# **ISDN** over IP

# Installation Manual

## LAN-Module 510

33300045

VELEO



### About this Manual

All described functions are referring to the current software available at the time of printing.

After a software update, functions and the associated handling thereof may alter. The AGFEO ISDN-over-IP Technology is using networks merely as a transportation media, AGFEO will not undertake the maintenance or support of networks.

AGFE0 Telecommunication will not afford any warranty for improper use of AGFE0 ISDNover-IP products or deployment in unsuitable networks.



Please consult your network administrator before you attempt any changes to the network configuration.

## Introduction

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### System Description

The LAN-Module 510 will integrate the AGFEO Telephone Systems AS 40 P (P 400-1), AS 4000 (P 400-1), AS 100 IT (P 400-IT), AS 43, AS 45 and AS 200 IT into networks and will offer the proven service and feature characteristics for use and operation via the network interface.

In addition all the important telephone applications are available to all users within the LAN. This includes TAPI connection, remote CAPI, TK-Suite, Computer Telephony and a shared Internet access.

With the integrated ADSL2+ modem and router the LAN-Module 510 enables various PC's within the local network access to the Internet. The local network will be protected via the integrated firewall.

The LAN-Module can also be integrated into an existing network structure as the modem and router of the LAN-Module 510 can be switched off.

In addition the LAN-Module 510 offers up to 8 channels for Internet-Telephony (SIP) or ISDN over IP. Additional Information will be available at our homepage on: http:// www.agfeo.com

### CTI - Computer Supported Telephony with TK-Suite Client

Phone calls, contact information and appointments can be centrally administrated via the TK-Suite Client.

TK-Suite Client will enable you to see who is calling on the monitor and make an outgoing call for a phone or headset with a simple mouse click. Calls from the call log can also be transferred into the contact database as well as to administrate appointments and call notes. In addition TK-Suite Client users may send messages to each other via the "Chat" button.

The contact database, notes and appointments are centrally stored in the LAN-Module 510. These will be synchronised with each login of a client onto the LAN-Module 510. You may differentiate if appointments, contact details and notes are accessible to all clients logged onto the LAN-Module 510, or are private and for your eyes only.

TK-Suite Client does not necessarily need to be connected via the internal network to synchronise between TK-Suite Client and the LAN-Module 510. If the necessary access has been granted then the LAN-Module 510 may also be accessed via the internet. For example, once logged onto your LAN-Module 510 via the internet you may check your missed calls whilst on holiday.

Please observe the note regarding number of users for this on page 10.

## Installation

### **LAN-Module Connections**

### Front

### Back





### LED's of LAN-Module

The LAN-Module 510 is equipped with two double LED's, each of these can display red and green simultaneously. The LED's will give information about the status of the LAN-Module.

		LED 1 Green	LED 1 Red	LED 2 Green	LED 2 Red
	Off	DSL Firmware not started			
	Flashing Slowly	DSL Modem not yet synchronised	Data Traffic via DSL	Firmware Update of LAN-Module	
Flashing Fast				LAN-Module	
	i taoining i aot			start up	
	On	DSL Modem synchronise and ready	d	LAN-Module is ready	LAN-Module start up

Should the router within the LAN-Module being disabled, then LED 1 is off and LED 2 is constantly green.

### Fitting the LAN-Module

#### Data Backup

Please install the PC programming software AGFE0 TK-Suite. Launch the program AGFE0 TK-Suite Set. For the purpose of data backup please download the complete telephone system program and, if applicable, any TK-Suite Bill call history information and save these to disc or flash drive.

#### Update the Telephone System

Prior to fitting the LAN-Module into the system, please ensure that the telephone system is running on the required operating system (SM-Version 8.0 or higher and Firmware Version of 8.0 or higher) which is imperative for LAN-Module operation. Current software versions can be found in our partner area at www.agfeo.com.

#### Please Note the Order of Updates

You must update the Start Module (SM) first, after which the system will remain in a state of none operation. Therefore update the firmware immediately after. After successful update please wait for two to three minutes until the system powers up again. After firmware update the system must be reset to default (erase system memory). Please note that ALL data will be deleted including system programming and billing information. Upload the earlier saved system programming data and check that all settings are correct.

