DIP3200A 32 Program IP to Analog Modulator

User Manual

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Directory

Chapter 1 Product Overview

1.1 Key Features

- 2 GE ports (max 64 IP programs total MPTS/SPTS), Max 840Mbps for each GE input
- Support HEVC/H.265, H.264/AVC, MPEG-2 TS Decapsulation
- Processing of up to 32 IP multicast groups of a Gigabit Ethernet MPEG TS into up to 32
- standard NTSC or PAL Analog channels
- 32 non-adjacent or adjacent carriers output within 400MHz bandwidth
- RJ-45 Ethernet front jack for Configuration and Web-based Network management

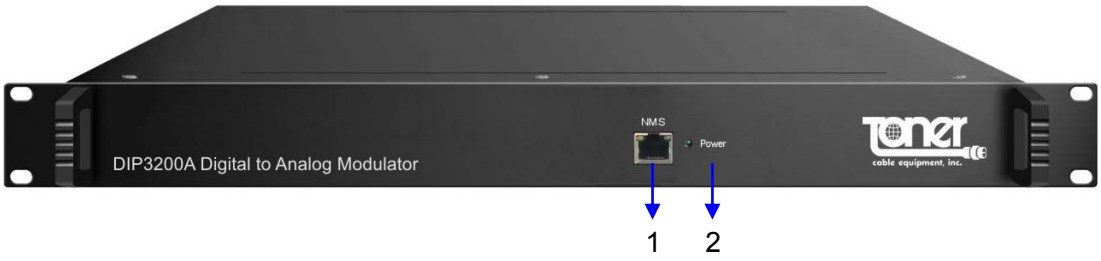
1.2 Specifications

Input	Interface/rate	2 GE RJ-45 ports for content ingest Max 840Mbps for each GE input
	Stream	UDP, UDP / RTP, 1-7 packets, FEC, SPTS, MPTS
	Transport Protocol	UDP/RTP, unicast and multicast, IGMP V2/V3
	Packet Length	188 / 204 Bytes
Decoding Parameters	Video codecs	HEVC/H.265, H.264/AVC Level 4.1 HP, MPEG-2 MP@HL
	Audio formats supported	MPEG-1/2 Layer 1/2, (HE-)AAC,AC3
	Data	Teletext, Teletext subtitles, DVB Subtitling
	Resolutions	**HEVC/H.265:** 1080@60P ,1080@60I,1080@50P,1080@50I,720@60P,720@50P

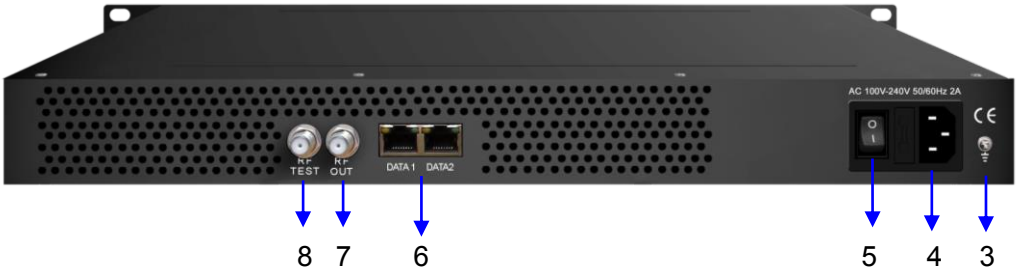
		H.264/AVC: 1080@60I,1080@50P,1080@50I,1080@30P,1080@25P , 720@60P,720@50P,576@50I,480@60I **MPEG2:** 1080@60I,1080@50I, 720@60P,720@50P,576@50I,480@60I
	Aspect ratio	4:3/16:9
Modulation	Number of Output Channels	Up to 32 Analog
	Connectors	75 ohm F-Female
	Frequency range	47 – 862 MHz (except 40-120 MHz)
	Output Bandwidth	400MHz
	Output level	maximum 52 dBmV
	Return loss	≥ 14dB
	Spurious frequency dist.	≥ 60dB
	Stereo cross talk	> 55dB
	Residual carrier accuracy	1%
	TV standard	NTSC or PAL B-G,
	Video-signal to noise ratio	≥ 60dB
Network Interface	Management	1 x 100 Base-T Ethernet (RJ 45)
	Data	2 x 1000 Base-T Ethernet (RJ 45)
	Protocol	IEEE802.3 Ethernet, RTP, ARP, IPv4, TCP/UDP, HTTP, IGMPv2/v3
Performance	Image resolution	up to 1080i
	CNR	60 dB (after internal combining)
	SNR	> 53 dB (after internal combining)
	Sampling frequency	48, 44.1, 32
	Output volume adjustment	0 - 100 %
General	Demission	19x16.5x1.75 Inches 420×440×44.5 (WxDxH)
	Temperature	32-110 °F (0-45° C)
	Power Supply	AC100V±10%, 50/60Hz or AC 220V±10%,50/60Hz

