

1. Crestron Module Information

Partner: Yamaha Corporation

Model: TIO1608-D

Device Type: Dante I/O-Rack

2. General Information

SIMPL Windows Name: Yamaha_Tio32_V.1.1

Category: Device Interface

3. General Notes:

This module is designed to control a Yamaha TIO I/O Rack with a Crestron Control System via Ethernet.

Because the core routines are written in SIMPL# the module only runs on Crestron System3 devices!

The archive contains the following files:

Yamaha_TIO1608_V.1.1.usp	The SIMPL+ wrapper for the TIO16 SIMPL# module
Yamaha_Tio_V.1.0.1.clz	The SIMPL# module as an interface for TIO
Sample App Tio1608.smw	Sample Application for controlling TIO1608-D via Ethernet
Tio1608SampleUI.vtp	XPanel UI for TIO1608-D Sample App
ToggleWithFeedback.umc	A helper Macro to realize a Toggle Function with feedback

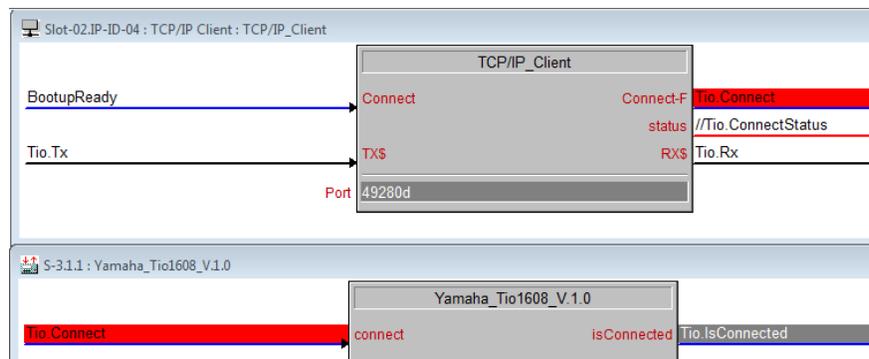
4. Tested software versions

- Crestron Simple Windows 4.14.31
- Crestron Simple+ 4.05.01
- Crestron Cross Compiler 1.3
- Crestron Database 202.05.002.00
- Crestron Device Database 200.40.004.00
- Crestron VT-Pro-e 6.2.02
- Crestron Smart Graphics Controls 2.17.00.05

5. Wiring:

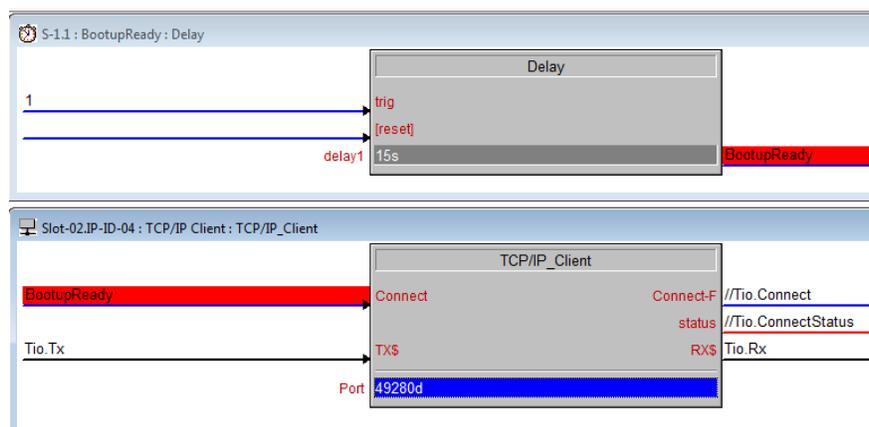
We recommend to use the “Connect-F” signal (feedback if TCP/IP connection is successful) as an input for the connect signal of the module:

(in the sample app we use a manual connect/disconnect just for demo purposes)



It is not recommended to use a “1” signal at the “Connect”-input of the TCP/IP-Client module. Because of the heavy work load for the Crestron-CPU during the boot-up phase, some signals may not have a consistent state.

