

MyM Pro T2 Installation guide

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1 Introduction

Thank you for purchasing an A2B Electronics product. The MyM Pro T2 is a revolutionary solution for reception and modulation both from satellite or from terrestrially transmitted TV content into an analogue format suited for small SMATV networks where cost efficiency and high quality is required. The MyM Pro T2 has a multifunctional tuner that receives DVB-S/S2 and DVB-T/T2 transmissions.

The MyM Pro T2 unit is delivered with hardware and software that supports MPEG2/MPEG4 decoding, HD downscaling, DSB RF modulation with NICAM or A2 audio, IP control and management.

The MyM Pro T2 can be upgraded for enhanced functionality by software upgrades.

Software upgrades are available from A2B Electronics web site.

A2B Electronics AB

Phone: +46 (0)141 229115 E-mail: <u>support@a2b.se</u>

Visit our web site www.a2b.se for more information.



2 Unpacking the unit

The following items are included in the package:

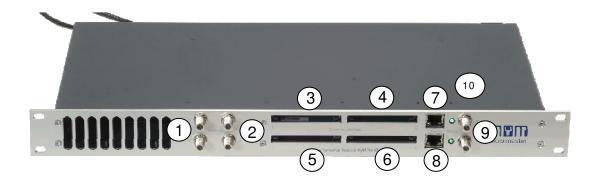
<u>Amount</u>	<u>Description</u>
1	MyM Pro T2
1	Quick guide

Every unit is quality controlled by us before delivery. Should any items be missing when unpacking, please contact our support service (see page 3 for contact info).





3 Connections and indications



1. Antenna input 1	Connect the satellite/terrestrial signal for Ch1 and Ch2 here
2. Antenna input 2	Connect the satellite/terrestrial signal for Ch3 here
3. Common Interface 1	Insert a Common Interface module into this slot (Supports decryption for Channel 1 and 2)
4. Common Interface 2	Insert a Common Interface module into this slot (Supports decryption for Channel 3)
5. Common Interface 3	Insert a Common Interface module into this slot (Supports decryption for Channel 4 and 5)
6. Common Interface 4	Insert a Common Interface module into this slot (Supports decryption for Channel 6)
7 and 8. Ethernet ports	RJ-45 port for 10/100 baseT Ethernet. Connect your PC to these ports for management and upgrades.
9. RF-output(s)	Combined 3 channel RF outputs for connection to your SMATV network.
10. Indicator LED(s)	Status indicator. Green flashing LED says all channels are OK. Red flashing LED says one or more channels are not decoding video.
	NOTE!If only two channels are used the Video WD shall be set to "OFF"for the non used channel to get green LED (see page 12)

get green LED (see page 12)

4 IP settings

The MyM Pro T2 has an embedded web server allowing web browser Internet Explorer to connect to the unit for settings and management. No controller software is needed. The MyM Pro T2 has by default static IP address(es) for connecting your PC to the unit.

NOTE! MyM Pro T2 is only approved with Internet Explorer as web browser.

The MyM Pro T2 is delivered with the default IP address: 192.168.0.20 for port 1 and 192.168.0.21 for port 2 in 6T.

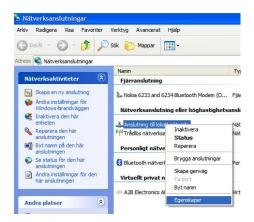
First time installation requires that you set a static IP address on your computer. For example set your PC to IP address: 192.168.0.19 and Net

mask: 255.255.255.0



TCP/IP settings for Windows XP (setting your PC to 192.168.0.19)

Select "Start", "Control panel" and "Network connections". Next select "Network and Internet settings". "Right click" on [Settings for local network] and select [Properties].



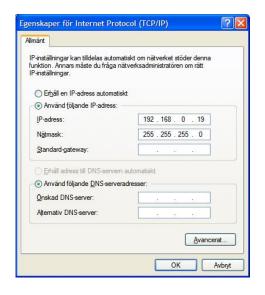
In Properties select [Internet protocol (TCP/IP)] and [Properties].