1.3 Appearance and Illustration

Front Panel Illustration



Rear Panel Illustration:



1	NMS: network management port
2	Power Indicator
3	Grounding/ Earthing connection
4	AC Power Connection (IEC Jack)
5	Power switch
6	Content Input RJ-45 Jacks (2)
7	RF output connector, F Female
8	RF test connector, F Female – -20 dB

Chapter 2 Installation Guide

2.1 Grounding

It is recommended that the chassis be grounded using the grounding screw on the rear

2.2 Power cord connection

The power socket is located on the rear panel, and the power switch is next to it.

2.3 Content connection

Use a standard Category 5 or higher Ethernet cable(s) to connect the DIP3200A to your signal source

2.3 Management and web connection

Use a standard Category 5 or higher Ethernet cable to connect the DIP3200A to a network or computer

Chapter 3 Web NMS Management

Setup and management can only be done using the IP network jack on the front panel

3.1 Login

The factory default IP address is 192.168.0.136

Launch the web browser and input the DIP3200A IP address in the browser's address bar and press Enter.

The Login box will appear (Figure-1). Enter the default Username and Password. Both the default Username and Password are "admin" without the ". Then click on Login" to enter the setup screen

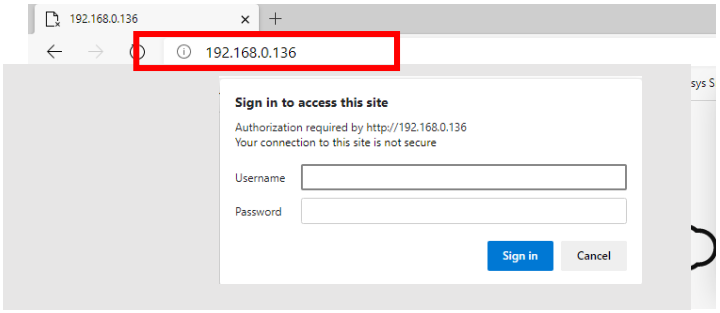


Figure-1

3.2.1 Login Screen

When correctly logged in the following screen will appear (Figure-2).

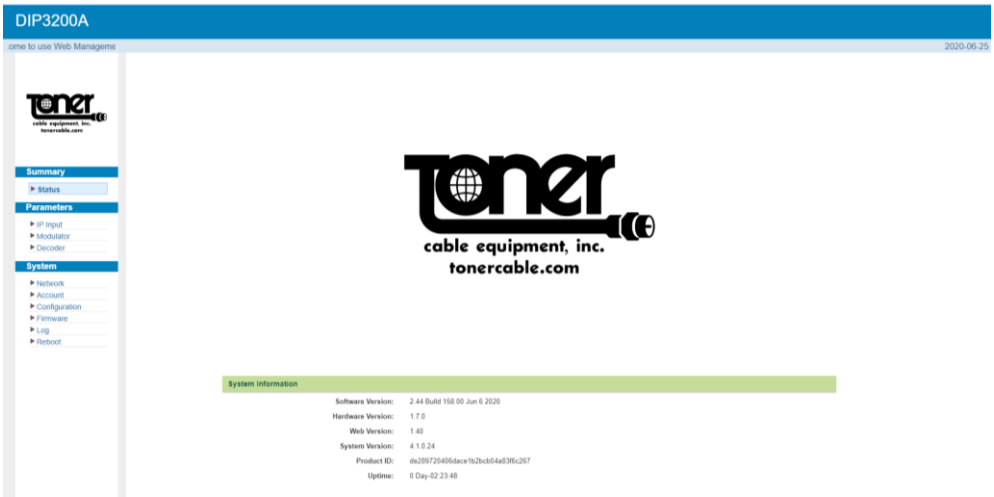


Figure-2

3.2.2 Settings IP Input:

Click “IP Input” on the left side of the screen to set up the input IP’s (Figure-3).

