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Scientific Atlanta
A CISCO COMPANY

Configuring ADC Devices in TNCS Application Note

Overview

Purpose

The purpose of this document is to provide instructions for configuring ADC devices in Transmission Networks Control System (TNCS). This document is a supplement to the *TNCS Administrator Software User Guide*, part number 4013494. The ADC devices supported by TNCS communicate with three distinct protocols. This document outlines what protocols are used with which devices and gives direction on how best to configure the use of the ports on a TNCS server. Most of the ADC modules have the model number on the bottom of the front panel.

Who Should Use This Document

This document is intended for authorized personnel who have experience working with similar equipment. The personnel should have appropriate background and knowledge to complete the procedures described in this document. Service engineers who help system operators manage their systems will also find the contents of this document useful.

Qualified Personnel

Only appropriately qualified and skilled personnel should attempt to install, operate, maintain, and service this product.

WARNING:

Allow only qualified and skilled personnel to install, operate, maintain, and service this product. Otherwise, personal injury or equipment damage may occur.

Related Publications

You may find the following publications useful as you implement the procedures in this document.

- *TNCS Administrator Software User Guide*, part number 4013494
- *TNCS Cabling Guide*, part number 736790

Safe Operation for Software Controlling Optical Transmission Equipment

If this manual discusses software, the software described is used to monitor and/or control Scientific Atlanta and other vendors' electrical and optical equipment designed to transmit video, voice, or data signals. Certain safety precautions should be observed when operating equipment of this nature.

For equipment specific safety requirements, refer to the appropriate section of the equipment documentation.

For safe operation of this software, refer to the following warnings.

WARNING:

- **Ensure that all optical connections are complete or terminated before using this equipment to remotely control a laser device. An optical or laser device can pose a hazard to remotely located personnel when operated without their knowledge.**
- **Allow only personnel trained in laser safety to operate this software. Otherwise, injuries to personnel may occur.**
- **Restrict access of this software to authorized personnel only.**
- **Install this software in equipment that is located in a restricted access area.**

In This Document

ADC Devices

DV6000 Product Line

The following information describes the DV6000 product line.

Part	Description
Physical Connector	2x5 pin block
Protocol	P95 and ADC Legacy
Device Address	Last eight digits of serial number
DV-6016 Chassis	This chassis can hold one of seven different controllers that speak one of two different protocols

Legacy DV6000 Product Line

The following table shows the model names for the Legacy DV6000 Controllers. The controller card's serial number is to be used as the address in TNCS. The only way to determine the serial number is to read it from a label on the side of the card.

Description	Model	Devtype
ADC DV6000 Legacy Drop-Add-Pass	DV6016DAP	dv6016dap.txt
ADC DV6000 Legacy Dmux	DV6016DX	dv6016dx.txt
ADC DV6000 Legacy Mux	DV6016MX	dv6016mx.txt

I/O Card Devtypes

Description	Model	Devtype
ADC DV6000 Power Supply	DV6011	dvl6011.txt
ADC DV6000 Power Supply	DV6048	dvl6048.txt
ADC DV6000 BTSC Line Card	DV6081VE	dvl6081.txt
ADC DV6000 Video/2 Audio Decoder 8-bit	DV6082VD	dvl6082vd2.txt
ADC DV6000 Video/2 BTSC Decoder 8-bit	DV6082VD	dvl6082vdb.txt
ADC DV6000 Video 4-Audio Encoder	DV6102VE	dvl6102ve4.txt
ADC DV6000 Video 4-Audio Decoder	DV6102VD	dvl6102vd4.txt

Description	Model	Devtype
ADC DV6000 Transmitter 1310	DV6301TXD	dvl6301.txt
ADC DV6000 Receiver	DV6302RCQ	dvl6302.txt
ADC DV6000 Transmitter 1550	DV6501TXD	dvl6501.txt

