BNCS Device Drivers

Atos IT Solutions and Services

Blackmagic Hyperdeck

HyperdeckDeck.exe

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BNCS

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BNCS

1 Overview

1.1 Description

HyperDeck.exe is written to control Black Magic Hyperdeck units that support IP control (firmware versions greater than 3.8).

The driver was written (configured) against version 1.3 remote control protocol.

The unit must be in REM (Remote) mode to allow external control, the driver will set this parameter when it connects.

The driver can support several units up to the maximum available slots.

1.2 BNCS configuration

This driver is compatible with BNCS V4.5 only as it uses instances.xml and device_types.xml for its configuration.

1.3 Driver PC requirements

The driver PC will require Microsoft .Net framework 4.5 installed

Neo.Lua.dll Version 0.9.11.0 or higher needs to be in the Libs folder

The file HyperDeck Studio_1.3.lua needs to be in bin/drivers with the exe

2 Driver setup

2.1 Driver launch

The driver is run up with an argument of a composite instance. <hyperdecks>

A separate info driver will also need to be run, Device ID as defined in the instance, in the case below device 605. The driver expects a slot spacing of 100. The driver can also supports multiple infodrivers as defined in the instance.

```
<instance composite="yes" id="hyperdecks">
<group id="Hyperdeck_01" instance="hyperdeck_01" />
        <group id="Hyperdeck_02" instance="hyperdeck_02" />
        <group id="Hyperdeck_03" instance="hyperdeck_03" />
</instance>
```

Where each group is an individual Hyperdeck as defined below;

```
<instance composite="no" id="hyperdeck_01" type="Hyperdeck" ref="device=605,offset=0"
address="192.168.1.94"/>
<instance composite="no" id="hyperdeck_02" type="Hyperdeck" ref="device=605,offset=100"
address="192.168.1.95"/>
<instance composite="no" id="hyperdeck_03" type="Hyperdeck" ref="device=605,offset=200"
address="192.168.1.27"/>
```

Note, that for simplicity the “location” and “Alt_ID” parameters have been removed

2.2 Driver configuration

The IP address of the Hyperdeck, to be controlled is defined in the address parameter of the non composite instance; address="192.168.1.27"

The driver is configurable, using LUA scripting, the appropriate script must be present in the folder where the driver is launched from.

The definition of the slots to be written to is defined in the appropriate devicetype.xml, an excerpt of which is below