Select at the top of the screen which channel you want the program on. CH01 will be the first channel in your output which you will select later when you set up modulation.

Here is where you select the Programs from the inputs on the left and select the outputs selecting the ===> button to add them to the Output area. Here you will see the details of the channel.

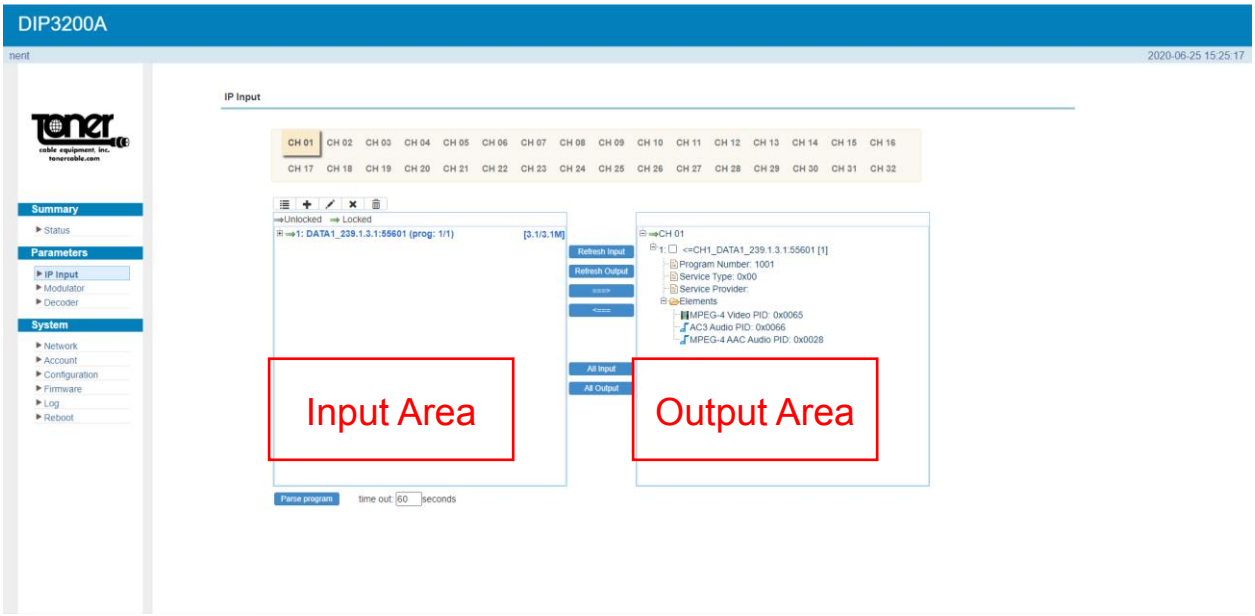


Figure-3

Configure ‘Input Area’ and ‘Output Area’ with buttons in ‘Operation Area’. Instructions are as below:

: To add input channel which come from Data1 or Data 2 or Data Module (front panel)

: To edit the input channel

: To delete the input channel

: To delete all inputs channel

Refresh Input To refresh the input program information

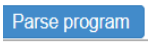
Refresh Output To refresh the output program information

===> Select one input program first and click this button to transfer the selected program to the right box to output.

Similarly, user can cancel the multiplexed programs from the right box.

To select all the input programs

To select all the output programs



To parse programs 

time limitation of parsing input programs

3.2.3 Settings Output: Modulator:

Select “Modulator”, to set up the analog output channels (Figure-4) NOTE all your channels must be within a 400 MHz wide bandwidth window. The DIP3200A will not allow you to select a channel beyond the window so make sure your first channel and last channel are no more than 394 MHz apart.

