

APS mini Plus (Home)

APS mini Plus access control system managed with APS Home

System installation step by step

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2 About document

This document is a guide for installation of APS mini Plus system managed with the APS Home program. It contains procedures for setting up basic functions of the system.

3 Hardware installation

When connecting reader modules to the APS BUS it is necessary to maintain general principles for RS 485 connection. When connecting modules, where the HW address is set by the jumpers' configuration, set the HW address immediately (the HW address jumpers description is provided in the individual device user's guide).

Modules, where the HW address is set by jumpers' configuration:

MREM 56, MWGD 46, MRRF 12, (MREM 54)

Modules, where the HW address is set by software:

MREM (MREC, MREP, MRED) 53, MREM 55, MREM 63, MDEM 31, MREF 63

4 System installation and setting

4.1 HW a SW requirements for the server computer

As for the HW requirements approach, any new computer will suit the requirements, when using an older one, it is appropriate to keep these minimal parameters:

- OS MS Windows XP – 1GB RAM
- OS MS Windows Vista – 2 GB RAM

The recommended OS is MS Windows XP or newer. If you intend to use a serial port microreader and your computer does not feature a native COM port, be sure your OS supports appropriate USB > COM converter drivers first (especially MS Windows 64bit OS editions).

4.2 Installation of support SW (SQL server 2005 Express)

For the data storage the APS Home program can use either MS SQL Server Compact 3.5 or MS SQL Server 2005/2008 (Express). Before advancing it is necessary to make a decision, which way is better for the application. Generally we recommend using MS SQL Server 2005/2008 (Express), which is faster, more stable and more secure. In case you still want to use the "light version" - MS SQL server Compact 3.5, which does not require any service installation, skip following steps and continue in the next chapter.

MS SQL Server Express installation - for the installation it is necessary to have MS .NET Framework 2.0 and Windows Installer 3.1 installed first.

The programs are available at the installation CD in the Support folder, or it can be downloaded from the Microsoft web pages.

The MS SQL Server 2005 Express program can be installed from a CD by running the setup.exe file – in this case you only need to fill in a strong password for the “sa” account and choose the instance name (unnamed instance is supposed in following parts).

If the setup.exe file is unavailable, run the installation with the msi file (Microsoft Installer). During the installation it is necessary to uncheck the box Hide advanced configuration options at the page with the registration information. Then set:

- Choose Default instance at the Instance Name page
- Check the SQL Browser service checkbox at the Service Account choice page
- Choose Mixed mode and enter the strong password for the sa account at the Authentication Mode page

Leave all other parameters at their default setting.

After the installation is finished (installation with msi file only), it is necessary to enable the TCP/IP protocol using in the server properties. It is performed by selecting Start > Programs > Microsoft SQL Server 2005 > Configuration Tools > Protocols for MSSQLSERVER > and set the TCP/IP protocol to enabled.

After the setting restart the SQL server service by selecting SQL Server 2005 Services > SQL Server (MSSQLSERVER) > Restart from the context menu.

The SQL server installation is finished now.

4.3 APS Home installation, creating database

Install the APS Home program by running the installer from the installation CD, or you can download it from <http://www.techfass.cz>. After installing run the program (Administration privilege is required for creating a database).

Press the Open button located at the top toolbar. Select a tab according to the SQL server version you intend to use.

In case you use SQL Server Compact 3.5 it is necessary to download and install relevant libraries (via links at the tab); after that choose Create a new database file, select Database File location, choose Next and click the Create Database link at the last screen. Continue by pressing OK then.

In case you use SQL Server 2005/2008 (Express) choose Create a new database, fill in “(local)” as the server name, perform a connection test, press the Next button, fill in the Database name, press the Next button and press the Create a database link at the last screen. Continue by pressing OK.

The data storage is ready now, you can continue with setting up communication.

4.4 TCP/IP converter setting (APSLAN, MWGD 46.IP, MDEM 31.IP)

Connect the converter to a PC with a network cable. By default the converter IP address is 192.168.1.253 (factory defaults can be restored by pressing the Reset button for more than 5 seconds). Set up an unused IP address at your network interface from the same subnet (192.168.1.xxx). Connect to the converter via terminal at port 9999 (command “telnet 192.168.1.253” from a command line). After connecting enter the password (“1234”

by default). In options 1 and 2 set up required IP address and IP port. After that save the changes by selecting 9 Save & exit.

The MDEM 31.IP terminal converter can be set directly from the configuration accessible from the terminal screen, for more information see product user's guide.

The converter configuration is available in APS Home program as well – in the main menu select System > Hardware and communication. Create a new network line. Fill in IP address and IP port choose the option Configure (terminal). A telnet terminal window is opened, where you can perform all procedures described above.

If you cannot access the converter at the default IP address, use following procedure – in the command line (in MS Windows Vista system the command line must be run with Administrator privilege) enter following commands:

- “Arp -d”
- “Arp -s IP_ADDRESS MAC_ADDRESS” (for an example of the command syntax use command Arp -?), where IP_ADDRESS is an unoccupied IP address from your subnet range, MAC_ADDRESS is the MAC address printed at the converter.
- “telnet IP_ADDRESS 1” – telnet terminal announces an error after a while, but the converter will be accessible at desired IP address now, use procedure described above.