#### ATTENTION:

Due to comprehensive changes within the firmware the following features must be newly programmed after a firmware upgrade from version 7.6 to version 8.0: EIB, Status Display of System Phones, Answering Machine and Call Barring.

The system must be completely reprogrammed for any firmware deviation which is higher than between these two versions (<7.6 - > 8.0)!

Refer to your AGFEO Telephone System Installation Manual for the fitting of the LAN-Module!

# NOTE: The LAN-Module must be fitted in the Master Cabinet for AS 40 P´s, AS 100 IT´s, AS 45's and AS 200 IT's which are interconnected.

Warning: Unplug Telephone System from Mains Power before any modules are changed.

### **Connect LAN-Module to DSL Line**

Please note: Your DSL modem of your LAN-Module can only be used if your DSL connection will support one of the following standards: G992.1 Annex B, G992.3 Annex B, G992.5 Annex B These standards may differ between providers.

- Connect one end of the cable, which is included with the module (RJ 45 Plug to individual wires), to the DSL connection of the LAN-Module 510.
- Plug the other end of the cable into the DSL socket of the splitter (filter).

The integrated DSL modem of the LAN-Module will synchronise with the DSL network.

# Connecting a PC to the LAN-Modul 510

You may connect a PC via a patch lead, and or via a switch to the LAN-Module 510. (Provided a Network Adapter is available)

### Establish Connection via a Patch Lead

In default the LAN-Module 510 is not configured as DHCP server, this means that you will have to assign an IP address to your PC which is within range of the LAN-Module. In default the assigned ID address of the LAN Module 510 is

the assigned IP address of the LAN-Module 510 is 192.168.100.1, therefore, for example, you should allocate the IP address of 192.168.100.2 to your PC in order to reach the LAN-Module.

Below is a description of settings under Windows XP:

- Open the network environment of your PC and select "Display Network Connection".
- Highlight the LAN connection which is connected to the LAN-Module 510.
- Click onto change "Settings for this connection".
- In the next window highlight "Internet Protocol TCP/IP" and click onto "Properties".

In order to establish a connection to the LAN-Module 510 the properties of your PC have to be set as displayed on the right.

Eigenschaften von Internetprotokoll	(TCP/IP)	? ×			
Allgemein					
IP-Einstellungen können automatisch zugewiesen werden, wenn das Netzwerk diese Funktion unterstützt. Wenden Sie sich andernfalls an den Netzwerk administrator, um die geeigneten IP-Einstellungen zu beziehen.					
C IE-Adresse automatisch beziehen					
→ Folgende IP- <u>A</u> dresse verwenden:					
JP-Adresse:	192.168.100.2				
S <u>u</u> bnetzmaske:	255 . 255 . 255 . 0				
Standardgateway:	192.168.100.1				
C DNS-Serveradresse automatisch	beziehen				
Folgende DNS-Serveradressen <u>v</u>	erwenden:				
Bevorzugter DNS-Server:					
Alternativer DNS-Server:					
	Erweitert.				
	OK Abbre	echen			

**NOTE:** Should you like to integrate the LAN-Module 510 in an already established network, then please contact your system administrator to avoid problems which might occur if settings are changed!

## Installation

### **Default Settings**

### **Router Settings:**

- Router disabled
- DHCP disabled
- IP-address: 192.168.100.1
- Only a user "admin" with the password "admin" is set, which cannot be used for TK-Suite client.

### **Technical Specifications:**

DSL Modem/Router	Can be switched off
- Standards	ADSL2+, downwards compatible G992.1 Annex B, G992.3 Annex B, G992.5 Annex B
- Speed	up to 16 Mbit

SIP-Codecs in order of preference

- without Compression 711PCM and 711PCMU
- with Compression G. 726-32
  - G. 726-24 G. 726-16 G. 726-40 G. 728

# Setup

# Establishing a Connection to the LAN-Module 510

Start your browser in default setting and enter the following URL-address into the address bar: http://192.168.100.1:5080/login

The login window of the LAN-Module 510 will be opened.

