

a:control

Proxy / Messagebroker



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Table of contents

1. SYSTEM REQUIREMENTS	3
2. PROXY FUNKTIONALITY	5
3. SET UP PROXY	5
Settings in a:control	5
4. MESSAGEBROKER FUNKTIONALITY	6
5. SET UP MESSAGEBROKER	8
Settings in a:control	8

Note:

All screenshots and pictures of the application which are shown in this document are to be taken as examples and are subjected to the copyright of Diagraph GmbH.

1. System requirements

It's absolutely possible that the software is running without problems on differing system constellations.

The performance of the application will possibly slow down with older hardware.

Most important for a faultless application execution is enough free working memory and hard disk space.

Software	Windows 10 or higher Microsoft .NET Framework 4.8
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Printer-Hardware	Requirements
Printer model	NGT2, NGT2+, NGT4, NGT4+, NGT6, NGT6E, NGT8, NGT8E, MLi, XLU, XL5000
Connectivity	Serial or Ethernet Network

53-System

Printer-Hardware	Requirements
Printer model	53XL40, 53XL80u, 53XLC, XL5000,XL5000C
Connectivity	Ethernet

MLi-System

Printer-Hardware	Requirements
Printer model	MLi
Connectivity	Seriell oder Ethernet Netzwerk

2. Proxy Functionality

With a standard NGT printer, normally only one client can connect to port 4001 of the NGT printer. The a:Control Proxy functionality allows this connection to be cut off from other PCs. To do this, another PC connects to port 4001 of the PC that provides the port forwarding.

3. Set up proxy

- Settings in a:control

In order to activate the proxy functionality for a printer, a:control must be started as an administrator. This is the case on an a:touch device.

The screenshot shows a window titled "Printer Change values" with several tabs: "PRINTER TYPE", "CONNECTION MODE", "NETWORK CONNECTION" (selected), "CONFIGURATION", and "CAMERA". Under "Printer description", there is a checkbox "Assign name automatically" which is checked, and a text field containing "NGT (192.168.175.75)". Below this, there are two rows of settings. The first row has a "DHCP" checkbox (unchecked), an "IP" field with "192.168.175.75", and a "Port" field with "4001". The second row has a "Port Forwarding" field with "192.168.175.70" and a "Port" field with "4001". There is a "Search printer" button with a magnifying glass icon. At the bottom right, there are "OK" and "Cancel" buttons.

- A port number must be defined in the port forwarding in the printer menu.

Under this port number and the grayed out IP, which is the current IP of the a:touch device, the printer can now be accessed externally via a:control.

The a:touch has priority over the connection.

If a connection is requested on the a:touch device by selecting a printer, a possibly connected client is disconnected and the user can operate the printer with the a:touch.

- If the external connection has priority, this must be defined in the program settings.

The screenshot shows the 'Settings' dialog box with the following configuration:

- SYSTEM** (selected tab)
 - SYSTEM OPTIONS** (selected sub-tab)
 - ☐ Synchronize printer clock with PC time when connecting
 - ☐ Disconnect printer connection when leaving the printer (Logoff / Home)
 - ☐ Allow multiple printer views
 - ☐ Common AppData path
 - ☐ Search for new program version
 - ☒ Proxy priority external
 - ☐ Autostart
 - ☐ Automatic logoff
 - ☐ Message broker 192.168.175.70
 - ☐ Systray Service
 - Instance Name:** NB074
 - Keyboard:** qwertz
 - Timeout:** 120 seconds
 - Message broker port:** COM1
 - Message broker protocol:** NGT

Buttons at the bottom: OK, Cancel, Apply.

Set the proxy priority to external.

An external device that accesses the printer via port forwarding has priority.

A possible connection of an a:touch user is disconnected as soon as a data transfer via port forwarding takes place.

Please note that regular polling via port forwarding (e.g. an error status from a parent machine) does not give a user a secure option to execute commands for the printer.

4. Messagebroker Functionality

With a standard NGT printer, normally only one client can connect to port 4001 of the NGT printer.

As soon as several clients want to communicate with the printer in parallel via TCP/IP, e.g. a PLC or another user, problems arise because the connection may be blocked. The MessageBroker solves this problem by accepting any number of connections and routing them to the printer. The clients therefore connect to the message broker and not directly to the printer. The message broker distributes requests and responses from the printer and duplicates printer messages to the connected clients.

5. Set up Messagebroker

Settings in a:control

In order to be able to activate the Message Broker functionality for a printer, the Message Broker must be activated in the system settings of a:control. Please note that the connected printer must be serially connected. Once the message broker has started, multiple clients can connect to the printer at the same time.

The printer can be reached via the IP address of the a:control computer.

The screenshot shows the 'Settings' window with the 'SYSTEM' tab selected. The 'SYSTEM OPTIONS' sub-tab is active. On the left, there is a list of checkboxes: 'Synchronize printer clock with PC time when connecting', 'Disconnect printer connection when leaving the printer (Logoff / Home)', 'Allow multiple printer views', 'Common AppData path', 'Search for new program version', 'Proxy priority external', 'Autostart', 'Automatic logoff', 'Message broker 192.168.175.70' (which is checked), and 'Systray Service'. On the right, there are input fields for 'Instance Name' (NB074) and 'Keyboard' (qwertz). Below these, there are two rows of settings: a time setting of '120' seconds, and a serial port setting with 'COM1' and 'NGT' selected from dropdown menus. At the bottom, there are three buttons: 'OK' (with a green checkmark icon), 'Cancel' (with a red X icon), and 'Apply' (with a green checkmark icon).