4 IP settings (continued)

Select [Use this IP adress] and write: 192.168.0.19 and select [Net mask] 255.255.255.0. Click [OK] and then click [Close].

NOTE! For PC with other Operating Systems (OS) than Windows, please consult the Owners manual for your PC for [IP/Network settings].



Connecting your PC to the MyM Pro T2

Connect the MyM Pro T2 double power cords to a wall outlet.

See section 6 for installation.

Next connect your PC to the MyM Pro T2 with a network cable.

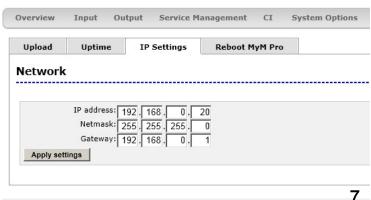
Start your web browser 1) and write the IP address 192.168.0.20 and 192.168.0.21 for second port *) in the address field of your browser.

1) MyM Pro is only approved with Internet **Explorer**

Settings of IP address

Click the [System options] menu and then press [IP Settings] to set a new IP address, Netmask and Gateway for the MyM Pro T2.

MyM Pro WEB Configurator



*) MyM Pro 6T

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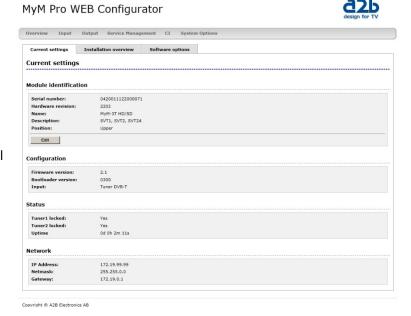
5 Menus and settings

All necessary settings can be made in the web GUI via a web browser. When first connection is made with the MyM Pro T2 following overview menu will appear.

5.1 Overview menu

<u>Current settings</u>

Contains information of current input and output signals, if the tuners are locked to a signal, firmware version, bootloader version, hardware revision, serial number and current IP Network settings.



Installation overview

In this menu you can see all MyM Pro units when connected to a switch and also see EXM/OXM units that are connected to the same switch.

MyM Pro WEB Configurator



Current settings Insta		llation overv	iew Software option	ns							
ns	talla	tion Overview									
••••											
	Refresh	view									
-											
		IP Address	Unit	Serialnumber	Firmware	Input	Output	ASI-Source	I NId	TsId	Uptime
9		IP Address 172.19.99.20	Unit	Serialnumber 0350009011300002	Firmware 1.33-RC21	Input DVB-T	Output Analogue	ASI-Source 172.19.99.32	3F NId 8945	TsId	Uptime 2d 22h 0m
	ď			- Section of the sect	200000000		100000000000000000000000000000000000000	000000000000000000000000000000000000000	-		
0	ă ă	172.19.99.20	EXM	0350009011300002	1.33-RC21	DVB-T	Analogue	172.19.99.32	8945	20	2d 22h 0m
0 0 0	ŭ	172.19.99.20 172.19.99.21	EXM EXM	0350009011300002 0350009011900068	1.33-RC21 1.33-RC21	DVB-T DVB-S	Analogue COFDM	172.19.99.32 172.19.99.20	8945 8945	20 21	2d 22h 0m 2d 21h 58m

Software options

In this menu you can see which software options that are activated.

MyM Pro WEB Configurator



To continue with settings click the [Input] name in the banner.

5.2 Input settings

As the MyM Pro T2 contains "multituner" start by selecting either DVB-T/T2 or DVB-s/S2. After that you choose [Tuner 1] or [Tuner 2] for settings of the tuner parameters.

Tuner 1 provides the service list for RF output Ch1 and Ch2. Tuner 2 provides the service list for RF output Ch3.

