

October 2013

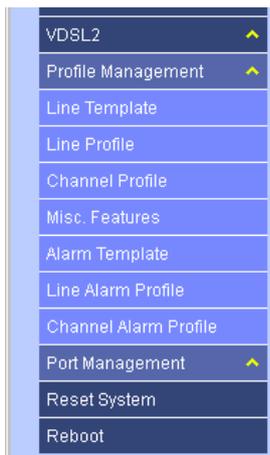
M2024S Profile Quick Guide

The goal of this guide is to help the user to do a quick setup of a VDSL Profile using the most common configuration.

Note: All the settings (Line Template, Line Profile, Channel Profile, etc) have a default value that is pre applied to all the VDSL ports by default is called “DEFVAL” and it cannot be modified. In order to change the values the User can choose other available profiles or add new ones.

Section Introduction:

Profile Management:



The Profile is a set of parameters that can be shared by multiple lines helping to manage the large number of CPEs that the DSLAM CO device can handle. We have the:

1. **“Line Profile”**: Allows setting the VDSL line configuration profile including the VLDS2 Profiles like 30a and 17a”.
2. **“Channel Profile”**: Allows setting the Max and Min Rate, Max Delay and Min INP.

The template is a way to bind the profiles so they can be applied to Port if needed. We have the:

3. **“Line Template”**: We group together a “Line Profile” and a “Channel Profile” under this template. The templates then can be assigned to a Port on the “Port Management” menu section.

Port Management:



In the “**Port management**” section we can assign “**Line Templates**” and “**Alarm Templates**” to each VDSL port and monitor its Status.

Basic Steps to configure a CPE Profile:

In the “Profile Management” left menu item.

1. Go to “Line Profile” menu section.

The default profile (“DEFVAL”) is selected. The user cannot modify this profile.

You can “Click” to select any of the above predefined profiles to modify it:

Line Profile Name	VDSL2 Profile	Band Profile	Target SNR DS/US(0.1dB)	Applied Port
DEFVAL	30a,17a,12b,12a,8d,8c,8b,8a	A_R_POTS_D-32_EU-32	60/60	1,2,3,4,5,6,7,8
AA8a_RA	8a	A_R_POTS_D-32_EU-32	60/60	
AA8d_RA	8d	A_R_POTS_D-32_EU-32	60/60	
AA12a_RA	12a	A_R_POTS_D-32_EU-32	60/60	
AA17a_RA	17a	A_R_POTS_D-32_EU-32	60/60	
BA8b_RA	8b	B8-4_998-M2x-A	60/60	
BA8c_RA	8c	B7-1_997-M1c-A-7	60/60	
BA8c_RA_U/DPBO	8c	B7-1_997-M1c-A-7	60/60	
BA12a_RA	12a	B8-4_998-M2x-A	60/60	
BA17a_RA	17a	B8-8_998E17-M2x-NUS0	60/60	
BA17a_RA_U/DPBO	17a	B8-8_998E17-M2x-NUS0	60/60	
BB8b_RA	8b	B8-6_998-M2x-B	60/60	
BB12a_RA	12a	B8-6_998-M2x-B	60/60	
BB17a_RA	17a	B8-12_998ADE17-M2x-B	60/60	
BB17a_RA_U/DPBO	17a	B8-12_998ADE17-M2x-B	60/60	
CG8d_RA	8d	C_TCM-ISDN	60/60	
CG12a_RA	12a	C_TCM-ISDN	60/60	
CG17a_RA	17a	C_TCM-ISDN	60/60	
CG30a_RA	30a	C_TCM-ISDN	60/60	
BA30a_B7-10_RA	30a	B7-10_997E30-M2x-NUS0	60/60	
BA30a_B8-13_RA	30a	B8-13_998E30-M2x-NUS0	60/60	
BA30a_B8-16_RA	30a	B8-16_998ADE30-M2x-NUS0-A	60/60	

After you “Click” on a profile (for example the “AA8a_RA”) the “line profile Name” and all the other fields will change to the predefined values of that profile.

You can modify any field and then click on the “Edit and Set” button to save the changes.

