

# Configuring the HMS Indoor Optics MIBs to Communicate with TNCS Application Note

## Overview

### Purpose

The purpose of this document is to provide instructions for configuring the HMS Indoor Optics MIBs with Transmission Network Control System (TNCS). This document is a supplement to the *TNCS Administrator Software User Guide*, part number 4013494.

### 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 Publication

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

## Introduction

This document provides TNCS administrators with the following information:

- Requirements for monitoring equipment via the HMS Indoor Optics SNMP interface.
- How to setup and connect to the equipment.
- How to add the HMS Indoor Optics devtypes to the TNCS devlist.
- How to use the alarm enable settings in the HMS Indoor Optics Devtypes.
- TNCS graphics with the HMS Indoor Optics devtypes.

## Requirements

- TNCS Version 03.00.24 or greater with SNMP Manager License
- Minimum hardware/software
  - C-COR CHP chassis (minimum supported version)

Device	HW Version	Boot code Version	Application Version
CMM	V000.003	V001.000	V003.006
SMM	V000.003	V1.5.0.0	V1.5.0.0

- Prisma II Chassis / ICIM revision 14 or greater
- IP connectivity from the TNCS server to the Indoor Optics Chassis

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## Setting Up the Indoor Optics

- 1 Set the IP address, Subnet mask, and the Gateway for each monitored chassis according to the manufacturer's recommendation.
- 2 Note the chassis addresses on all chassis in the Prisma II ICIM domain or the C\_COR SMM domain.
- 3 Connect the Controller's Ethernet port to the IP network with a Cat5 Cable.

## Setting Up of TNCS

There are 2 methods to add HMS Indoor Optic devices to TNCS.

- Editing the Devlist
- Online Add/Delete

### Editing the Devlist

- 1 Open the TNCS file devlist.txt with a text editor. It is recommended that a backup copy of the devlist.txt file be made anytime changes are being made to the file.

**Note:** The devlist.txt file is normally found in the following directory:  
C:\Program Files\TNCS 3.0

- 2 Enter the groups and devices into the devlist.txt file. Below is a sample devlist for HMS Indoor Optics devtypes.

**Note:** There are 6 Devtypes for HMS Indoor Optics.

- hmsoptamp.txt - Optical Amplifiers
- hmsoptfan.txt - Fans
- hmsoptps.txt - Power Supply
- hmsoptrx.txt - Optical Transmitters
- hmsopttx.txt - Optical Receivers
- hmsrfamp.txt - RF amplifiers

**Note:** Optical and RF switches are not supported at this time.

```

group rackHMS address=10 graphic="rack 40"
group Chassis1 desc="CHP Shelf" address=11 graphic="chassis" racverpos=30 verdim=2
  hmsoptrx RX1 address="172.18.184.175" port=Ethernet SnmInd=2480501
  hmsoptrx RX2 address="172.18.184.175" port=Ethernet SnmInd=2480502
  hmsoptrx RX3 address="172.18.184.175" port=Ethernet SnmInd=2480503
  hmsoptrx RX4 address="172.18.184.175" port=Ethernet SnmInd=2480504
  hmsoptrx RX5 address="172.18.184.175" port=Ethernet SnmInd=2480505
  hmsopptx TX1 address="172.18.184.175" port=Ethernet SnmInd=2480506
  hmsopptx TX2 address="172.18.184.175" port=Ethernet SnmInd=2480507
  hmsopptx TX3 address="172.18.184.175" port=Ethernet SnmInd=2480508
  hmsopptx TX4 address="172.18.184.175" port=Ethernet SnmInd=2480509
  hmsopptx TX5 address="172.18.184.175" port=Ethernet SnmInd=2480510
  hmsoptps PS-A address="172.18.184.175" port=Ethernet SnmInd=2480511
  hmsoptfan FAN-A address="172.18.184.175" port=Ethernet SnmInd=2480511
  hmsoptps PS-B address="172.18.184.175" port=Ethernet SnmInd=2480512
  hmsoptfan FAN-B address="172.18.184.175" port=Ethernet SnmInd=2480512
  hmsoptfan FANS address="172.18.184.175" port=Ethernet SnmInd=2480513
group Chassis2 desc="Prisma2 Shelf" address=12 graphic="chassis" racverpos=20 verdim=5
  hmsoptps PS1 address="172.18.184.175" port=Ethernet SnmInd=401
  hmsoptps PS2 address="172.18.184.175" port=Ethernet SnmInd=403
  hmsoptamp OPTAMP1 address="172.18.184.175" port=Ethernet SnmInd=405
  hmsoptamp OPTAMP2 address="172.18.184.175" port=Ethernet SnmInd=408
  hmsopptx TX1 address="172.18.184.175" port=Ethernet SnmInd=411
  hmsopptx TX2 address="172.18.184.175" port=Ethernet SnmInd=412
  hmsrfamp RFAMP1 address="172.18.184.175" port=Ethernet SnmInd=413
  hmsrfamp RFAMP2 address="172.18.184.175" port=Ethernet SnmInd=414
  hmsoptfan FANS address="172.18.184.175" port=Ethernet SnmInd=499

```

Line 1 is a standard entry for an equipment rack.