[Bandwidth] can be selected between 6, 7 or 8 MHz. Select input channel from [Channel name] scroll list or write the center frequency of the wanted Mux and press [Set].

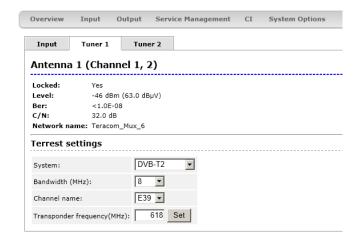
If you have an MyM Pro 6T proceed with next two tuners [Tuner 3] and [Tuner 4] after moving the TP cable to the other RJ 45 port (if not using switch). Tuner 3 provides the service list for RF output Ch4 and Ch5. Tuner 4 provides the service list for RF output Ch6.

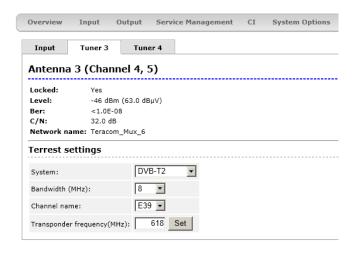
NOTE! Don't press [Set] if channel is chosen from the scroll list.

MyM Pro WEB Configurator



MyM Pro WEB Configurator



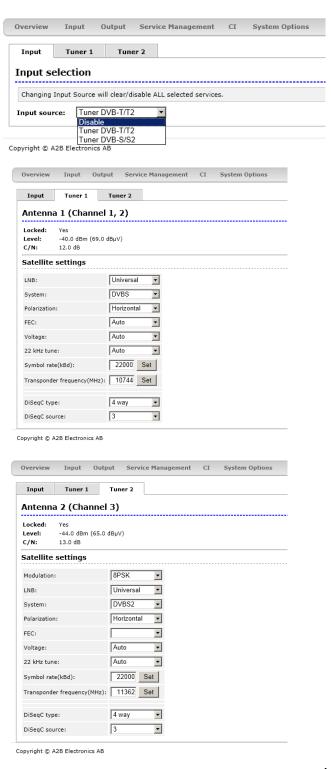


5.2 Input settings cont.

For receiving from satellite, start with chosing [Tuner 1] or [Tuner 2]. Tuner 1 provides the service list for RF output Ch1 and Ch2. Tuner 2 provides the service list for RF output Ch3. The tuner can also be "Disabled".

Select the actual Input parameters for the satellite transponder you receive. After the tuner has locked you can read the values for [Locked], [Level] and [C/N].

If you have an MyM Pro 6S proceed with next two tuners [Tuner 3] and [Tuner 4] after moving the TP cable to the other RJ 45 port (if not using switch). Tuner 3 provides the service list for RF output 4 and 5. Tuner 4 provides the service list for RF output 6.



5.3 Output settings

Modulation

Band

Start the output setup by selecting which band you want to use. You can select VHF-7, VHF-8 and UHF. VHF-7 and VHF-8 corresponds to 7 and 8 MHz bandwidth. After selection press [Set].

Frequency

For each of the 3 (or 6) possible RF output channels, set the desired output channels by using [Channel name] scroll list or write the frequency.

NOTE! The MyM Pro provides DSB modulation so you can't use adjacent channels.

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National

Subtitle/

Type

Set type of subtitling to Normal or for Hearing Impaired or None.

Language

Select subtitling language. Depends of received languages in the terrestrial signal.

Priority

Set DVB or Teletext subtitling as default selection.