- For this guide as an example let's create a "testLineProfile" profile based on the "DEFVAL" line profile but with support for VDSL2 17a only. Make sure that the "DEFVAL" profile is selected and then on "New Line Profile Name" enter "testLineProfile" and on "VDSL2 Profile" only check the "17a" check-box. As follows:

Line Profile

Line Profile Name	DEFVAL			
New Line Profile Name	testLineProfile			
Band Profile	A_R_POTS_D-32_EU-32			
VDSL2 Profile	<input type="checkbox"/> 8a	<input type="checkbox"/> 8b	<input type="checkbox"/> 8c	<input type="checkbox"/> 8d
	<input type="checkbox"/> 12a	<input type="checkbox"/> 12b	<input checked="" type="checkbox"/> 17a	<input type="checkbox"/> 30a
Auto Profile	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		Auto Profile Threshold: 3800	
Custom PSD Mask	DEFVAL			
G.hs Carrier Set	<input checked="" type="radio"/> Auto <input type="radio"/> A43 <input type="radio"/> B43 <input type="radio"/> V43			
Band Config	<input checked="" type="radio"/> All Tone On <input type="radio"/> Disable 1.1MHz Below <input type="radio"/> Disable 2.2MHz Below			
Allow USO	<input checked="" type="radio"/> Yes <input type="radio"/> No			
	<input type="radio"/> Enable <input checked="" type="radio"/> Disable			
UPBO(Upstream Power Back-Off)		US0	US1	US2
	Band A	4000	4000	4000
	Band B	0	0	0

For the purposes of this quick guide please leave the other options with the default values. Then Click on the "Edit and Add" button to create the new "testLineProfile" Profile. The newly created Line Profile should now be on the list on available profiles as follows:

Line Profile Name	VDSL2 Profile	Band Profile	Target SNR DS/US(0.1dB)	Applied Port
DEFVAL	30a,17a,12b,12a,8d,8c,8b,8a	A_R_POTS_D-32_EU-32	60/60	1,2,3,4,5,6,7,8
AA8a_RA	8a	A_R_POTS_D-32_EU-32	60/60	
AA8d_RA	8d	A_R_POTS_D-32_EU-32	60/60	
AA12a_RA	12a	A_R_POTS_D-32_EU-32	60/60	
AA17a_RA	17a	A_R_POTS_D-32_EU-32	60/60	
BA8b_RA	8b	B8-4_998-M2x-A	60/60	
BA8c_RA	8c	B7-1_997-M1c-A-7	60/60	
BA8c_RA U/DPBO	8c	B7-1_997-M1c-A-7	60/60	
BA12a_RA	12a	B8-4_998-M2x-A	60/60	
BA17a_RA	17a	B8-8_998E17-M2x-NUS0	60/60	
BA17a_RA U/DPBO	17a	B8-8_998E17-M2x-NUS0	60/60	
BB8b_RA	8b	B8-6_998-M2x-B	60/60	
BB12a_RA	12a	B8-6_998-M2x-B	60/60	
BB17a_RA	17a	B8-12_998ADE17-M2x-B	60/60	
BB17a_RA U/DPBO	17a	B8-12_998ADE17-M2x-B	60/60	
CG8d_RA	8d	C_TCM-ISDN	60/60	
CG12a_RA	12a	C_TCM-ISDN	60/60	
CG17a_RA	17a	C_TCM-ISDN	60/60	
CG30a_RA	30a	C_TCM-ISDN	60/60	
BA30a B7-10_RA	30a	B7-10_997E30-M2x-NUS0	60/60	
BA30a BB-13_RA	30a	B8-13_998E30-M2x-NUS0	60/60	
BA30a BB-16_RA	30a	B8-16_998ADE30-M2x-NUS0-A	60/60	
testLineProfile	17a	A_R_POTS_D-32_EU-32	60/60	

- Go to “Channel Profile” menu section.

The default profile (“DEFVAL”) is selected. The user cannot modify this profile.

Channel Profile Name	DEFVAL
-----------------------------	--------

You can “Click” to select any of the above predefine profiles to modify it:

Channel Profile Name	Min Rate DS/US(kbps)	Max Rate DS/US(kbps)	Max Delay DS/US(ms)	Min INP for 30a Profile DS/US(symbols)	Min INP for non-30a Profile DS/US(symbols)	Applied Port
DEFVAL	256/256	101064/101064	8/8	2/2	2/2	1,2,3,4,5,6,7,8
I-8/2_100_100	128/64	101064/101064	8/8	2/2	2/2	
I-32/16_100_100	128/64	101064/101064	32/32	16/16	16/16	
F-1/0_100_100	128/64	101064/101064	1/1	0/0	0/0	

After you “Click” on a profile (for example the “I-8/2_100_100”) the “Channel profile Name” and all the other fields will change to the predefined values of that profile.