Login as "admin" for user name and password respectively.



A menu will now be displayed offering access to the several programs of the TK-Suite Server.



To program the telephone system please select the blue icon (TK-Suite Set).



Select the orange icon TK-Suite Bill) to receive call data listing incoming and outgoing telephone calls.



To program basic settings of TK-Suite Server, select the grey symbol.

Please consult the Online Help for further information regarding the seperate TK-Suite programs.

## Setup

### The TK-Suite Server

#### Note:

We would like to suggest to change the password for the user "admin" immediately after a successful login. This will eliminate unauthorised access to the TK-Suite Server programs (Set, Bill, etc.). In addition each computer connected to the LAN-Module should have a user account allocated to them. Each of these users may have different levels of access assigned to them to restrict unauthorised access to other components of the system programming tool. Further information will be available under the online help of the TK-Suite programs.



#### Note:

The user "admin" can only be edited in the LAN-Module if you are logged in as "admin" user.

#### Number of Users:

Please note that due to technical conditions with regards to the number of users higher than 24 and or a higher level of call traffic (higher number of CTI messages) it may be advisable to employ an external PC for use as TK-Suite Server. This will greatly assist to guarantee a smooth running of the various applications.

### LAN-Module Setup

After you logged into the LAN-Module 510 click onto the TK-Suite Set symbol. Afterwards click onto "PBX/Hardware Configuration" and select how the four ports of your LAN-Module should be used:

IoP External: Register your LAN-Module to other IOP Servers, ie. other LAN-Modules. IoP Internal: IoP Hosts may register to your LAN-Module 510 (IoP Server). SIP External: Access to Internet Telephony - each port offers 2 "Trunk Lines".

### Note:

If IoP- **and** SIP-ports are programmed, then the SIP ports must always be programmed **after** the IoP ports. If IoP Internal **and** IoP external ports are to be utilised, then the IoP Internal ports must be **before** the IoP External port. For example, should you change port 1, then all none assigned ports 2 to 4 will be hidden from view in hardware programming.

The following configurations are possible:

Port 1	Port 2	Port 3	Port 4
IoP Internal	IoP Internal	IoP Internal	IoP Internal
IoP Internal	IoP Internal	IoP Internal	IoP External
IoP Internal	IoP Internal	IoP External	IoP External
IoP Internal	IoP External	IoP External	IoP External
IoP External	IoP External	IoP External	IoP External
IoP External	IoP External	IoP External	SIP External
IoP External	IoP External	SIP External	SIP External
IoP External	SIP External	SIP External	SIP External
SIP External	SIP External	SIP External	SIP External
IoP Internal	SIP External	SIP External	SIP External
IoP Internal	IoP Internal	SIP External	SIP External
IoP Internal	IoP Internal	IoP External	SIP External
IoP Internal	IoP Internal	IoP Internal	SIP External
IoP Internal	IoP External	IoP External	SIP External
IoP Internal	IoP External	SIP External	SIP External
IoP Internal	SIP External	SIP External	SIP External

Expand All Close All		? Info ab	oout: Hardware Cor	ifiguration		
Hardware Configuration DECT S0 Base EIB Home Bus Naturation	Some so configu Releas	Some settings can only be changed directly on the hardware, and not using the configurator. Click on "Release" to do so anyway. Release				
Network     Network     Port Assignment     Extensions     Caller Assignment	DECT SO Module	Base Connected				
Calls Outgoing	5101	Trouble type	Port 1	Port 2	Port 3	Port 4
<ul> <li>Phone Settings</li> <li>System Call Log Settings</li> <li>Security Settings</li> </ul>	1	LAN Module 510	IoP External IoP Internal SIP External			
<ul> <li>Special Functions</li> <li>Maintenance</li> <li>PBX Phone Book</li> </ul>	2	EIB Module				
	2	50 Modulo 540 (4 50)	50 Bus 1	50 Bus 2 9	60 Bus 3 50	) Bus 4

### Setup Internet Access

In default the router is disabled and an alternative router may be entered as the standard gateway for your LAN-Module 510.

