity
Type title"	
Dolorean current state	
Type Description*	
This type <u>returns the current</u> date and time <u>from the Dolorean</u>	
Command: Get current date and time type: 00	
Addressing	
Unicast	
O Broadcast	
 Unicast or broadcast (application specific) 	
Communication trigger	
Event trigger	
Time trigger	
Event and time trigger	
Response to cmd trigger	
trigger event description*	

The next step is **functionality definition**, where the submitter defines the telegram characteristics and array structure <u>for each defined command of all types</u>.

- <u>Type title</u>: Find a proper text which summarizes the functionality of the new type
- <u>Description</u>: This is the description of the new type.
- <u>Addressing</u>: Specify if the type requests communication addressed (unicast, Adressed Data Telegram) or broadcast or application specific both.
- <u>Communication trigger</u>: Definition of when this command will be sent. Could be an event (i.e. temperature change or pressing a key, a time (heartbeat timeout), a combination of both, or a response to a previously sent CMD request.
- <u>Trigger event description</u>: Detailed description of under which conditions this command will be sent.
- <u>Timing description</u>: Detailed description about the timing of the telegrams if a time trigger is selected. The timing is to be defined in [ms].

Then the submitter defines the array structure for each command. See chapter 2.3.

When this is done, the summary will be shown and all necessary files for the submission can be created. See chapters 2.5. and Ohow to submit the designed EEP proposal.



6. Upload a saved work file

	EEP tool Please read the user manual before starting !	enocean alliance Building Smarter Connectivity
Select your action		
Create new unidirectional VLD profile	e	
Add a new family member to an existing	VLD	
Create a new VLD family		
Upload a saved work file		
If you need support for defining an EEP please contact y	your module manufacturer.	
If you need help with the usage of the EEP-Tool or you v	vant to report a bug, please contact <u>Armin Pelka</u> ,	

When pressing "upload a saved work file" the user selects a saved work file in order to return to a previous item of work, so there is no need to repeat the whole process if a change is needed. Then a 5th button appears to select the loaded work file and the user finds all pages filled with his saved values.