4.5 Readers configuration

The readers are identified with their HW address at a communication line. The address is from range 1-32, each reader must have its own unique HW address (MWGD 46(.IP) dual door controller occupies two successive addresses at the communication line, the lower address is set by the jumpers' configuration, more information can be found in the product user's guide).

Reader modules having their HW address set with SW (see chapter 3) require setting up the communication parameters in the program first – COM port for communication via a serial line, or IP address and port for communication via TCP/IP. After that it is possible to set up the HW addresses of the readers with one of the procedures described below.

In the APS Home program open the Hardware and communication dialog (System > Hardware and communication). Add a communication line you intend to use for communication with the system. If it is a serial line, it is necessary to set up the COM port name in the line properties. If it is a TCP/IP line, it is necessary to set up the IP address and IP port in the line properties. Use the ping command from the context menu of the TCP/IP line to verify it is accessible. To set HW addresses of the readers open the Set HW address dialog from the context menu of the line.

- Setting HW address with reader's SN – in the Set HW address dialog fill in the Knowing serial number parameter and select required HW address. After pressing the Start button the relevant reader's HW address is set.
- Setting HW address with a confirmation ID – in the Set HW address dialog fill in the Using confirm ID parameter – here you need to enter the ID of a card, which will be used for address assignment confirmation – select required address and press the Start button. The readers go in HW address setting mode – they expect reading a confirmation ID (flashing with red and green LED). When the confirmation card is presented to a reader, its HW address is assigned.

After setting HW addresses to all readers choose the option Explore communication line from the line context menu. If the program finds all modules, which you have added to the line, follow the procedure described below, otherwise you need to set the HW addresses properly.

The next step is setting up parameters for door control – parameters for setting are available after selecting an individual reader module. The setting can be copied and pasted to other modules with commands located in the context menu.

4.6 Microreader and its setting

The ID Microserver program can be installed from the installation CD or it can be downloaded from the web pages <http://www.techfass.cz>. After the installation run the application and select your microreader type at the Configuration tab. When the configuration setting is done, start the server with the green start button. Verify the program functionality by presenting a card at the microreader; you should be able to see the card ID in the Read Cards list at the Application tab.

If a microreader is connected to a PC permanently, you can set the program to run as a windows network service. The installation can be done at the Service tab. Select the service name (we recommend to keep default value) and press the Install Service button. After the service is installed, you can run it by pressing the Start service button. The service is installed to run on every computer start.

In APS Home program open the Program options dialog (Program > Options). Choose Use microreader at the Microreader tab. Fill in the IP address of the computer running the ID Microserver program or service (in case it is the same computer keep the address 127.0.0.1) and the IP port set in the ID Microserver program (10777 by default).

After saving the setting verify the function of the whole configuration by selecting System > Access cards > New (from the context menu), read a card at the microreader – if the ID appears in the code field , everything is set properly.

If the microreader does not work properly, verify setting of all parameters mentioned in this chapter and verify, if the port used by microreader server for listening is not blocked by a firewall or used by another application.

4.7 Access rights setting

The access rights distribution model is designed for easing the administration for blocks of flats and similar objects. The reader modules of the system are bound to a defined area, a user is assigned to the area then – thus acquires access to all readers defined as entry readers for the area.

The areas are hierarchically sorted in a tree. A user assigned to an area automatically gains access to all parent areas of the area.

For creating an area open a context menu from area list (top left) and choose New root or Child area. Create a tree of areas according to the real situation and after that assign entry readers to the areas at the Modules tab in Area properties dialog (opened by selecting Edit from the area context menu). If a module does not lead from a parent area, it is appropriate to set it also as an exit module of an area it leads from.

By this procedure define a structure of access areas, in which you can assign users then.

4.8 Inserting cards

The cards can be inserted either with a microreader or by presenting a card to any module in the system (in this case it is necessary to start the communication by pressing the Connect button at the top toolbar in APS Home program first). Open the Collect cards dialog with System > Collect cards. Choose modules you intend to use for cards inserting (Module option) and read all demanded cards. Fill in a pattern for card description – see an example of the first card in the Example field. Check the Create personal cards checkbox – after inserting cards in the database the program will automatically create persons, which will have the cards assigned. Choose cards you want to insert in the database from all read cards list and press the OK button.

4.9 Access rights assignment

To assign access rights to users select required area in the left part of the main window, select required users from all users list in the right part of the main window and drag and drop the users from the right part to the middle part of the window. By this action the selected users acquire access rights to selected area (and its entry readers) as well as the selected area's parent areas. Assign access rights to all users with this procedure.

4.10 Data transfer

To upload the access rights and settings to the APS mini Plus system press the Connect button located at the top toolbar first. After that upload all settings and access rights by pressing the Send data button.

4.11 Function verifying

Verify that all settings are correct. The installation is finished.

5 Links

Detailed manuals can be found at the installation CD in the Documentation folder, or at www.techfass.cz.