Use a small delay instead (approx. 10-30s):



The module uses the keep-alive function of the TIO. The time period is about 10s. If there is no answer after that time, the Crestron CPU assumes a broken connection and tries to re-connect.

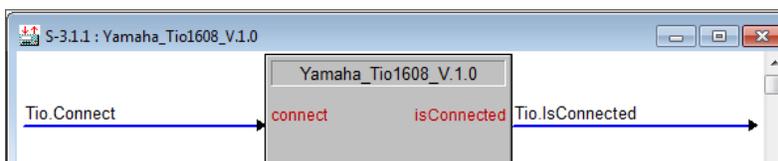
The default TCP/IP Port Number of the MTX is “49280”

Please keep in mind that the TIO has only one Network-Port but 3 IP-Addresses (Dante Primary, Dante Secondary and TIO Control). The connections have to go to the Tio control port. To set the IP-Addresses you have to use the software R-Remote. Refer to the manual of the TIO about how to do that and how to set the DIP-Switches.

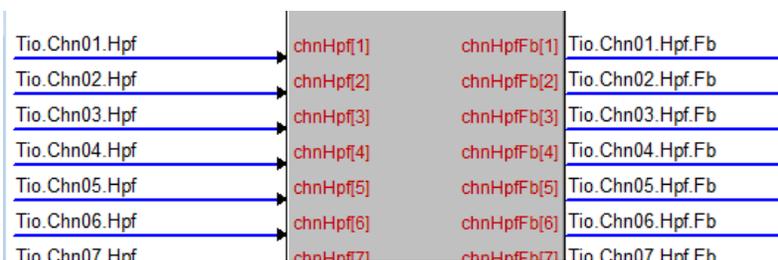
6. Signals:

The following pictures show different parts of the module.

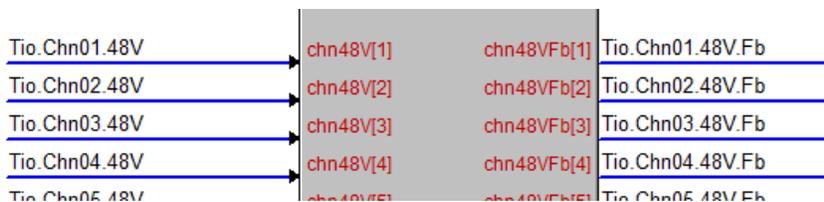
Connect Section:



HPF Section:



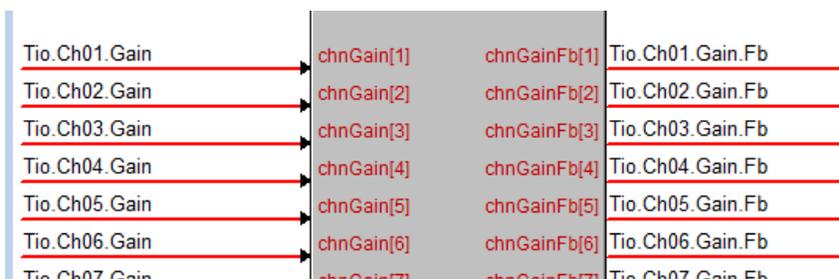
48V Section:



RX/TX and Info Section



Gain Section

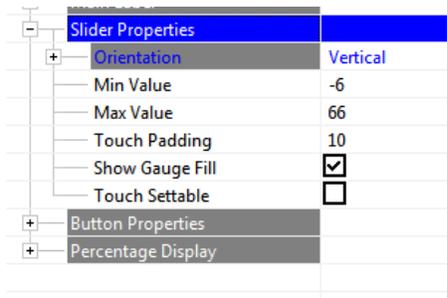


Description:

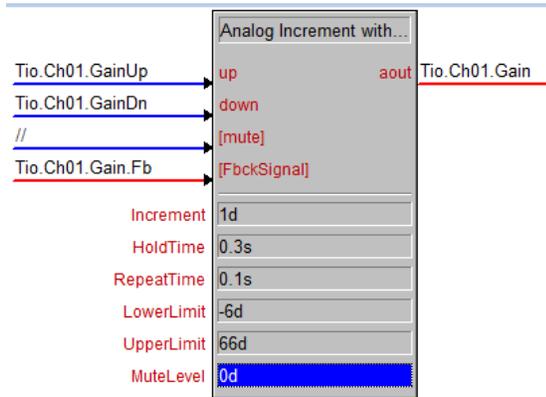
Controls		
connect	digital	1: causes the module to connect to the TIO 0: causes disconnect
chnHpf[1] .. [XX]	digital	HPF on in the respective channel
chn48V[1] .. [XX]	digital	48V phantom power on in the respective channel
chnGain[1] .. [XX]	analog	Gain level of the respective channel. Valid values: -6 .. 66
Rx	serial	RX-Data (usually connected to the RX Signal of the TCP/IP-Client Module).
Feedback		
isConnected	digital	“1” if the module is successfully connected to the MTX
chnHpfFb[1] .. [XX]	digital	Current status of the respective HPF
chn48VFb[1] .. [XX]	digital	Current status of the respective 48V phantom power
chnGainFb[1] .. [XX]	analog	Current gain level
protocolVer	serial	The protocol version of the connected device
paramSetVer	serial	The parameter set version of the connected device
deviceId	serial	The device ID of the connected device
Tx	serial	TX-Data (usually connected to the TX Signal of the TCP/IP-client module)

7. Parameter Range:

The gain level is using a range from -6 to 66. Those values need to be taken as “Min Value” and “Max Value” in the Touchpanel design.



Also observe these parameters if you use a Ramp, Analog Increment or something similar in SIMPL Windows. Here you can see the parameters “LowerLimit” and “UpperLimit” in an Analog Increment:



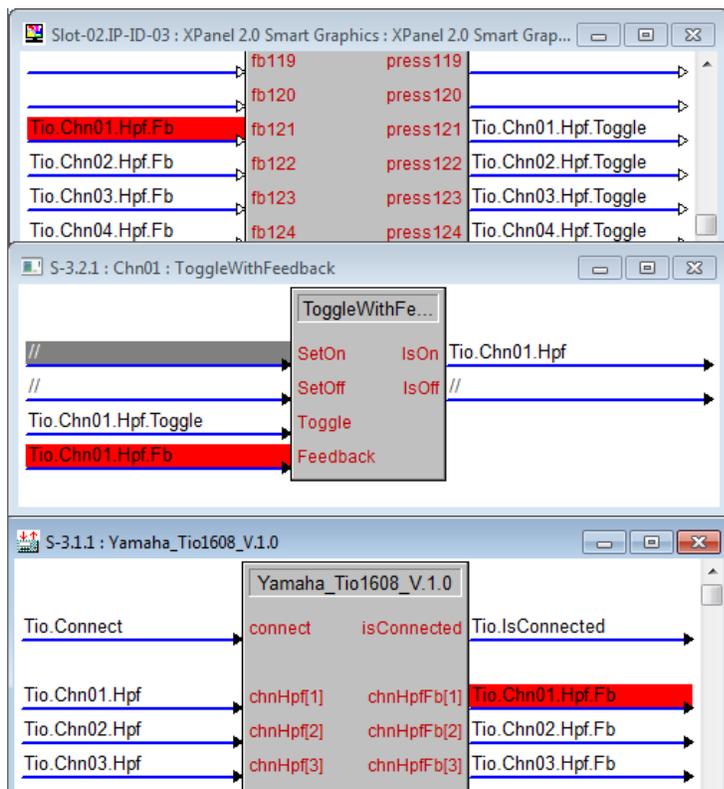
8. ON's and OFF's (HPF and 48V):

You can set these two parameters just by setting the respective signals to ON or OFF .

If you want to use a toggle, you have to pay attention to the real status in the TIO (feedback). To make this easier, a small helper macro is included.

The macro is called "ToggleWithFeedback". It can be used for setting parameters on, off or just to toggle.

The sample application shows how it works:



9. Other Documents

In case you encounter any errors (you may see them on the Rx signal in the debugger coming from the TIO) please also have a look at the other documents such as:

- latest Release Notes
- FAQ