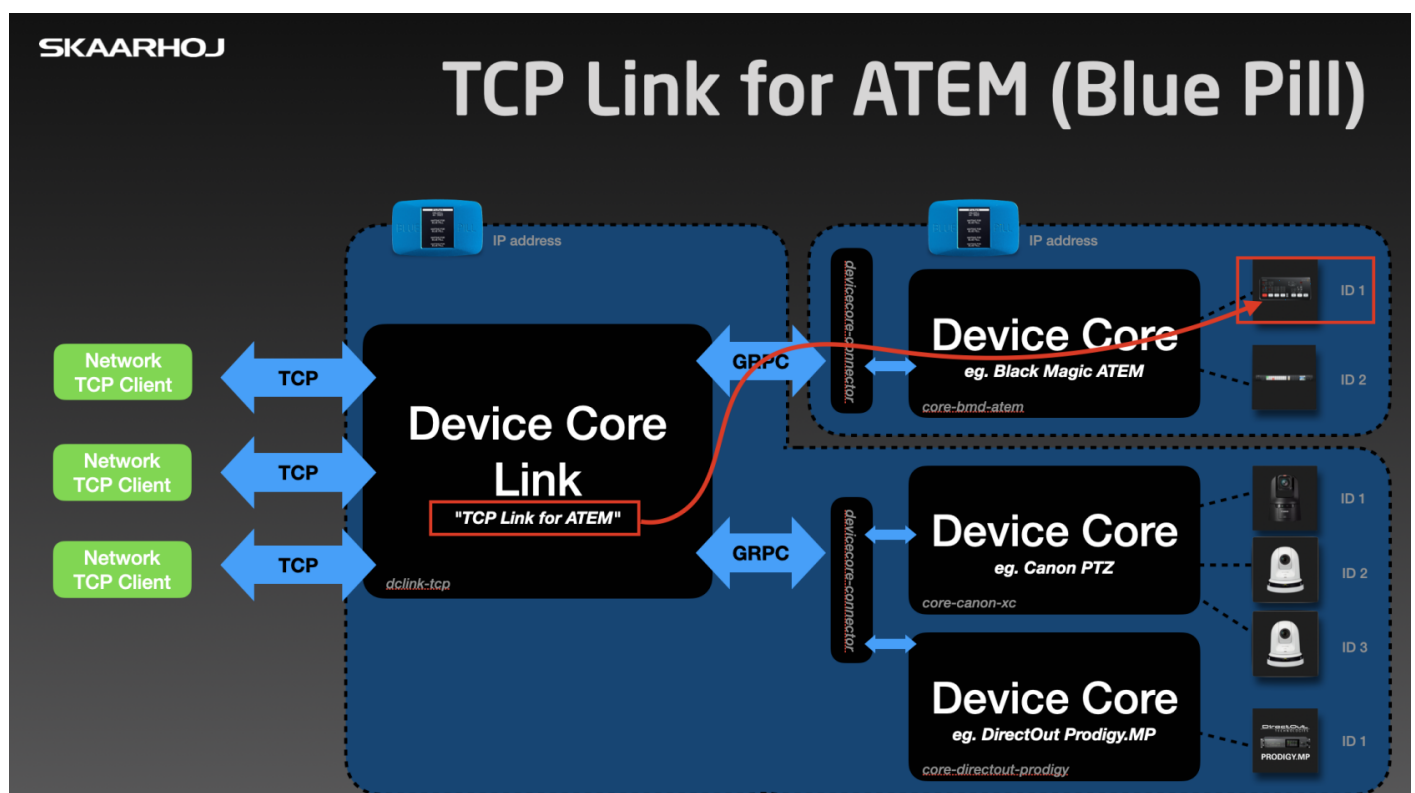


# TCP Link for ATEM (on Blue Pill)

The Blue Pill app called *dclink-tcp* has a special mode to **convert the Blackmagic Design ATEM protocol into simple TCP commands**. The focus of this is to offer a relatively compatible and more comprehensive and powerful substitute to the long term SKAARHOJ product called **"TCP Link for ATEM"** (formerly known as "ATEM-TCP Link"). The command set and general workings makes it an almost drop-in replacement for existing installations that need support for the newer ATEM switchers. This page deals exclusively with that. However, if you are about to make a **new integration with ATEM** using *dclink-tcp*, please consider to **use the more generic API** offered instead of the special mode.