Channel Profile		
Channel Profile Name	I-8/2_100_100	<- Selected Profile
New Channel Profile Name		
	Downstream	Upstream
Min Net Date Rate	128 kbps	64 kbps
Max Net Date Rate	101064 kbps	101064 kbps
Max Interleave Delay	8 ms	8 ms
Min INP for 30a Profile	2 symbols	2 symbols
Min INP for non-30a Profile	2 symbols	2 symbols

You can modify any field and then click on the “Edit and Set” button to save the changes.

- For this guide as an example let's create a “testChannelProfile” profile based on the “DEFVAL” Channel Profile but with Max Rate of 80000 kbps. Make sure that the “DEFVAL” profile is selected and then on “New Channel Profile Name” enter “testChannelProfile” and on “Max Net Date Rate” Downstream and Upstream enter “80000”. As follows:

Channel Profile		
Channel Profile Name	DEFVAL	
New Channel Profile Name	testChannelProfile	
	Downstream	Upstream
Min Net Date Rate	256 kbps	256 kbps
Max Net Date Rate	80000 kbps	80000 kbps
Max Interleave Delay	8 ms	8 ms
Min INP for 30a Profile	2 symbols	2 symbols
Min INP for non-30a Profile	2 symbols	2 symbols
	Edit and Add	Edit and Set Delete

For the purposes of this quick guide please leave the other options with the default values. Then Click on the “Edit and Add” button to create the new “testChannelProfile” Profile. The newly created Channel Profile should now be on the list on available profiles as follows:

Channel Profile Name	Min Rate DS/US(kbps)	Max Rate DS/US(kbps)	Max Delay DS/US(ms)	Min INP for 30a Profile DS/US(symbols)	Min INP for non-30a Profile DS/US(symbols)	Applied Port
DEFVAL	256/256	101064/101064	8/8	2/2	2/2	1,2,3,4,5,6,7,8
I-8/2_100_100	128/64	101064/101064	8/8	2/2	2/2	
I-32/16_100_100	128/64	101064/101064	32/32	16/16	16/16	
F-1/0_100_100	128/64	101064/101064	1/1	0/0	0/0	
testChannelProfile	256/256	80000/80000	8/8	2/2	2/2	

- Go to “Line Template” menu section.

The default Template (“DEFVAL”) is selected. The user cannot modify this template.

Line Template Name

You can “Click” to select any of the predefine profiles to modify it, in the above case the only Line Template available is the “DEFVAL”:

Line Template Name	Line Profile	Channel Profile	Applied Port
DEFVAL	DEFVAL	DEFVAL	1,2,3,4,5,6,7,8

- For this guide as an example let's create a “testLineTemplate” template. On “New Line Template Name” enter “testLineTemplate”. Now let's use the test profiles that we created before, On “Line Profile” select the profile “testLineProfile” and on “Channel Profile” select the profile “testChannelProfile”. As follows:

Line Template

Line Template Name

New Line Template Name

Line Profile

Channel Profile

Then Click on the “Edit and Add” button to create the new “testLineTemplate” template. The newly created Line Template should now be on the list on available templates as follows:

Line Template

Line Template Name

New Line Template Name

Line Profile

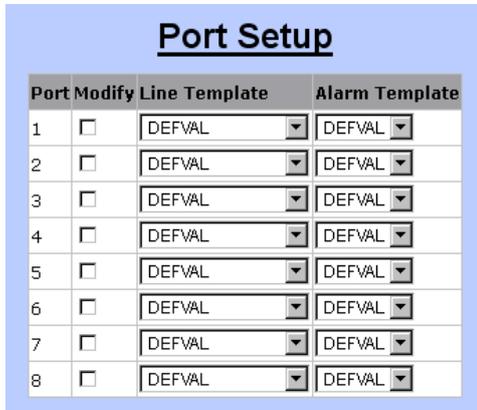
Channel Profile

Line Template Name	Line Profile	Channel Profile	Applied Port
DEFVAL	DEFVAL	DEFVAL	1,2,3,4,5,6,7,8
testLineTemplate	testLineProfile	testChannelProfile	

In the “Port Management” left menu item.