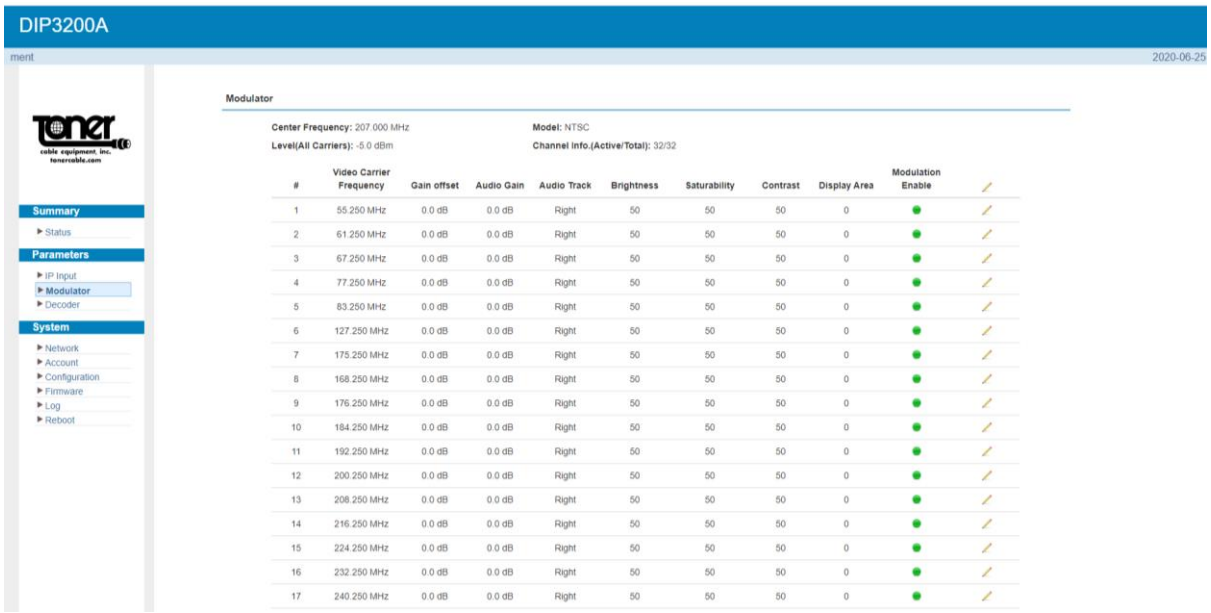


Figure-4

Remember to save changes, refer to 3.3.3

The analog output channels are selected based on the picture carrier frequency. Use the Frequency List (Figure 5) to choose the correct frequency for the channel you want. Channel 1 will be the first program you selected on the IP Input and Channel 2 will be the second channel selected and so on.

Channel	Video	Audio
2	55.25	59.75
3	61.25	65.75
4	67.25	71.75
5	77.25	81.75
6	83.25	87.75
95	91.25	95.75
96	97.25	101.75
97	103.25	107.75
98	109.275	113.775
99	115.275	119.775
14	121.263	125.763
15	127.263	131.763
16	133.263	137.763
17	139.25	143.75
18	145.25	149.75
19	151.25	155.75
20	157.25	161.75
21	163.25	167.75
22	169.25	173.75
7	175.25	179.75
8	181.25	185.75
9	187.25	191.75
10	193.25	197.75
11	199.25	203.75
12	205.25	209.75
13	211.25	215.75
23	217.25	221.75
24	223.25	227.75
25	229.263	233.763
26	235.263	239.763
27	241.263	245.763
28	247.263	251.763
29	253.263	257.763
30	259.263	263.763
31	265.263	269.763
32	271.263	275.763
33	277.263	281.763
34	283.263	287.763
35	289.263	293.763
36	295.263	299.763
37	301.263	305.763
38	307.263	311.763
39	313.263	317.763
40	319.263	323.763
41	325.263	329.763

Channel	Video	Audio
42	331.275	335.775
43	337.263	341.763
44	343.263	347.763
45	349.263	353.763
46	355.263	359.763
47	361.263	365.763
48	367.263	371.763
49	373.263	377.763
50	379.263	383.763
51	385.263	389.763
52	391.263	395.763
53	397.263	401.763
54	403.25	407.75
55	409.25	413.75
56	415.25	419.75
57	421.25	425.75
58	427.25	431.75
59	433.25	437.75
60	439.25	443.75
61	445.25	449.75
62	451.25	455.75
63	457.25	461.75
64	463.25	467.75
65	469.25	473.75
66	475.25	479.75
67	481.25	485.75
68	487.25	491.75
69	493.25	497.75
70	499.25	503.75
71	505.25	509.75
72	511.25	515.75
73	517.25	521.75
74	523.25	527.75
75	529.25	533.75
76	535.25	539.75
77	541.25	545.75
78	547.25	551.75
79	553.25	557.75
80	559.25	563.75
81	565.25	569.75
82	571.25	575.75
83	577.25	581.75
84	583.25	587.75
85	589.25	593.75
86	595.25	599.75