For this the DSL Router must be disabled in the section "Network Router / Internet Dial Up via DSL":

Expand All Close All		? Info about: Internet Dial Up via DSL
PBX Hardware Configuration DECT S0 Base	1	
EIB Home Bus     Network Router     Internet Dial Up via DSL	LAN Module 510	Enable DSL Router
Network     LAN Interface     SIP Settings     ISDN over IP (IoP)		
▶ Port Assignment		

Afterwards click onto "Network / LAN-Interface" and enter the IP-Address of your Internet Gateway and DNS Servers (if applicable):

Expand All Close All		? Info about:	LAN Interface
PBX Hardware Configuration DECT S0 Base	1	, es	
▶ EIB Home Bus	LAN Module 510		
Network Router Internet Dial Up via DSL		Name	Lan-Modul
Vetwork		IP Address	192.168.250.25
LAN Interface		Netmask	255.255.255.0
ISDN over IP (IoP)		Default Gateway	192, 168, 250, 1
Port Assignment		DNS Server	192.168.250.1
Extensions		MAC Address (Hex)	0009405900ce
Calls Incoming			
Calls Outgoing		DHCP Server	
Phone Settings		Enable DHCP	
System Call Log Settings			

### Setup Internet Access

You may enter your data as described below, if the router function of the LAN-Module 510 is required:

- Click onto "Network Router/Internet Dial Up via DSL"
- Should the Router be set to "disabled", then you must first tick the check box "Enable DSL Router".
- To gain access to your DSL connection, enter your login details in the field "Login Data" as supplied by your provider (User Name and Password).
- Select the mode of Dial Up to your DSL connection: In case of a Flat-Rate connection, we would suggest the setting of "Always Online":

After System Start Up, the LAN-Module will Dial Up the connection to the Internet and will stay permanently connected to this. Only select this option if you are paying a standard flat rate as otherwise this type of connection could cause unnecessary high call charges.

Should your access be charged by **Time or Volume**, then we would suggest the setting of Dial Up "on Demand":

This option offers a targeted connection to the Internet and makes sense to use if your internet connection is charged by time or data volume. Please note that some software may, now and then, access the internet to make contact with the software vendor. This feature should be disabled within the relevant software to avoid unnecessary call charges. Note: You may enter a time out value if the

LAN-Module is idle for the specified time as entered in "Disconnect if Iddle for:", after which the Dial Up connection will be terminated.

- In the section "ADSL" enter the ADSL-Parameter for your DSL connection. This information is available from your service provider.

AGFEO 🗘 Administrato	r Menu / Internet	Dial Up via DSL	menu
AS 45 V8.0 💿 CReject	🗸 Apply	📑 New 🚛 Load ' 🔚 Saye as 🥁 Print	Ø
Expand All Close All		? Info about: Internet Dial Up via DSL	
PBX     EIB Home Bus     Vetwork Router	1		
Internet Dial Up via DSL Dyr,DNS DNS/NAT Firewall/Services Network Port Assignment Extensions Calls Incoming Calls Outgoing Calls Outgoing System Call Log Settings System Call Log Settings Special Functions Maintenance PBX Phone Book	LAN Module 510	✓ Enable DSL Router         WAN         Login Data         User Name         Password         DSL Dial Up         Always Online on Demand         Disconnect if Idle for (thimm)         ADSL         Virtual Path Identifier (VPI)         Virtual Channel Identifier (VCI)         Status         No Internet Connection Established	

## Setup Internet Telephony

### Setup Internet Telephony

The LAN-Module offers up to 8 freely programmable SIP trunk access lines. The LAN-Module settings offer the following options, which will also be dependent on the bandwidth of your DSL connection and your SIP service provider.

- Have up to eight simultaneous conversations from one Internet Telephone Number or
- Up to eight simultaneous conversations from eight different Internet Telephone Numbers (one call for each telephone number).

Please note that your Internet Telephone Number can only be reached if you have a permanent connection to the Internet.

Ticking the check box "SIP active" will open the fields of your SIP settings.

