It is assumed in this protocol that the data would not be corrupted during the SPI communication therefore this protocol does not define integrity checks and error correction. It is also assumed that when the slave select line is de-asserted the SPI buffers in both the client and server sides are flushed, this is to prevents unknown state and possible synchronization issues.

1 Packet structure

1.1 Global Structure

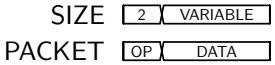


Table 1: Operation codes and values

Operation	Value(#2)	Description
CMD	00	Command Packet
D11	01	11bits identifier CAN packet
D29	10	29bits identifier CAN packet

Every packet must have a two bits packet identifier to indicate the type of the outgoing data. The table **??** contains the command codes used in this protocol to send command messages and CAN packet with an identifier of length 11 and 29.

1.2 CMD Packet

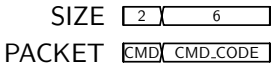
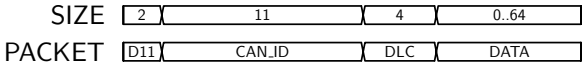


Table 2: Command codes and values

Command	Value(#10)	Description
CMD_NULL	0	Do nothing
CMD_START	1	Start data transfer
CMD_STOP	2	Stop data transfer
CMD_EOS		End of stream

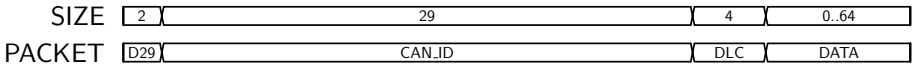
The command packet is used to initiate and indicate the current status of the transmission. The list of available commands can be seen in the Table **??**. The number of possible commands is limited to 64 as the command field is 6 bits long.

1.3 DATA11 Packet



The DATA11 packet is used to transfer a CAN packet where the CAN identifier is 11 bits long, the DLC value should be specified precisely or the transmission will go out of sync as the amount of data read and the data in the transmit buffer will be different.

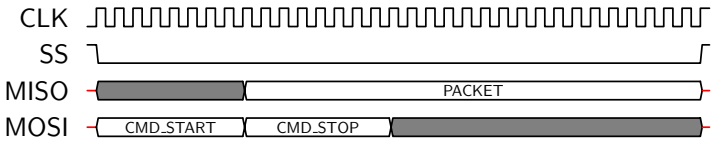
1.4 DATA29 Packet



The DATA29 is similar to the DATA11 packet however it is used to transfer the CAN packet with a 29 bits long identifier.

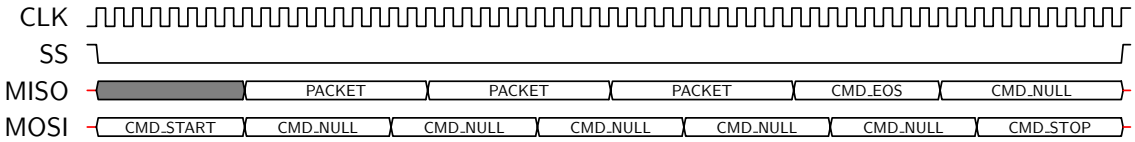
2 Transfer

2.1 Read one packet



A single packet can be read by sending the start and stop packet back to back the master will have to ensure that it finishes reading the packet before de-asserting the slave select line.

2.2 Read all packets



2.3 Read and write