Communication with I/O Devices

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The reliability and quality of data transfer into the D2000 system is one of the most important functional features. We pay great attention to support communication protocols and standards. We take heed to maximum reliability and debugging of data transfers by means of communication tests in an industrial application environment.

Data acquisition from I/O devices of technological processes into the D2000 system is provided via the communication process D2000 KOM.

The communication process supports the following standards and protocols:

- **Serial asynchronous data transfer**
  - via physical media according to the standards RS232, RS485, RS422, TTY, M-Bus, wireless transfers, telephone modems, GSM/GPRS /3G.
  - transfer types request/response, token-passing (e.g. Profibus standard).
- **Serial synchronous data transfer**
  - for example CAN bus, DeviceNet, HDLC, and others.
- **Communication standards**
  - for example COM/DCOM OPC, OPC UA, DDE, Echelon LonTalk, DLMS.
- **PC-card**
  - for example the series Advantech Data Acquisition Card.
- **Network standards**
  - technologies TCP/IP - both IPv4 and IPv6.
- **Data exchange using shared files**

If needed, process D2000 KOM allows working in offline mode (without running Server or without connection to Server), in the KOM Archive mode and performing the acquisition and archiving of data. After automatic reconnection to Server, process D2000 KOM sends data acquired in offline mode.

Related pages:

Communication lines
Communication station
I/O Tags
KOM Archive
Communication protocols
Communication utilities

Blogs

You can read several of our blogs about communications and communication protocols.

Blogs on various communication topics:

- Communication in testing environments
- Communication Protocols in D2000
- There is browsing and browsing
- D2000 (aims for) IoT
- The (hidden) price of communication
- Communication - IPv6 protocol in D2000
- Simplification of communications during the upgrade

Blogs about specific communication protocols:

- Communication - BACnet protocol
- Communication - BACnet protocol, part 2
- Communication - BACnet protocol, part 3
- Communication - Bernecker & Rainer PLC
- Communication - DLMS/COSEM protocol
- Communication - DLMS and Iskraemeco AC750 concentrator
- Communication - DNP3 protocol
- Communication - Ethernet/IP protocol
- Communication - EthernetIP and encapsulated PCCC
- Communication - Ethernet/IP protocol in practice
- Communication - FAG SmartCheck
- Communication - General Electric SRTP (Fanuc robots), part 1
- Communication - General Electric SRTP (Fanuc robots), part 2
- Communication - Generic User Protocol.
- GPIO protocol is here to help
- Communication - HART, Modbus, and a Parrot
- Communication – protocol IEC 101 (SK)
- Communication – protocol IEC 101, part 2 (SK)
- Communication – protocol IEC 101, part 3 (SK)
- Communication – protocol IEC 104 (SK)
- Communication – protocol IEC 104, part 2 (SK)
- Communication – protocol IEC 61850
- Communication – M-Bus
- Communication – Modbus protocol
- Communication - Modbus in practice
- Communication - MQTT in practice
- Communication - Omron FINS

Device-specific blogs:

- Moxa NPort or an industrial Raspberry? You choose…
- How to - part 1 - RGB LED Control by D2000 Raspberry PI
- How to - part 2 - Raspberry Pi and DC motor
- How to - part 3 - Communication Raspberry and AI sensors
- Simatic S7-300 and D2000
- Communication - control panel of DINI ARGEO DFW06 scales
- What load can Raspberry Pi handle?
- What load can Raspberry Pi handle? Part II
- D2000 and UniPi Neuron