Channel	Video	Audio
87	601.25	605.75
88	607.25	611.75
89	613.25	617.75
90	619.25	623.75
91	625.25	629.75
92	631.25	635.75
93	637.25	641.75
94	643.25	647.75
100	649.25	653.75
101	655.25	659.75
102	661.25	665.75
103	667.25	671.75
104	673.25	677.75
105	679.25	683.75
106	685.25	689.75
107	691.25	695.75
108	697.25	701.75
109	703.25	707.75
110	709.25	713.75
111	715.25	719.75
112	721.25	725.75
113	727.25	731.75
114	733.25	737.75
115	739.25	743.75
116	745.25	749.75
117	751.25	755.75
118	757.25	761.75
119	763.25	767.75
120	769.25	773.75
121	775.25	779.75
122	781.25	785.75
123	787.25	791.75
124	793.25	797.75
125	799.25	803.75
126	805.25	809.75
127	811.25	815.75
128	817.25	821.75
129	823.25	827.75
130	829.25	833.75
131	835.25	839.75
132	841.25	845.75
133	847.25	851.75
134	853.25	857.75
135	859.25	863.75

Figure-5

3.2.4 Settings → Decoder:

This function is to monitor status of decoding. It displays the interface as (Figure-6).

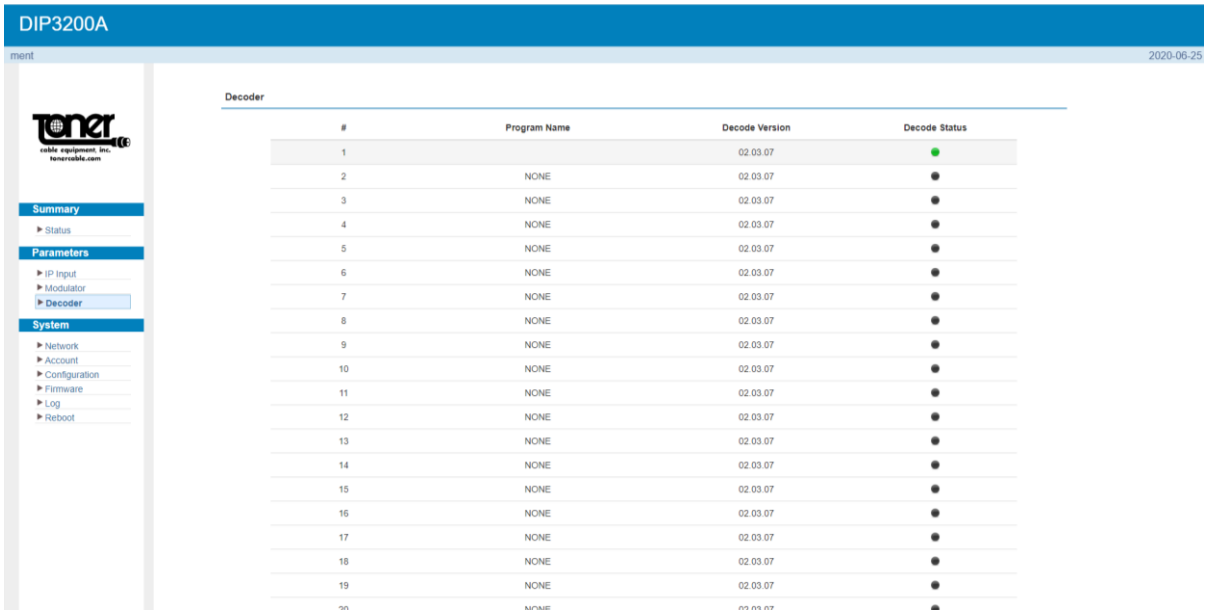


Figure-6

3.3 System

3.3.1 Network:

Click ‘Network’, it displays the interface as (Figure-7) where to set network parameters.

