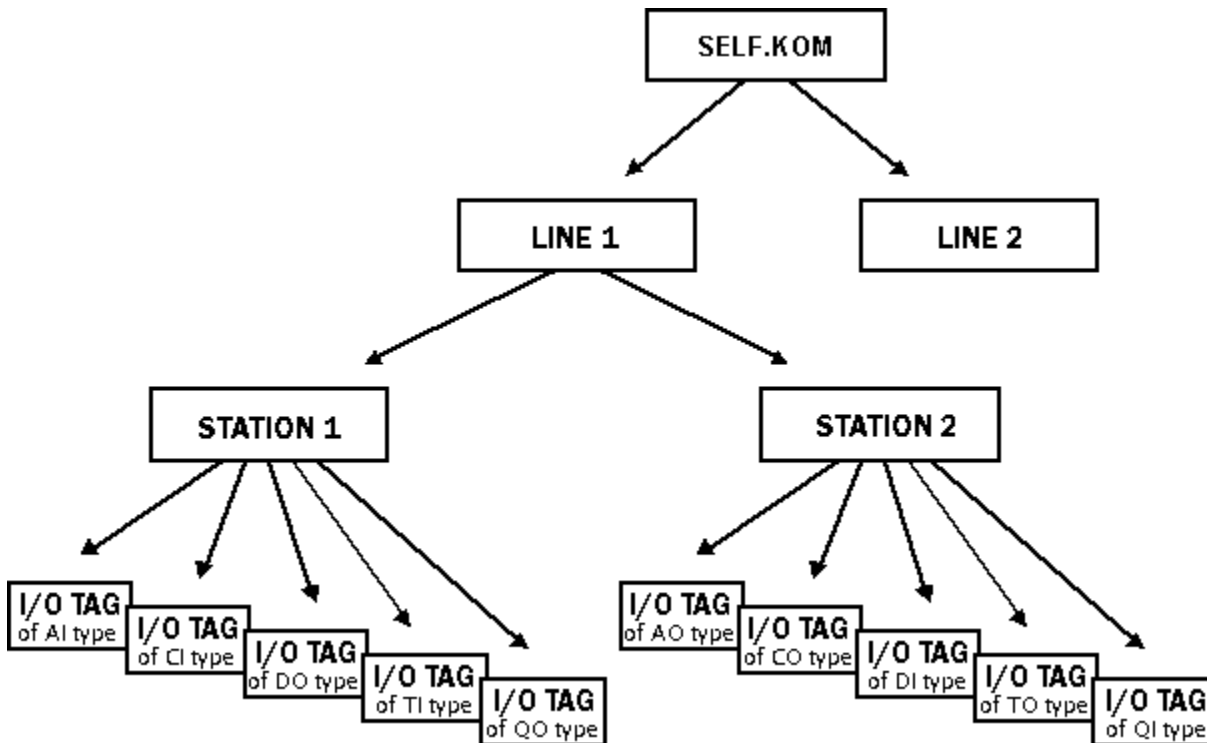# Communication Lines

## Communication lines

Lines are the objects of the D2000 system, which define parameters of the transfer via physical line (some other systems may call these "channels"). They are defined by logical names and relation to a communication process. In the system, several communication lines can be defined (although no software limitation is implemented in D2000, limits in the system may result from the maximum number of threads in the system and the capacity of available memory). For each line defined in the D2000 system, a dedicated communication subprocess (thread) is created. It independently communicates to all Stations belonging to this line. Communication on individual lines runs in parallel, the communication process is, with regard to communication lines, re-entrant.

**Note**: for some communication protocols, there may be even multiple threads per-line (e.g. sending/receiving thread for IEC 870-5-104 Client or one-thread-per-client in IEC 870-5-104 Server, or 1-4 threads in Siemens SIMATIC S7 ISO on TCP protocol to support parallel reading).

Object hierarchy - **Communication process, Line, Station, I/O Tag**



Starting with D2000 V4.0, the external communication process **EXT_KOM** is substituted by the KomAPI interface for external communication protocols, that are implemented as DLL libraries.

> **(i) Related pages:**
>
> Communication line - configuration dialog box
> Communication lines - values
> Configuration of "Ext KOM" communication lines
> Configuration of "File I/O" communication lines
> Configuration of "LonWorks" communication lines
> Configuration of "MOXA IP Serial Library" communication lines
> Configuration of "RFC2217 Client" communication lines
> Configuration of "Serial", "Serial Line Redundant" and "Serial System&Line Redundant" communication lines
> Configuration of "SerialOverUDP Device Redundant" and "SerialOverUDP Line Redundant" communication lines
> Configuration of "TCP/IP-TCP" and "TCP/IP-TCP" Redundant communication lines
>  Configuration of TCP/IP-TCP System Redundant communication lines
> Configuration of "TCP/IP-UDP" communication lines