Line 2 is a standard entry for a chassis. Since the HMS Indoor Optics supports a variety of chassis, Vertical Dimension (verdim) was added to set the proper chassis height for the graphics view.

**Note:** Only the “graphics=chassis” is supported as a generic chassis view. The modules will be displayed in the order they are entered in the devlist. If a module is more than one slot wide, it will show as a single-wide module. Also, a skipped slot does not display in the graphics.

Line 3 describes a HMS Indoor Optics devtypes entry.

hmsoptrx is the devtype for the receiver module.

The other fields required are:

- Unique Name - “RX1” is the name used in this example.
- Address - This is the IP of the chassis or controller module.

## Setting Up of TNCS

- Port - Use "Ethernet" for the all modules.
- Snmind - This is the module address. Typically, the last 2 digits of the module address are the module slot number.

The exceptions are:

- The Prisma II Fan Tray does not use a standard slot - the last 2 digits in the address are 99.
- The CHP Power Supply and fans are in Slots 11,12, and 13, respectively. For both power supplies a separate line is needed to support the 2 fans in each power supply.

## Online Add/Delete

The HMS Indoor Optic devtypes can be added online using the TNCS on-line add/delete function. However when using the on-line add/delete, there are a couple of rules to follow.

- 1 When adding the Group for the chassis, **do not specify the chassis graphic until all modules have been added to the chassis.** If the chassis graphic is specified before the modules are added, TNCS will not allow the modules to be added. After all of the modules have been added, the group detail can be opened and the chassis graphic added.
- 2 On-Line Add/Delete allows the Name, Address, Port, and SNMP Index to be specified.
  - Name - This is the unique name that is used to identify the device.
  - Address - This is the IP address of the chassis or controller that the chassis is connected to.
  - Port - This will always be Ethernet for HMS Indoor Optics.
  - SNMP Index - This is the module address of the module.

## Using the Alarm Enable Settings with the HMS Indoor Optics Devtypes

The alarm enable byte is used to set the alarm severity of an analog parameter. There are 16 possible settings. Any parameter can support either HI (minor high), HIHI (major high), LO (minor low), and or LOLO (major low). In the table the blanks represent whether the severity is supported or not. The severity can be set to any configuration in the table below.

	HIHI	HI	LO	LOLO	Value
No Alarms					00
Only Major Low Alarm				LOLO	01
Only Minor Low Alarm			LO		02
Only Low Alarms			LO	LOLO	03
Only Minor High Alarm		HI			04
Minor High and Major Low		HI		LOLO	05
Only Minor Alarms		HI	LO		06
Minor High and Minor and Major Low		HI	LO	LOLO	07
Only Major High Alarm	HIHI				08
Only Major Alarms	HIHI			LOLO	09
Major High and Minor Low	HIHI		LO		0A
Major High and Minor and Major Low	HIHI		LO	LOLO	0B
High Alarm Only	HIHI	HI			0C
Minor and Major High and Major Low	HIHI	HI		LOLO	0D
Minor and Major High and Minor Low	HIHI	HI	LO		0E
Major and Minor Alarms	HIHI	HI	LO	LOLO	0F

**Note:** There are 2 instances with the discrete and property alarms that need to be noted because the implementation may be different than expected.

### C-COR CHP Implementation of Alarm Settings

- 1 Typically an alarm can be created or cleared for an analog parameter by adjusting the alarm thresholds. Alarms in the CHP chassis can be created by adjusting an alarm threshold but cannot be cleared by adjusting a threshold. To clear an alarm by changing a threshold, you will need to first set the alarm enable to x00 (No alarms) and then set the threshold to the desired value and finally set the alarm enable back to the desired functionality.

**Using the Alarm Enable Settings with the HMS Indoor Optics Devtypes**

2 Another issue with alarms is the behavior of alarm settings. When a discrete alarm threshold is set, it in turn automatically set the property alarm enable as follows:

<b>Discrete Alarm Enable</b>	<b>Property Alarm Enable</b>
Disabled	00 All alarms disabled
Minor	0F HIII, HI, LO, LOLO Alarms (All Alarms enabled)
Major	09 HIII and LOLO Alarm Only

In this implementation a setting of Minor means Minor and Major Alarms.