Enable Compression (QOS):

If you ticked the check box "Enable Compression", then the required bandwidth to make an internet phone call will be made available even if another internet access, like a download, requires a larger bandwidth. The bandwidth for the other internet access will automatically be reduced.

**Note:** Compression can only be enabled within the LAN-Module 510 if this is also enabled to be used as a router.

### Important Notice regarding Internet Telephony

### General Information:

Please note that dependent on Internet - and SIP Providers used (availability, capacity) could lead to fluctuation in the transfer rate and therefore may result in possible connection termination (Data and or Internet Telephony).

### Utilisation of an external Router

Should the LAN-Module 510 not be used as DSL access, then the network ports 5004 to 5019 and 5060 must be released on the external router and routed via port forwarding to the LAN-Module.

### Information regarding Bandwidth:

Please note that an internet telephone call will require, if compression is disabled, a 1Mbit DSL connection with a minimum upstream rate of 128 Kb/s.

Many providers now offer a higher upstream transfer rate at a surcharge.

Should the bandwidth be insufficient for an incoming or outgoing call, then the LAN-Module will sent a busy tone.

## Setup Internet Telephony

### Configure Internet Telephony in TK-Suite

- In TK-Suite Set click onto "Network/ SIP Settings"
- Tick the check box "SIP active"
- Enter the details as given to you by your SIP provider.

### **Programming Example Sipgate**

Enter the following access details to setup internet telephony, as received from Sipgate: Telephone Number: Enter the Internet Telephone Number as allocated

	by sipgate.
SIP-Gateway:	Enter or select <i>sipgate.de</i>
STUN-Server:	Enter or select stun.sipgate.net:10000
SIP-Login:	sipgate User Name has 7-digits (i.e.: 1234567)
SIP-Password:	Enter the sipgate SIP Password
Authentication Name:	sipgate User Number 7-digits (i.e.: 1234567)

Enable Compression:

You should enable compression for insufficient or low bandwidth, this will then enable to conduct several simultaneous internet telephone calls. Please note that speech quality may be impaired when compression is enabled.

Click the "accept" button to activate SIP telephony.

### Programming Example t-online

Enter the following access details to setup internet telephony, as received from T-Online:

Telephone Number:	Enter the Internet Telephone Number as allocated by T-Online
SIP-Gateway: STUN-Server:	Enter or select <i>tel.t-online.de</i> Enter or select <i>stun.t-online.de</i>
SIP-Login:	Enter the T-Online Internet Telephone Number
SIP-Password:	Enter the T-Online SIP Password
Authentication Name:	Enter your T-Online e-mail address without the "@" (Example: anv.body1234)

Enable Compression:

You should enable compression for insufficient or low bandwidth, this will then enable you to conduct several simultaneous internet telephone calls. Please note that speech quality may be impaired when compression is enabled.

Click the "accept" button to activate SIP telephony.

### Programming Example 1&1

Enter the following access details to setup internet telephony, as received from 1&1:

Telephone Number:	Enter the Internet Telephone Number as allocated by 1&1
SIP-Gateway: STUN-Server:	Enter or select <i>sip.1und1.de</i> Enter or select <i>stun.1und1.de</i>
SIP-Login :	Your 1&1 Internet Telephone Number. Replace the first "0" of your number by "49" (Example: 498555123456789)
SIP-Password:	1&1 SIP-Password
Authentication Name:	Your 1&1 Internet Telephone Number. Replace the first "0" of your number by "49" (Example: 498555123456789)

Enable Compression:

You should enable compression for insufficient or low bandwidth, this will then enable you to conduct several simultaneous internet telephone calls. Please note that speech quality may be impaired when compression is enabled.

Click the "accept" button to activate SIP telephony.

