

Example – Requesting the serial number of a bus sharing unit via RPC request



RPC-ID 0x0094 – Serial number

Type: R
Description: Being requested this RPC delivers the serial number of the addressed device.

Read-Request	Parameter definition	Resolution/Offset	Data Range
RPC-ID	0x0094	-	-
param #1	Client address	1/bit / 0 offset	0...65535
param #2	-	-	-
param #3	-	-	-

Read-Response	Parameter definition	Resolution/Offset	Data Range
RPC-ID	0x0094	-	-
param #1	[MSB] = Bus address, [LSB] = Modul ID	1/bit / 0 offset	0...65535
param #2	Serial number, [MSW]	1/bit / 0 offset	0...65535
param #3	Serial number, [LSW]	1/bit / 0 offset	0...65535

How does an RPC request for the serial number work in practice? In this example you will request the serial number of two communication interfaces using PROPA00 (PGN 61184). A remote procedure request for RPC ID 0x0094 is sent to each device which acknowledges with PROPB00 (PGN 65280) as broadcast. Parameter #1 (Payload1) contains the bus address of the unit whose serial number is to be requested. Here it is address »234« (hex. 0xEA). This request must be carried out separately for each unit whose serial number is required.

Bus	CAN-ID	PGN	DLC	Symbol	Data
1	18EFFF07h	61184	8	PropA	FP_RPC_Request_Code = 0094h – read (/write) s/n
					FP_RPC_Request_Payload1 = 00EAh
					FP_RPC_Request_Payload2 = 0000h
					FP_RPC_Request_Payload3 = 0000h
					FP_RPC_Request_WriteReq = 0

In our example, we also request the serial number of the second communication interface with the address »235«. Below you can see the acknowledgements (PROPB00) of both interfaces to our requests.

Time	Bus	Type	ID/Symbol	Prio	PGN	SA	DA	DLC	Data
8,6447	1	Rx	PropB_00	3	65280	234	255	8	00 94 EA 09 00 00 00 47
28,4682	1	Rx	PropB_00	3	65280	235	255	8	00 94 EB 09 FF FF FF FF

The contents of the acknowledgement messages in detail:

Read-Response	Acknowledgement of the first request	Acknowledgement of the second request
RPC-ID	0x0094	0x0094
param #1	[MSB] = Bus address = 0xEA = 234 dec, [LSB] = Modul ID = 0x09 (Com. Interface)	[MSB] = Bus address = 0xEB = 235 dec, [LSB] = Modul ID = 0x09 (Com. Interface)
param #2	Serial number, [MSW] = 0x0000	Serial number, [MSW] = 0xFFFF = 65535 dec *)
param #3	Serial number, [LSW] = 0x0047 = 71 dec	Serial number, [LSW] = 0xFFFF = 65535 dec

*) development hardware, does not have a valid serial number, therefore 0xFFFF in this example