Audio/ Video Delay (ms)

This is automatic. However, if you experience a lip-sync delay problem you can set delay between 200ms and - 200ms individually for each Channel

Modulation	National	Advanced			
National					
Subtitle					
	Type: None	•			
Lang	uage: Swedis	1			
Pr	iority: Teletex	•			
Auto conve	rsion: On 🔻				
Teletext ch	arset: Latin 0	•			
Audio					
Audio lang	uage: Swedisl	1			
Audio level					
Channel 4		Channel 5		Channel 6	
Audio Level	(dB): 0	Audio Level (d	3): 0	Audio Level (dB):	0 🔻
Audio/Video [elay (ms)				
Channel 4	0 Set	Channel 5	0 Set	Channel 6 0	Set

11

5.3 Output settings continued

National (continued)

Auto conversion

Setting this in position "On" converts subtitling to fit actual picture aspect ratio if needed.

Teletext Charset

Select appropriate characters for selected language.

Audio/

Audio language

Select which language to receive and transmit on the outgoing programs.

Audio level

This setting allows to equalise the difference in sound level between different programs. Settings can be done between + 6 and -6 dB.

Advanced

Aspect ratio

Set correct picture format of the programs transmitted from the MyM Pro T2.

Video standard

Select your regional video standard.

Audio system

Set your regional audio standard.

Video watchdog

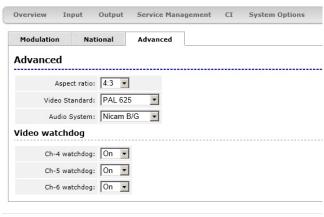
Here you can switch the video WD On or Off. This can be useful for example if authorisation of a new smartcard is hard to achieve. A non used channel shall be set to "OFF" to avoid rebooting of the unit.

NOTE! Changing this setting will only take effect if a reboot is done after the change.

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5.4 Service Management

The MyM Pro 3T contains 2 and for MyM Pro 6T 4 separate DVB-T tuners and totally 3 or 6 services can be selected for each of the output channels, named [CH-1], [CH-2] and [CH-3] and for MyM Pro 6T also [CH-4], [CH-5] and [CH-6].

The list of services presents all received services from both tuner inputs. Service from Tuner 1 is named "Tuner1" and services from Tuner 2 is named "Tuner2" respectively "Tuner 3" and "Tuner 4" in a 6T.

When one program (service) is selected, the box in front of the program name changes colour to green. The service list gives following information:

Selected service Green colour indication

Type Shows type of service (MPEG-2, MPEG-4, Data etc.)

Name Program name
Provider Name of operator

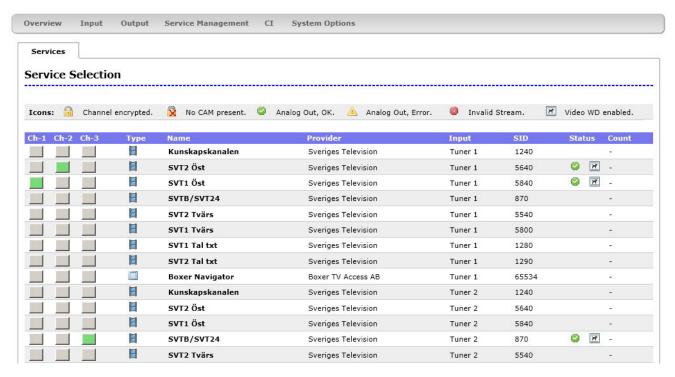
Input Indicates what tuner input the service is received from.

SID Service ID number (as received)

Hanglock Shows if service is encrypted or not and if CAM is inserted

Status I cons for Analogue out and watchdog enabled

Count Counts if there is a fault in the video decoding



NOTE! To detect whether a Common Interface module and smart card actually decrypts the programs is only possible by watching the outgoing signal on a TV-set tuned to the correct frequency.

5.5 Cl menu

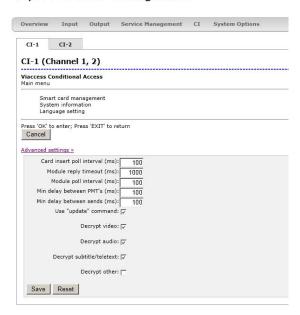
The MyM Pro 3T contains 2 CI (Common Interface) and MyM Pro 6T contains 4 CI (Common interface). [CI-1] decrypts services for output CH-1 and CH-2. The [CI-2] decrypt services for output CH-3.