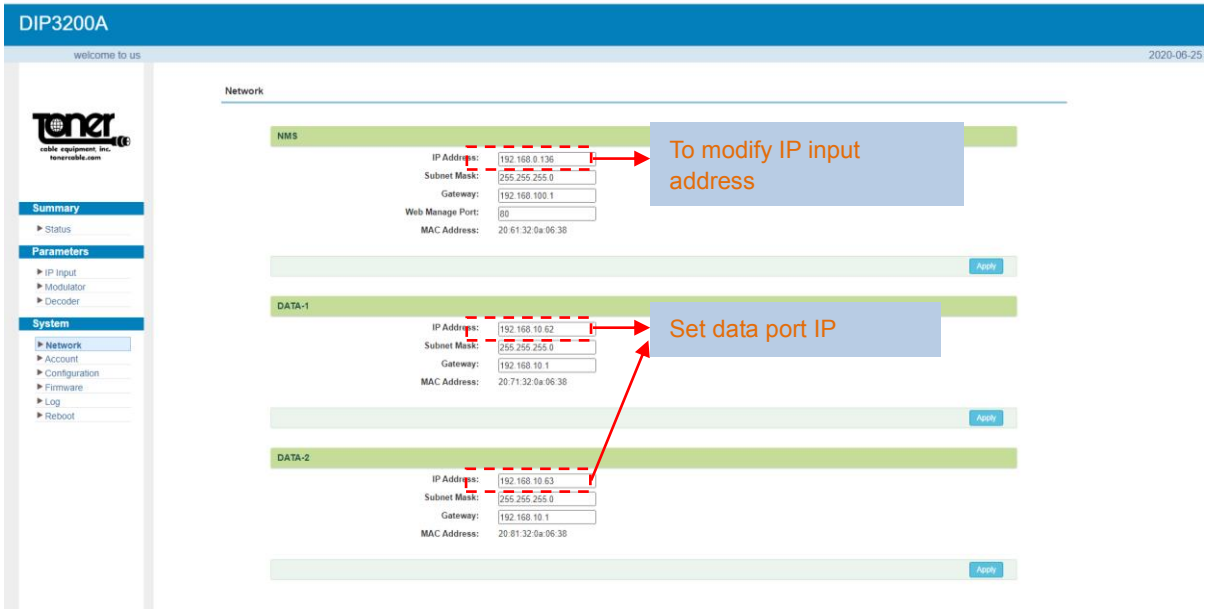


Figure-7

3.3.2 Account:

Click “Account”, it displays the screen as (Figure-8) where you can change login username and password for the web interface.

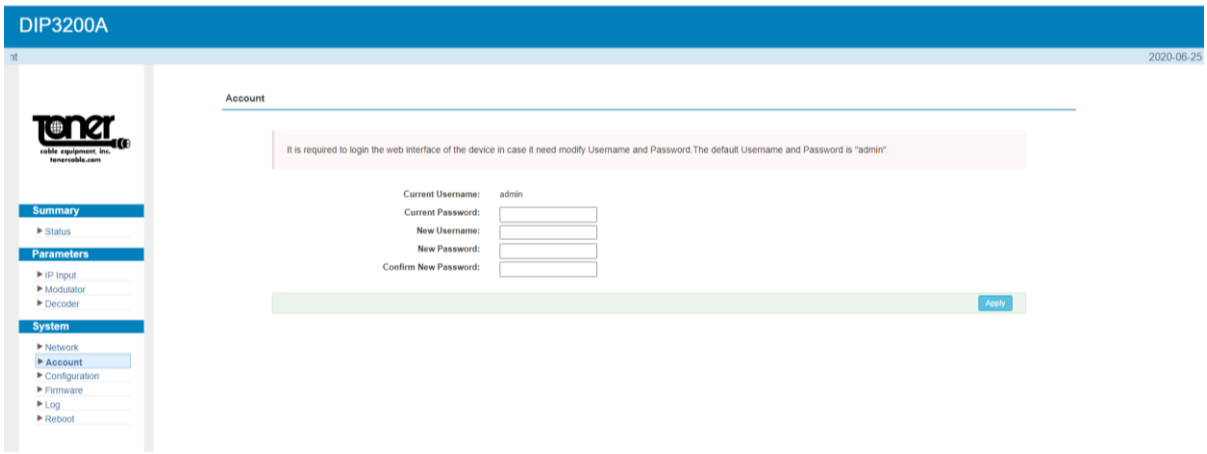


Figure-8

3.3.3 Configuration:

Click “Configuration”, it displays the screen as (Figure-9) where to set your configurations for the DIP3200A.