7. Go to “Setup” menu section.

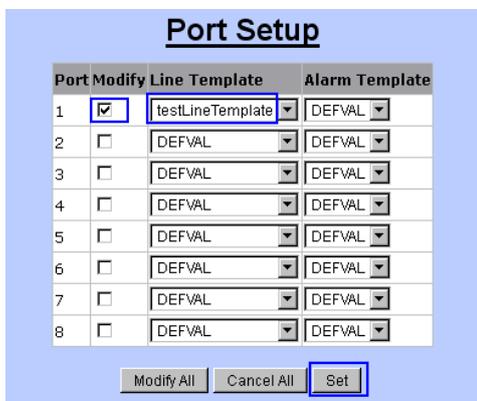
All the Ports are assigned by default the default Line Template and Alarm Template (“DEFVAL”).



Port	Modify	Line Template	Alarm Template
1	<input type="checkbox"/>	DEFVAL	DEFVAL
2	<input type="checkbox"/>	DEFVAL	DEFVAL
3	<input type="checkbox"/>	DEFVAL	DEFVAL
4	<input type="checkbox"/>	DEFVAL	DEFVAL
5	<input type="checkbox"/>	DEFVAL	DEFVAL
6	<input type="checkbox"/>	DEFVAL	DEFVAL
7	<input type="checkbox"/>	DEFVAL	DEFVAL
8	<input type="checkbox"/>	DEFVAL	DEFVAL

You can select any other template in any Port to apply it.

4. Following the example of this guide on the Port 1 row select the “testLineTemplate” on the “Line template” field (the test template that we created before). Then check the “Modify” check-box and click on the “Set” button. As follows:



Port	Modify	Line Template	Alarm Template
1	<input checked="" type="checkbox"/>	testLineTemplate	DEFVAL
2	<input type="checkbox"/>	DEFVAL	DEFVAL
3	<input type="checkbox"/>	DEFVAL	DEFVAL
4	<input type="checkbox"/>	DEFVAL	DEFVAL
5	<input type="checkbox"/>	DEFVAL	DEFVAL
6	<input type="checkbox"/>	DEFVAL	DEFVAL
7	<input type="checkbox"/>	DEFVAL	DEFVAL
8	<input type="checkbox"/>	DEFVAL	DEFVAL

Modify All Cancel All Set

For the purposes of this quick guide please leave the Alarm Template field with the default value (DEFVAL) (the Alarm Template can be configure in a similar way as we did with the Line Template if needed).

After setting the configuration, the “Port Setup” table should look like this:

Port	Modify	Line Template	Alarm Template
1	<input type="checkbox"/>	testLineTemplate	DEFVAL
2	<input type="checkbox"/>	DEFVAL	DEFVAL
3	<input type="checkbox"/>	DEFVAL	DEFVAL
4	<input type="checkbox"/>	DEFVAL	DEFVAL
5	<input type="checkbox"/>	DEFVAL	DEFVAL
6	<input type="checkbox"/>	DEFVAL	DEFVAL
7	<input type="checkbox"/>	DEFVAL	DEFVAL
8	<input type="checkbox"/>	DEFVAL	DEFVAL

Modify All Cancel All Set

8. As a Final step go to the “Port Status” menu section.

Port	Up Time(second)	Rate DS/US(kbps)	Status	INP DS/US(0.1 symbol)	Delay DS/US(ms)	CRC DS/US	Outbound Pkts	Inbound Pkts	Retrain	Details
1	330	79987/54692	Showtime	20/20	7/7	0/0	414982	241179	Retrain	Details
2	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
3	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
4	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
5	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
6	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
7	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details
8	0	0/0	Idle	0/0	0/0	0/0	0	0	Retrain	Details

Port Info	
Items	Status
Port Number	1
Line Template	testLineTemplate
Alarm Template	DEFVAL
Actual Profile	17a
Status	Showtime
Firmware Version	1413c1

VDSL2 Status			
Items	Downstream	Upstream	Unit
Attainable Net Data Rate	108054	54692	kbps
Actual Net Data Rate	79987	54692	kbps
Previous Net Data Rate	101030	101030	kbps
Actual Delay	7	7	ms
Actual INP	20	20	0.1 symbol
SNR Margin	210	67	0.1 dB
Signal Attenuation	5	2	0.1 dB
Line Attenuation	5	2	0.1 dB
Electrical Length	14	14	0.1 dB
Actual Aggregate Transmit Power	107	106	0.1 dB
Trellis Coding	1	1	Enable(1)

As you can see, the Line template “testLineTemplate” was applied correctly to the Port1.

Details: Because of the “testLineProfile” port1 is on VDSL2 17a (Upstream Attainable/Actual Data Rate of 54692 kbps) and because of “testChannelProfile” the Downstream Actual Data Rate (79987 kbps) is lower than the Attainable Data rate (108054 kbps).