

## 4.5 MCAPI Scalar Channels

MCAPI scalar channels are used to transfer 8-bit, 16-bit, 32-bit and 64-bit scalars on a connected channel. The connection process for scalar channels uses the same two-phase mechanism as packet channels. See the packet channel section for a detailed description of the connection process.

The MCAPI scalar channels API provides only blocking send and receive methods. Scalar channels are intended to provide a very low overhead interface for moving a stream of values. In fact, some embedded systems may be able to implement a scalar channel as a hardware FIFO. The sort of streaming algorithms that take advantage of scalar channels should not require a non-blocking send or receive method; each process should simply receive a value to work on, do its work, send the result out on a channel, and repeat. Applications that require non-blocking semantics should use packet channels instead of scalar channels. The scalar functions only support communication of same size scalars on both sides, i.e. an 8-bit send must be read by an 8-bit receive, etc.