In MyM Pro 6T [CI-3] decrypt services for CH-4 and CH-5 and [CI-4] decrypt service for CH-6In menu you get information about CAM and card.

In the Advanced settings menu you can change timing settings for the used CAM if there is a need for changing that. After a change is made the [Save] button must be clicked. If changes are made and does not work, you can get the default settings again by a click on the [Reset] button and a click on the [Save] button.

NOTE! If one change CAM to another CA system (i.e. from NDS to Conax) the unit needs to be rebooted. Decryption may take some seconds before it starts.

MyM Pro WEB Configurator





5.6 System options

Upload/ Upgrade

The Upgrade menu is used to be able to download software Upgrades or future software functionality.

The procedure of downloading a new software looks as described below:

- 1.Download the appropriate file from our web page to your PC.
- 2.Browse for the file in the MyM Pro T2 user Interface.
- 3.Press [Upload]
- 4. Wait until message shows up, "Upload completed".
- 5.Click on [Restart] to reboot the MyM Pro T2.

The Upload menu shows current files downloaded into the units and can be useful when contacting A2B support.

<u>Uptime</u>

The Uptime menu gives statistics of uptime and possible restarts. The log can be cleared by click on [Clear log].

IP settings

This section shows current IP-address, Netmask and Gateway settings.

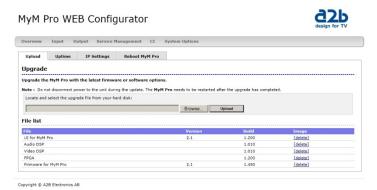
Remember to change settings if the default IP-address is used by other devices in your network.

In case you have forgotten your IP-address please consult the A2B support web site and download free of charge our tool "IP-supporter". This tool finds all MyM Pro T2 and their respective IP-addresses available in your network.

Also remember to press [Apply settings] when ready.

Reboot MyM

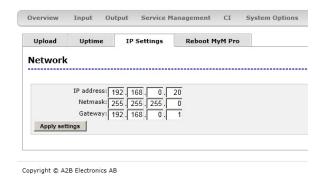
Pressing [Reboot unit] re-starts the MyM Pro T2. All settings are preserved so no settings or programs will be lost.



MyM Pro WEB Configurator



MyM Pro WEB Configurator



MyM Pro WEB Configurator

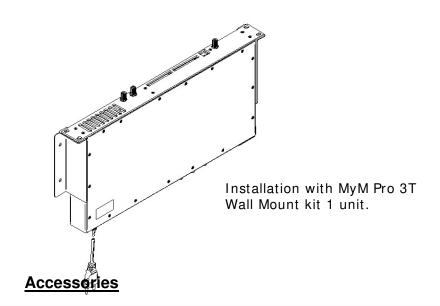


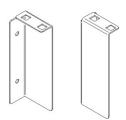
English

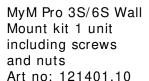
6 Installation and configuration

The MyM Pro T2 can be installed either as a stand alone unit directly on the wall by the use of a dedicated MyM Pro T2 Wall Mount brackets (part number 702800.10) or in an 19 inch cabinet.

Before connecting power to the MyM Pro T2, make sure that all other connections have been made. A coaxial cable of good quality with an F-connector should be connected to the Antenna input and another one from the RF output to the SMATV network. Make all necessary settings as described in section 4 and 5.

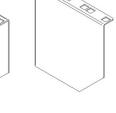






MyM Pro 3S/6S Wall Mount kit 2 units including screws and nuts Art no: 121402.10





MyM Pro 3S/6S Wall Mount kit 3 units (for two MyM and one switch) including screws and nuts.