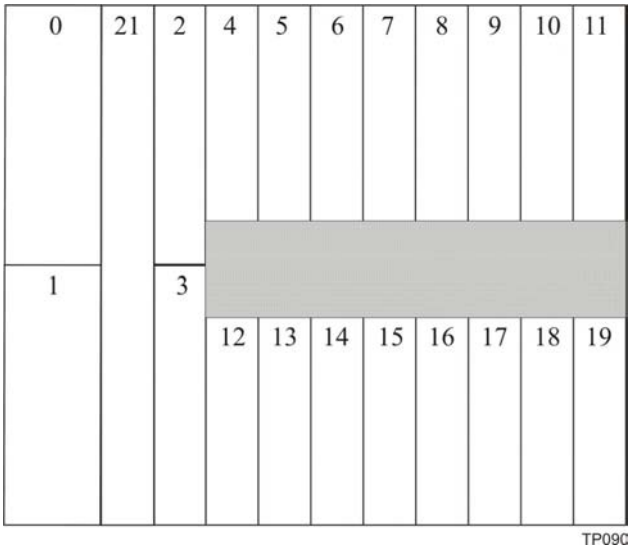
Slot Numbers

The following list shows the slot numbers for this chassis.

Module Card	Slot Number
Top Power Supply	0
Bottom Power Supply	1
Controller card MX,DX, or DAP	21
Top Rx/Tx	2
Bottom Rx/Tx	3
Top I/O cards (left to right from front)	4, 5, 6, 7, 8, 9, 10, 11
Bottom I/O cards (left to right from front)	12, 13, 14, 15, 16, 17, 18, 19

ADC DV6000 Chassis

The following illustration shows a typical ADC DV6000 chassis.



P95 Protocol DV6000 Product Line

The following table shows the model names for the P95 Protocol DV6000 Controllers. The last eight digits of the serial number are used as the address in TNCS. To determine this, connect TNCS to one chassis at a time and use 4294967295 as the address and the controller devtype will show the serial number in the details screen.

Description	Model	Devtype
ADC DV6000 Legacy Drop-Add-Pass	DV6016DAP2	dv6016dap2R2.txt
ADC DV6000 Legacy Drop-Add-Pass	DV6016DAP3	dv6016dap3R2.txt
ADC DV6000 Legacy Dmux	DV6016DX2	dv6016dx2R2.txt
ADC DV6000 Legacy Mux	DV6016MX2	dv6016mx2R2.txt

I/O Card Devtypes

Description	Model	Devtype
ADC DV6011 110 Volt Power Supply	DV6011	dvl6011.txt
ADC DV6011 Repeater Shelf 110 Volt Power Supply	DV6011	dv6011rpc.txt
ADC DV6048 -48 Volt Power Supply	DV6048	dv6048.txt
ADC DV6081 Video Encoder Line Card	DV6081VE	dv6081.txt
ADC DV6081 Video Encoder 2 Audio Line Card	DV6081VE2	dv6081ve2.txt
ADC DV6081 Video Encoder BTSC Line Card	DV6081VEB	dv6081veb.txt
ADC DV6082 Video / 2 Audio Decoder	DV6082VD2	dv6082vd2.txt
ADC DV6082 Video / 2 BTSC Decoder	DV6082VDB	dv6082vdb.txt
ADC DV6101 IF Encoder	DV6101CE	dv6101ce.txt
ADC DV6101 Modified IF Encoder	DV6101NCE	dv6101nce.txt
ADC DV6101 Encoder/4 Audio	DV6101VE4	dv6101ve4.txt
ADC DV6101 Modified Encoder/4 Audio	DV6101VEM	dv6101vem.txt
ADC DV6102 IF Decoder	DV6102CD	dv6102cd.txt
ADC DV6102 Modified Decoder	DV6102NCD	dv6102ncd.txt
ADC DV6102 Decode /4 Audio	DV6102VD4	dv6102vd4.txt
ADC DV6102 Modified Decoder/4 Audio	DV6102VDM	dv6102vdm.txt
ADC DV6301 1310 Optical Tx	DV6301	dv6301.txt
ADC DV6301 1310 Repeater Shelf Optical Tx	DV6301	dv6301rpc.txt

Description	Model	Devtype
ADC DV6302 Optical Rx	DV6302	dv6302.txt
ADC DV6302 Electrical Optical Rx	DV6302ERCQ	dv6302ercq.txt
ADC DV6302 Electrical Repeater Shelf Optical Rx	DV6302ERCQ	dv6302ercqrpc.txt
ADC DV6302 Repeater Shelf Optical Rx	DV6302	dv6302rpc.txt
ADC DV6501 1550 Optical Tx	DV6501TXD	dv6501.txt
ADC DV6501 1550 Repeater Shelf Optical Tx	DV6501TXD	dv6501rpc.txt
ADC DV6501 1550 Optical Tx	DV6501TXDHCx	dv6501txdhc.txt
ADC DV6501 1550 Repeater Shelf Optical Tx	DV6501TXDHCx	dv6501txdhcrpc.txt

Slot Numbers

The following list shows the slot numbers for this chassis.