# Setup ISDN over IP

# Network Configuration for ISDN over IP

The following diagram displays the working of an IoP connection and the relation towards each other:



### To setup IoP the following programming has to be carried out:

- A unique name has to be allocated to LAN-Module 510 under the setting "Network / LAN Interface". This IoP name is then used by the LAN-Module 510 to be identified by other IoP components. Please note that the IoP name and the DNS name are independent within a network and do not necessarily have to be identical.
- If internal IOP channels (Host) have been programmed (see Page 11), then the ISDN over IP server has to be enabled in the setting "Network/ISDN over IP (IoP)" by clicking onto the tab "IoP internal: Host Access". IoP clients will be registered here (LAN-Box 120 or LAN-Module as client). See Page 18.
- If external IOP channels (Client) have been programmed (see Page 11) then the ISDN over IP client has to be enabled in the setting "Network/ISDN over IP (IoP) by clicking onto the tab "IoP External: LAN Sub PBX". Your system will register as client to other systems with the details entered here. See Page 19.

# Setup ISDN over IP

### **HOST-Access**

Should one or more channels of the LAN-Module 510 have been set to "IoP" internal, then further settings may be carried out under **Host Access** (Access Authorisation of the internal S0)

After the principle settings have been programmed into the LAN-Module, the next step is to establish authorised access to it. Which IoP component of a network is allowed to logon to the LAN-Module and which port is allocated for use?

Access and allocation can be set under the menu "Network /ISDN over IP (IoP)" and click on the tab "IoP internal: Host Access".

Expand All Close All		? Info about: ISDN over	IP (IoP)			
PBX     Hardware Configuration     DECT S0 Bace	1					
EIB Home Bus	LAN Module 510	IoP internal (IoP servers): Host Access		oP external (J	oP Client): L	AN Sub PBX
Network Router     Network     LAN Interface	_	Enable IoP Server     Access Rights IoP Clients     IP Address/IoP Name	Connect	to LAN 50 I	Bus Enable	d
Port Assignment     Extensions     Calls Incoming		IoP-Plug 1 데고 Add entry	SO 1	S0 2	-	×
Calls Outgoing Phone Settings		Access Rights for Remote CAPI Clients IP Address/IoP Name	Connect	to LAN SO I	Bus Enable	d
<ul> <li>System Call Log Settings</li> <li>Security Settings</li> <li>Special Functions</li> <li>Maintenance</li> </ul>		Remote Capi 1	SO 1	50 2	-	×

### ISDN-over-IP

Should you install IoP components in a network, then the IoP name will be entered automatically. You only have to allocate the relevant port authorised for access.

### Remote-CAPI

Should you install remote-CAPI in a network, then the IoP name will be entered automatically. You only have to allocate the relevant port authorised for access.

## Setup ISDN over IP

### LAN-Client Phone System

If at least one of the virtual S0 Buses has been set to external, then it is possible to connect phone systems to each other via the use of the LAN-Module. Clicking on the tab "LAN Sub PBX" you are able to connect via the virtual internal S0 port of the first telephone system the virtual external S0 port of the second telephone system, which is programmed as the client (Piggyback). You may enable data compression should you want to limit the data volume. With this the speech packets are compressed to limit network load. However, please note that such data compression may result in impaired speech quality.

Expand All Close All		?	Info about: ISDN ove	er IP (IoP)	
PBX Hardware Configuration DECT S0 Base	<b>1</b>				
▶ EIB Home Bus	CAN MODULE 310	IIII IoP internal (IoP serve	ers): Host Access	IoP external (Io	P Client): LAN Sub
<ul> <li>Network Router</li> <li>Network</li> <li>LAN Interface</li> </ul>		Enable ISDN over IP C Self-Descriptive IoP Name for Registration on	Request 50 bus	from I AN DRY with DRY	Fnable
ISDN over IP (IoP)		Master PBX	IP address/IoP	name	Compression Enal
Port Assignment		I Bielefeld 1			- 되
Extensions		T. Bielefeld D			
Calls Incoming		1 bieleteid 2			-
Calls Outgoing					
Phone Settings					
System Call Log Settings					
Security Settings					
Special Functions					
Maintenance					
PBX Phone Book					

For the connection via a virtual internal S0 Bus to the Host System, enter the IP address and IoP name of the Host System respectively.

Your selected name will automatically be entered as an extension in the Host System under "Host Access / ISDN over IP".

After the telephone system is registered you will have to allocate telephone numbers for each IoP S0 and setup an incoming call distribution and line access for the same.