Art no: 121403.10

7 Technical specification MyM Pro T2

2 / 4 x DVB-T Terrestrial Receiver

2/4 T2 Number of tuners Input frequency 47-862MHz Connector Type F female, 75 Ω Input level 40 - 70 dBuV Bandwidth Selectable 6,7 or 8 MHz FFC Auto GΙ Auto 2k and 8k Modes

3 / 6 x MPEG Decoder - Video - audio

Video standard MPEG2 MP@ML, MPEG4 h.264 AVC MP@L3 Audio standard AAC HE or MPEG 1

layer II

Picture aspect ratio Letterbox, Anamorphic Teletext

Subtitling Teletext or DVB subtitling

3 / 6 x Modulator

PAL B/G, I, D/K, SECAM Modulation standard

(DSB)

Audio FM-mono, NICAM stereo

and A2/A2* stereo Double side band from

160 - 862 MHz. Min. 80 dB μ V, fixed

RF output connector Type F female, 75 Ω

Miscellaneous

230 VAC typ (94-264VAC) AC Power supply AC power consumption 3T Typ. 18 W AC power consumption 6T Typ. 36 W Ethernet port Setup and update

Setup Dimension

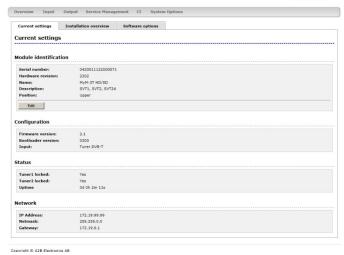
Weight Operating temperature

Web based GUI 383x220x44 mm (excl.

connectors) Approx. 3,2 kg -20 to +45°C non condensing

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Example of MyM Pro T2 Web GUI

Decryption

Output channels

Output level

Decryption Interface 2/4 x Common Interface (PMCIA 5VDC) Decryption type Single or Multidecryption CAM's supported CI 1 slot (3/6T) Decryption for output Ch1 and Ch2 CI 2 slot (3/6T) Decryption for output Ch3 CI 3 slot (6T) Decryption for output Ch4 and Ch5 CI 4 slot (6T) Decryption for output Ch6

8 Declaration of Conformity

The document for Declaration of Conformity is available for download from $\underline{www.a2b.se}$.



Further information at www.a2b.se.

9 Abbreviations

DVB Digital Video Broadcasting (Standardization body)

MPEG-2 Compression format for digital TV

MPEG-4 Compression format for digital TV (SD and HD)

DSB Double Side Band (RF modulation occupying 2 channels)

NICAM Digital sound format for analogue TV transmission

IP Internet Protocol (defines how data is packetized for Internet broadcast)

DVB-S Modulation format (QPSK) for satellite transmission of digital TV

DVB-S2 Modulation format (QPSK or 8PSK) for satellite transmission of digital TV

DHCP Dynamic Host Configuration Protocol is a protocol used by networked devices

(*clients*) to obtain the parameters necessary for operation in an <u>Internet Protocol</u> network. This protocol reduces system administration workload, allowing devices to be added to the network with little or no manual

configuration.

Common Interface Connector for a PCMCIA module used for decrypting encrypted TV programs.

Modules should comply with the DVB CI standard

SD Standard definition TV (576i in Europe)

SMS Service Management System (system for handling smartcards).

SMATV Satellite Master Antenna TV.

A2 Dual sound analogue stereo audio

LNB Low Noise Block (outdoor unit for sat. Reception)

GUI Graphical User Interface

QAM Quadrature Amplitude Modulation (digital modulation method)

QPSK Quadrature Phase Shift Keying (digital modulation method)

8 PSK Eight Phase Shift Keying (digital modulation method)

FEC Forward Error corection (digital error correction method for digital

transmissions)

C/N Carrier to Noise ratio (defines the difference in dB between digital signal and

noise level

AAC-HE Digital sound compression standard

VBI Vertical Blanking Interval. Part in video signal non-visible
CAM Conditional Access Module (see above Common Interface)



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