Module Card	Slot Number
Top Power Supply	0
Bottom Power Supply	1
Controller card MX,DX, or DAP	21
Top Rx/Tx	2
Bottom Rx/Tx	3
Top I/O cards (left to right from front)	4, 5, 6, 7, 8, 9, 10, 11
Bottom I/O cards (left to right from front)	12, 13, 14, 15, 16, 17, 18, 19

Sample Devlist

The following shows a sample devlist for the P95 Protocol DV6000.

```
group chas2 desc="Chassis #2" graphic="chassis dv6000" racverpos=20 port=none group =1000
 dv6016dx2r2 dx2 port=com3 address=4294967295
 dv6011 ps1 port=com5 address=4294967295 slonum=0
 dv6011 ps2 port=com5 address=4294967295 slonum=1
 dv6301 tx1 port=com5 address=4294967295 slonum=2
 dv6302 rx1 port=com5 address=4294967295 slonum=3
 dv6101ve4 io4 port=com5 address=4294967295 slonum=4
 dv6081 io5 port=com5 address=4294967295 slonum=5
 dv6101ve4 io6 port=com5 address=4294967295 slonum=6
 dv6101ve4 io7 port=com5 address=4294967295 slonum=7
 dv6101ve4 io12 port=com5 address=4294967295 slonum=12
 dv6081 io13 port=com5 address=4294967295 slonum=13
 dv6101ve4 io14 port=com5 address=4294967295 slonum=14
 dv6101ve4 io15 port=com5 address=4294967295 slonum=15
 dv6101ve4 io16 port=com5 address=4294967295 slonum=16
```

Homeworx and Optiworx Product Line

The Homeworx & Optiworx chassis' are 5 rack units high and hold ten modules. The middle two modules are the power supply/controllers. This product line has a single protocol, P95, which communicates to TNCS. To determine the address, connect TNCS to one chassis at a time and use 4294967295 as the address for the power supply/controller "adcps.txt" devtype. This will show the serial number in the details screen. If it shows zero then an ADC utility, the Homeworx Control Panel, is needed to set the serial number.

The Homeworx chassis supports dual power supplies, so the power supply/controller can be removed while online to determine the serial number located on a sticker affixed to the side. Stand alone single rack unit Homeworx chassis are discussed later in ***Stand Alone Homeworx Product Line*** (on page 9).

The following information describes the Homeworx product line.

Part	Description
Physical Connector	RJ11
Protocol	P95
Device Address	Last eight digits of serial number

The following table shows the P95 Protocol Homeworx Chassis devices.

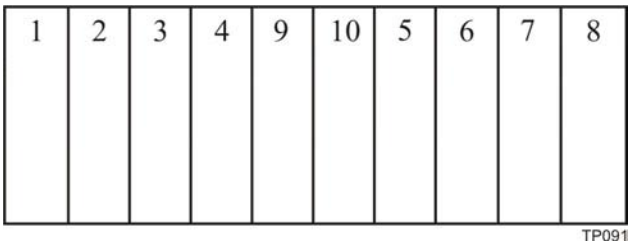
Description	Model	Devtype
ADC P95 Homeworx Dual Reverse Rx	HX6213RX4	adcdrrx.txt
ADC P95 Homeworx Quad Rx	HX6413	adc6413rx.txt
ADC P95 Homeworx Power Supply	HX-1481PC	adcps.txt
ADC P95 Homeworx 750 MHz Tx	HX-750-DT	adctx750.txt
ADC P95 Homeworx 870MHz Tx	HX-870-DT	adctx870.txt

Slot Numbers

The slot numbers are assigned as follows reading left to right from the front: 1, 2, 3, 4, 9, 10, 5, 6, 7, 8.

