



Outgoing CAN messages from client applications are received on the TX socket, each resulting in a guaranteed corresponding success/fail response (client connects with a REQ socket). The Sender-Routing thread round-robins the message between a fixed number of Sender threads (10 by default). Each sender thread processes its own queue of messages, forwarding each and waiting for a corresponding echo. If no echo is seen on the bus, the command is retried several times, and a timeout (fail) response is returned if an echo is not seen over multiple retries.

CAN messages are received on the TX/Echo socket from multiple senders, and are recorded in a table before being sent on to the RX/TX layer. For each echo received on the Echo-In socket, the recorded routing information is retrieved from the table, and the echo is sent back only to the sender of the corresponding message.

CAN messages are converted from ASCII format specific to the IXXAT device, to a `smocand_can_message_t` structure, which is used for all message queue communication, internally and with the client application. The IXXAT device is wired to detect all outgoing commands on its second physical bus connection; the resulting "echo" messages are separated from the incoming message stream and published on the Echo socket.

SMOCO CAN Communication Daemon (smocand)