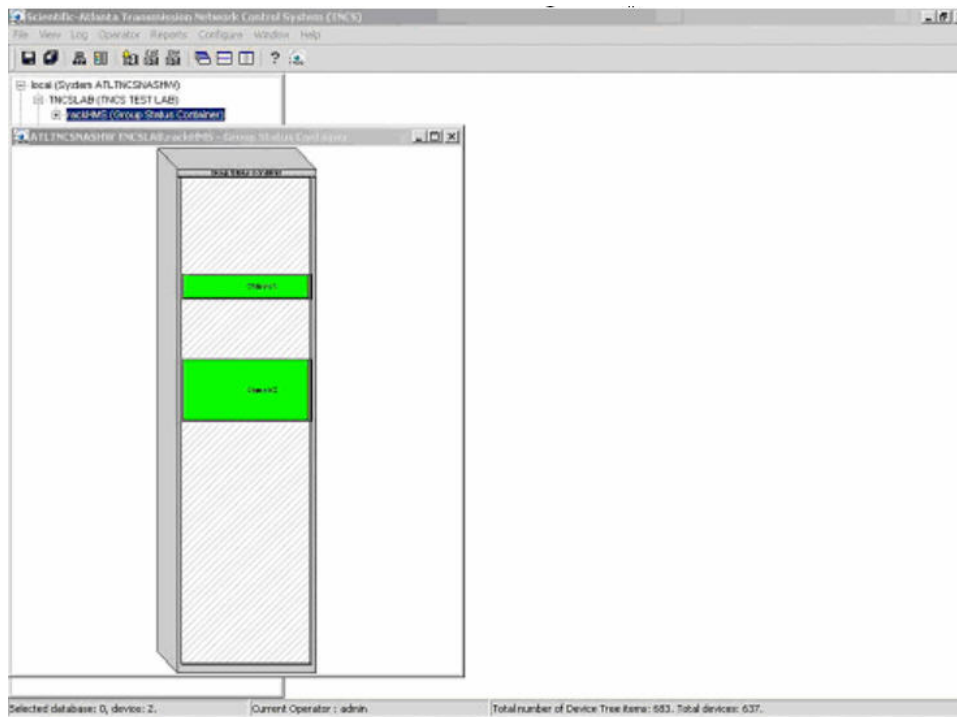
And Major means Major only. This is an example of how different vendor's equipment may perform differently.

In other implementations, the discrete alarm is set to a minor or major only and has no effect on the Property alarm enable setting.

## TNCS Graphics with HMS Indoor Optics Devtypes

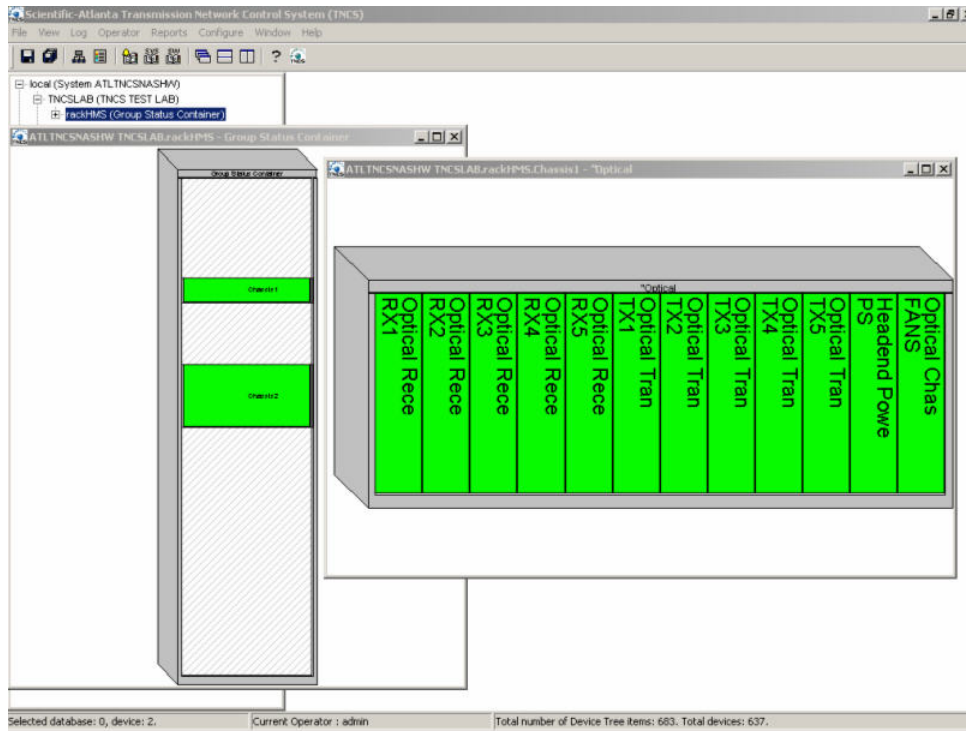
Only the generic chassis graphic is supported for the HMS Indoor Optics devtypes. The group containing the modules can be specified as "chassis" or left unspecified. Either option will show the group in a Rack. The Group devtype has been changed to add a "vertical dimension" parameter to specify the chassis height. It defaults at 2RU.