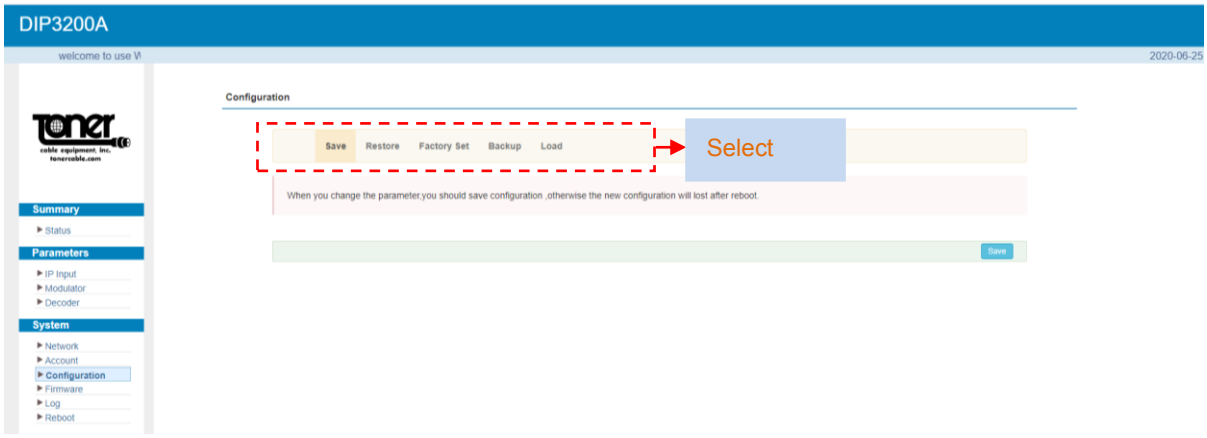


Figure-9

Remember to save changes, refer to 3.3.3

System → Firmware:

Click “Firmware”, it displays the screen as (Figure-10) where to update firmware for the device.

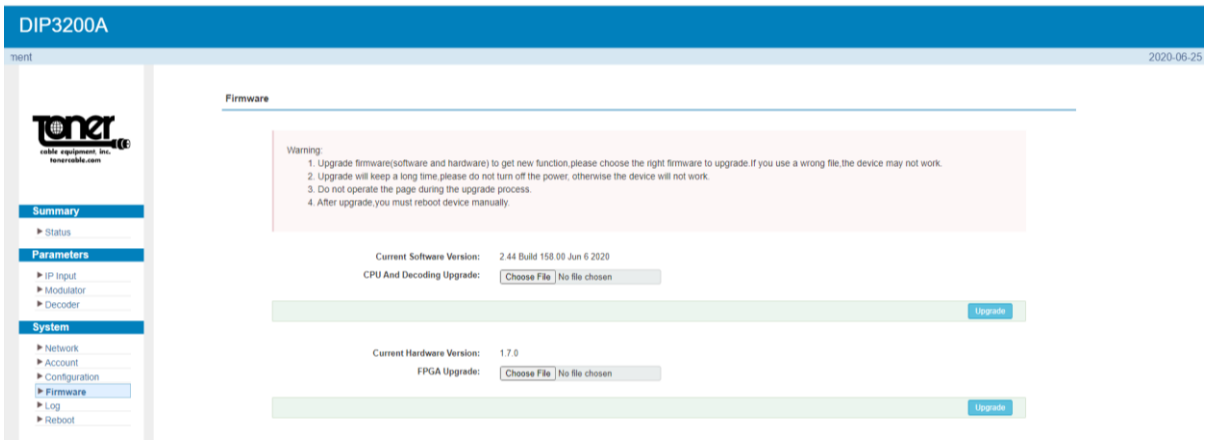


Figure-10

System → Log:

Click “Log”, it displays the screen as (Figure-11) where to check the “Log”.