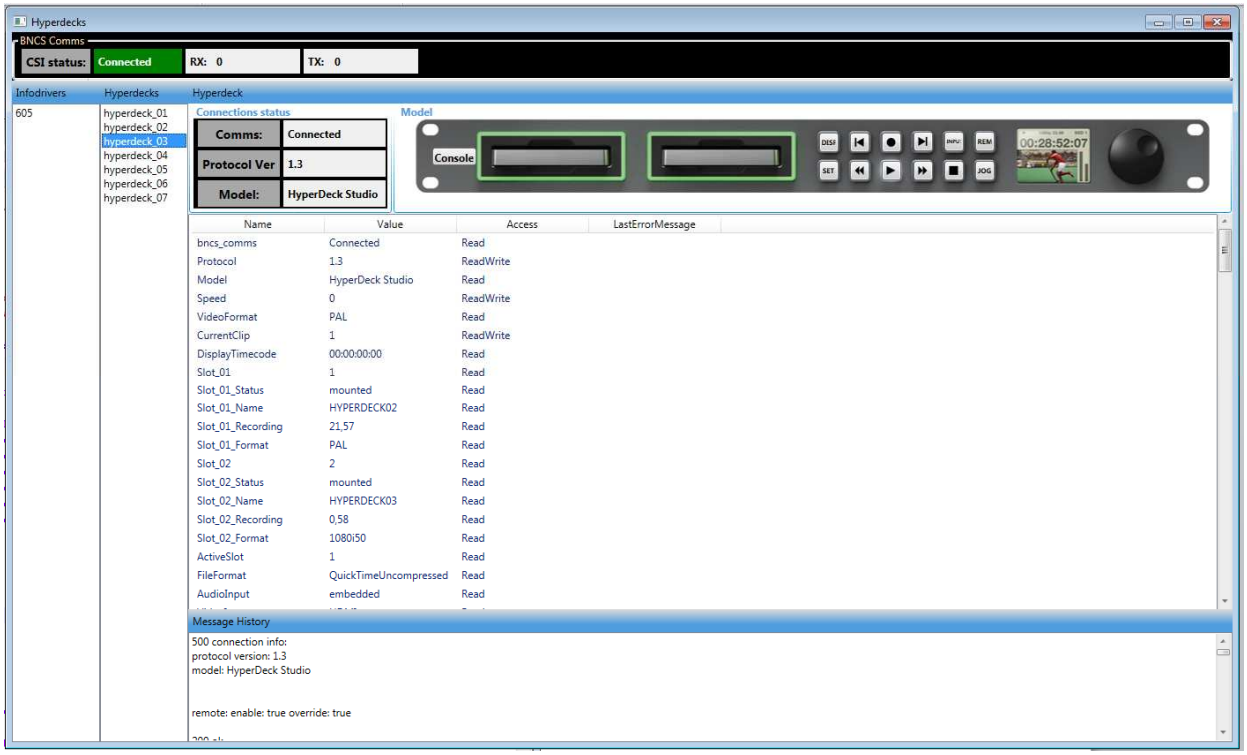
```
<device_description name="Hyperdeck">
        <param name="bncs_comms" class="enum" style="label" slot="1" access="readonly">
                <state value="0" caption="Ok"/>
                <state value="1" caption="Fail"/>
        </param>
        <param name="Speed" class="range" style="button" subclass="integer" slot="2" access="readwrite">
                <values min="-1600" max="1600" defaultvalue="100" step="1" units="fr" value="100"/>
                <display inoffset="0" units="fr" outoffset="0" dp="" multiplier="1" />
        </param>
        <param name="TransportCommand" class="enum" style="button" slot="3" access="readwrite">
                <state value="stop" caption="stop"/>
                <state value="play" caption="play"/>
                <state value="playloop" caption="playloop"/>
                <state value="forward" caption="fastforward"/>
                <state value="rewind" caption="rewind"/>
                <state value="record" caption="record"/>
                <state value="next" caption="next"/>
                <state value="previous" caption="previous"/>
        </param>
…..
        <param name="DiskClip_09" class="string" style="label" slot="59" access="read" />
        <param name="DiskClip_10" class="string" style="label" slot="60" access="read" />
        <param name="DiskClip_11" class="string" style="label" slot="61" access="read" />
        <param name="DiskClip_12" class="string" style="label" slot="62" access="read" />
        <param name="DiskClip_13" class="string" style="label" slot="63" access="read" />
        <param name="DiskClip_14" class="string" style="label" slot="64" access="read" />
        <param name="DiskClip_15" class="string" style="label" slot="65" access="read" />
        <param name="DiskClip_16" class="string" style="label" slot="66" access="read" />
        <param name="DiskClip_17" class="string" style="label" slot="67" access="read" />
        <param name="DiskClip_18" class="string" style="label" slot="68" access="read" />
        <param name="DiskClip_19" class="string" style="label" slot="69" access="read" />
        <param name="DiskClip_20" class="string" style="label" slot="70" access="read" />
</device_description>
```

Within the LUA script, which should not need any modification, the various response codes from the device are mapped to device type parameters and thus they need to match in both files.

There are no specific ini file settings required.

3 Driver GUI design

The driver GUI lists the infodrivers as defined in instances.xml and shows the hyperdecks it is connected to. If it can't locate any particular hyperdeck it will indicate "un known model"



There are windows to show the parameters and current status of those parameters along with the read write capabilities.

A further window shows the last messages sent and received to and from the device.

4 Version History

4.1 Driver version

Version No	Date	Details	Name
1.00.00	20/2/2015	Initial development and release for testing	Simon Armstrong
1.0.0.1	04/03/2015	Corrects Polling	Simon Armstrong

4.2 Document version

Version No	Date	Details	Name
0.01	1/4/2015	Initial draft for review	Andrew Prince
1.00	7/4/2015	Release	Andrew Prince
1.0.0.1	28/05/2015	Added additional dependencies	Simon Armstrong

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