Homeworx Chassis

The following illustration shows a typical Homeworx chassis.



Sample Devlist

The following shows a sample devlist for the Homeworx chassis.

```
group chas1 desc="Chassis #1" graphic="chassis homeworx" racverpos=10 port =none group=1001
  adctx750 tx1 port=com4 address=98005362 slonum=1
  adctx750 tx2 port=com4 address=98005362 slonum=2
  adctx750 tx3 port=com4 address=98005362 slonum=3
  adctx750 tx4 port=com4 address=98005362 slonum=4
  adcdrrx rx1 port=com4 address=98005362 slonum=5
  adcdrrx rx2 port=com4 address=98005362 slonum=6
  adcdrrx rx3 port=com4 address=98005362 slonum=7
  adcdrrx rx4 port=com4 address=98005362 slonum=8
  adcps ps1 port=com4 address=98005362 slonum=9
  adcps ps2 port=com4 address=98005362 slonum=10
```

Stand Alone Homeworx Product Line

The Stand Alone Homeworx Chassis' are 1 rack units high and communicate with TNCS with one of two protocols. The only way to distinguish the devices that speak the legacy Homeworx protocol versus the P95 protocol is by model numbers. The chassis are physically the same.

The following information describes the Stand Alone Homeworx product line.

Part	Description
Physical Connector	RJ11
Protocol	P95 and Legacy Homeworx
Device Address	P95 = Last eight digits of serial number Legacy = Rotary switch on chassis

Legacy Homeworx Stand Alone Devices

Address is set by rotary SWITCH from 1 to 15. Zero may not be used.

Some Available Devtypes

Description	Devtype
Legacy Homeworx Stand Alone Quad Rx	adclrx4.txt
Legacy Homeworx Stand Alone Single Rx	adclrx1.txt
Legacy Homeworx Stand Alone Tx	adcltx750-tx7.txt

Sample Devlist

```
adclrx4 rx1 port=com5 address=1 racverpos=35
adclrx1 rx2 port=com5 address=2 racverpos=30
adcltx750-tx7 tx1 port=com5 address=3 racverpos=25
```

P95 Protocol Homeworx Stand Alone Devices

The address is the last eight digits of the serial number on the label stuck to the bottom of the chassis.

Description	Devtype
ADC P95 Homeworx Stand Alone Quad Rx	adcrx4.txt

Sample Devlist

```
adcrx4 rx port=com5 address=1 racverpos=35
```

For Information

Support Telephone Numbers

Use the following table to find the Technical Support and Customer Service telephone numbers for your area.

Region	Centers	Telephone and Fax Numbers
North America	SciCare™ Broadband Services Atlanta, Georgia United States	For *Technical Support*, call: ■ Toll-free: 1-800-722-2009 ■ Local: 770-236-6900 (Press **2** at the prompt) For *Customer Service* or to request an RMA number, call: ■ Toll-free: 1-800-722-2009 ■ Local: 770-236-6900 (Press **3** at the prompt) ■ Fax: 770-236-5477
Europe	Belgium	For *Technical Support*, call: ■ Telephone: 32-56-445-197 or 32-56-445-155 ■ Fax: 32-56-445-053 For *Customer Service* or to request an RMA number, call: ■ Telephone: 32-56-445-118 ■ Fax: 32-56-445-051
Asia-Pacific Australia	Hong Kong	Telephone: 852-2522-5059 Fax: 852-2522-5624
Brazil	Brazil	For *Technical Support*, call: ■ Telephone: 55-11-3845-9154 ext 230 ■ Fax: 55-11-3845-2514 For *Customer Service* or to request an RMA number, call: ■ Telephone: 770-236-5662 ■ Fax: 770-236-5888
South America, other than Brazil	Argentina	For *Technical Support*, call: ■ Telephone: 54-23-20-403340 ext 109 ■ Fax: 54-23-20-403340 ext 103 For *Customer Service* or to request an RMA number, call: ■ Telephone: 770-236-5662 ■ Fax: 770-236-5888
Mexico, Central America	Mexico	For *Technical Support*, call: ■ Telephone: 52-3515152599 ■ Fax: 52-3515152599 For *Customer Service* or to request an RMA number, call: ■ Telephone: 5255-50818425 ■ Fax: 5255-52610893

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