*A more powerful and updated version of "TCP Link for ATEM" is available as a licensed application (*dclink-tcp*) that you can run on any Blue Pill device. In this mode, the application limits itself to a single device connection to a single ATEM switcher and maintains the legacy protocol.*

## Command Examples

Send "Cut" to ATEM M/E 1:

```
performCutME:0=1
```

Select Input 3 on Aux 1:

```
AuxSourceInput:0=3
```

Run Macro 1:

```
MacroAction:1=0
```

Generally, there is a quite nice method to spotting commands: Simply make a change in ATEM software control and a line with the change is returned in the TCP client. If you sent that line yourself, you would normally make that change to the switcher. Sending the line without the "=" will request the value (but you don't need that usually as you are "subscribed" to changes happening). Commands you can't spot like this would be such as "performCutME" since that is a one shot trigger command.

See the section below for more info on the commands and the compatibility differences.


## Setup

### Install the "dclink-tcp" application

On your Blue Pill, go to Packages and search it up, install it and start it

 Running	dclink-tcp	Device Core Link	1.0.0-pre3-test ▼
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### Check that devicecore-connector is also installed and running

 Running	devicecore-connector	connects cores to reactor on different bluepills	1.0.0 ▼
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### Enable "TCP Link for ATEM"

Click on "dclink-tcp" in Packages and you will see the config screen. Make sure TCP Link for ATEM is enabled. If you run devicecore-connector on your local Blue Pill (most likely) you can leave all the other fields alone.

TCPLinkForATEM

Enable

☒

If set: will enable legacy TCP Link for ATEM server

Friendly Name

(Used in logging)

Server Port

0

TCP for ATEM Server Port (default is 8899)

Device Core Connector

IP and port of endpoint where devicecore-connector is running. If empty, localhost:8502 will be used.

Device ID

0

Device ID, default is 1

Max Clients

0

Max number of systems allowed to connect. Zero is equal to no limits.

Lock to IPs

## Use nc, telnet or Putty to connect to port 8899 on your Blue Pill device

You should see a prompt about like this. Try to use ATEM software control to make a simple change to the inputs and you should see it reflected in the terminal window:

```
kasper — nc 192.168.11.5 8899 — nc — nc 192.168.11.5 8899 — 86...
[~ > nc 192.168.11.5 8899 x INT 32m 59s ]
Welcome to SKAARHOJ TCP Link for ATEM, version v1.0.0-pre7 (x-dc102d5) - skaaros_prod
Type 'help' + Enter to see available commands

TallyBySourceTallyFlags:0:0=1
TallyBySourceTallyFlags:999:0=0
ProgramInputVideoSource:0=1
█
```

# Commands

The original [manual for ATEM TCP Link is found here](#). Not all commands are transferred over. Assuming you are only considering the legacy "TCP Link for ATEM" for drop-in replacement of the previous product, you should simply consider the commands you are using already and nothing more. Some will be available, others may not and yet others may work slightly differently. If you are changing your software anyway, it's highly recommended to use the more generic dclink-tcp interface to control your ATEM than the legacy command set.

- If you send a command name without its parameters (those numbers separate from the command by a colon, aka "dimensions"), it will return the values of for all known parameters of that command. For example, sending "InputLongName" will return names for all input sources. This is not so on the original TCP Link for ATEM where you need to specify all parameters.
- Some parameters can only be changed on Blue Pill when other features are enabled. For example, Wipe parameters can only be changed when the current transition is Wipe.

Confirmed compatibility table:

Command	Comment
performAutoME	OK
performCutME	OK
performDownstreamKeyerAutoKeyer	OK
performFadeToBlackME	OK
PreviewInputVideoSource	OK
ProgramInputVideoSource	OK
AuxSourceInput	OK
AtemConnected	OK
TransitionPosition	OK
TransitionStyle	OK

TransitionStyleNext	OK
TallyBySourceTallyFlags	Works slightly differently, where program and preview is <i>not</i> combined into bits in a single value but rather they are second parameters (dimensions) with 1/0 value.
TransitionMixRate	OK
TransitionDipRate	OK
TransitionDipInput	OK
KeyerOnAirEnabled	OK
DownstreamKeyerOnAir	OK
DownstreamKeyerTie	OK
TransitionNextTransition	Works differently with two parameters (dimensions) instead of one
MacroAction	OK

# Licensing

**Licenses for unlimited use of TCP Link for ATEM on a Blue Pill device currently costs 299 EUR / 365 USD** (January 2024). Please contact [support@skaarhoj.com](mailto:support@skaarhoj.com) or [sales@skaarhoj.com](mailto:sales@skaarhoj.com) to place your order and get a license assigned. Remember to include your Blue Pill serial number in the request.

The dclink-tcp application will always give you about **10 minutes of free and unlimited TCP usage** after a 20-60 second quarantine period from application (re-)start. After 10 minutes you won't be able to receive or send messages over TCP. Re-starting the dclink-tcp package in the Blue Pill Web UI will reset the period.

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