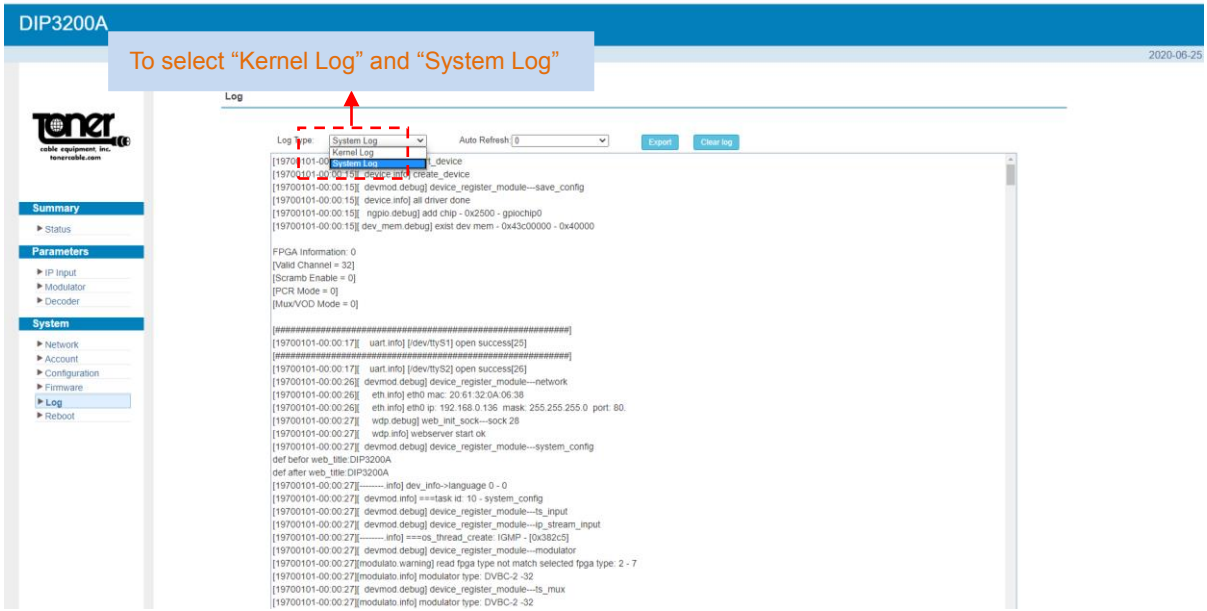


Figure-11

System → Reboot:

Click “Reboot”, it displays the screen as (Figure-12) where to check the “Reboot”.

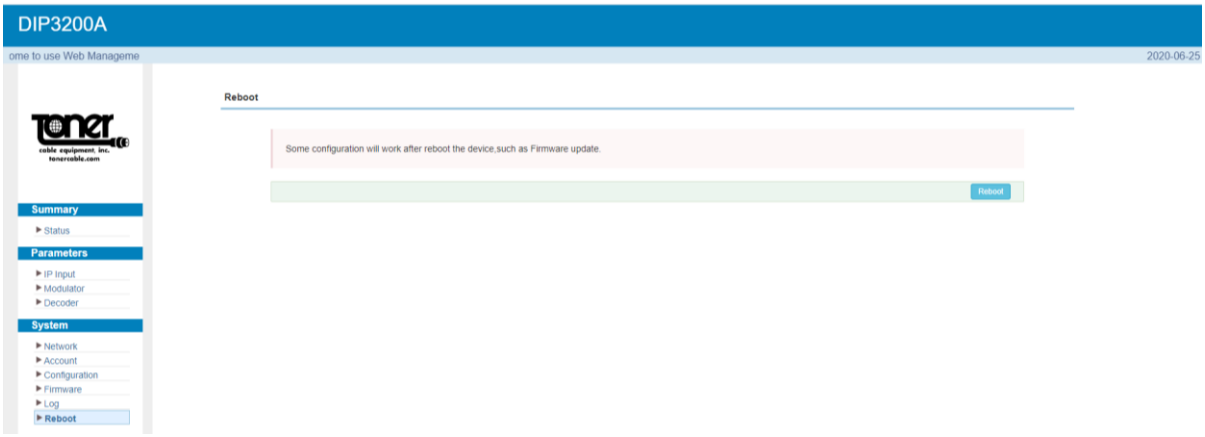


Figure-12

Precautions

- Do not install in an environment that exceeds 110 degrees F.
- When installing in a rack make sure there is one full empty rack space above and below the unit.
- Install where there is good ventilation, do not install in a dusty environment such as a laundry.
- Make sure the electrical outlet is the correct voltage.
- Make sure all connections are tight and installed properly.
- Make sure that there are not power issues. If the power switches on and off quicker than 10 second intervals, this could cause damage to the unit. Unplug the unit and wait for the power problem to be corrected.
- Check to make sure the top ventilation opening is not obstructed in any way.