The following illustration shows the rack view with a 2RU chassis and a 5RU chassis. This view is the same for both chassis unspecified or specified as "chassis."

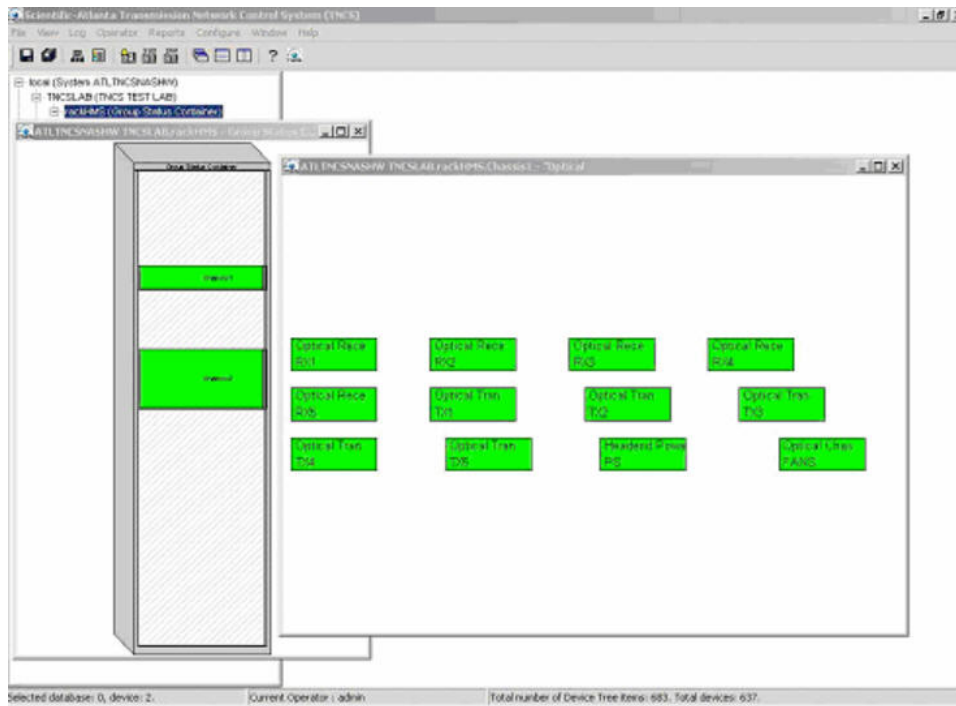


## TNCS Graphics with HMS Indoor Optics Devtypes

The following illustration shows the module view when the graphic is specified as "chassis."



The following illustration shows the module view when the graphic is not specified.



## 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	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> <li>■ Toll-free: 1-800-722-2009</li> <li>■ Local: 770-236-6900 (Press <b>2</b> at the prompt)</li> </ul>
	Atlanta, Georgia United States	For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> <li>■ Toll-free: 1-800-722-2009</li> <li>■ Local: 770-236-6900 (Press <b>3</b> at the prompt)</li> <li>■ Fax: 770-236-5477</li> </ul>
Europe	Belgium	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> <li>■ Telephone: 32-56-445-197 or 32-56-445-155</li> <li>■ Fax: 32-56-445-053</li> </ul> For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> <li>■ Telephone: 32-56-445-118</li> <li>■ Fax: 32-56-445-051</li> </ul>
Asia-Pacific Australia	Hong Kong	Telephone: 852-2522-5059 Fax: 852-2522-5624
Brazil	Brazil	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> <li>■ Telephone: 55-11-3845-9154 ext 230</li> <li>■ Fax: 55-11-3845-2514</li> </ul> For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> <li>■ Telephone: 770-236-5662</li> <li>■ Fax: 770-236-5888</li> </ul>
South America, other than Brazil	Argentina	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> <li>■ Telephone: 54-23-20-403340 ext 109</li> <li>■ Fax: 54-23-20-403340 ext 103</li> </ul> For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> <li>■ Telephone: 770-236-5662</li> <li>■ Fax: 770-236-5888</li> </ul>
Mexico, Central America	Mexico	For <i>Technical Support</i> , call: <ul style="list-style-type: none"> <li>■ Telephone: 52-3515152599</li> <li>■ Fax: 52-3515152599</li> </ul> For <i>Customer Service</i> or to request an RMA number, call: <ul style="list-style-type: none"> <li>■ Telephone: 5255-50818425</li> <li>■ Fax: 5255-52610893</li> </ul>



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