### Advanced Setup

In addition to the basic settings you may also change other router settings of your LAN-Module:

- Allocation of Host Name of LAN-Module (Only if DSL Router is enabled)
- Setup of NAT Table (Only if DSL Router is enabled)
- User Administration
- Setting of Firewall (Only if DSL Router is enabled)
- Setup of Dynamic DNS (Only if DSL Router is enabled)
- Release of Service Access to LAN-Module

### Note:

These settings may only be carried out via the integrated TK-Suite within the LAN-Module or the AGFEO Tool. These settings will not be available if the system configuration is received via TK-Suite installed on the PC.

### Allocation of Host Name for LAN-Module

- Start TK-Suite Set (see Page9)
- Click onto "Network Router/DNS/NAT".
- Enter the required Host Name (in default "LAN\_Modul.510"). Your LAN-Module can be reached with this name if your LAN-Module is configured as DHCP.

(Example: "http://LAN\_Modul.510:5080/login" to get to login page of TK-Suite.)

- Click onto "accept" to enable settings within the LAN-Module.

# Setup of NAT (Network Adress Translation) and Virtual Server

Here you may set the data received from the internet is forwarded to the relevant PC.

- Start TK-Suite Set (see Page 9)

- Click onto "Network Router/DNS/NAT"

For example, should you have assigned a home page on a PC within the network, then click onto the Plus Symbol under "Port Mapping".

Enter the port number and IP address of the computer to which enquiries should have access (in the example of the home page this would be port 80, 81).

- Click onto "accept" to enable settings within the LAN-Module.

## **Advanced Settings**

### Setting of the Firewall

The LAN-Module has a fully-fledged firewall. This firewall will check the data packets if these are legitimate (Stateful Packet Inspection Firewall). Data packets will only pass the firewall if these are linked to a valid session which have been initiated within the network. Other internet users cannot see the PC behind the firewall.

- Start TK-Suite Set (see Page 9)
- Click onto "Network-Router/ Firewall/Services"
- Select the required option for the firewall:
- You may enable or disable the firewall setting.
- You may bar PING enquiries to the LAN-Module.
- You may bar PING enquiries to Internet addresses.

PING enquiries are used to check the connection of two devices within a network (i.e. Internet). These enquiries can be changed in such a way that these may have a negative effect on your system. If you bar PING enquiries to the LAN-Module, then it may be possible that various programs (Messenger, Online Games, Speed Measuring) will no longer function properly. The same problem will occur if you bar PING enquiries from your local network to Internet addresses.

SIP Telephony and remote maintenance of your LAN-Module with the aid of the AGFEO Tool will not be affected.

- Click onto "accept" to enable settings within the LAN-Module.

# **Advanced Settings**

### Release Service Access to LAN-Module

Here you can define which feature is accessible from the Internet. Please tick the required feature in the relevant check box. These features cannot be disabled within a LAN network.

Should you enable the web user interface "TK-Suite", then your LAN-Module can be programmed from any location.

### Note:

Should this feature be enabled, then you must set a password to access the LAN-Module (see Page 10), this will prevent unauthorised access to your LAN-Module from the Internet.

- Start TK-Suite Set (see Page 9)
- Click onto "Network-Router"/ Firewall/Service" This feature can be switched on or off by ticking the relevant check boxes.

Configuration	Releases the programming of the LAN-Module via the Internet.
Firmware Update	Release of LAN-Module update via the Internet.
TK-Suite Backup	Enables LAN-Module backup via the Internet.
TK-Suite Web Interface	Releases programming of the LAN-Module via TK-Suite from the Internet.
TK-Suite CTI	Enables Computer Telephony of the LAN-Module via TK-Suite in the Internet.

- Click onto "accept" to enable settings in the LAN-Module.

### Setup of "Dynamic DNS"

Dynamic DNS is a feature which enables a PC to be contacted under the same Host Name, even though the IP address may constantly change.

In order that the specific LAN-Module can be found within the World Wide Web the Dynamic DNS Service must be programmed first. To utilise such DynDNS Service it is first necessary to register to such service like "dyndns.org".

- Start TK-Suite Set (see Page 9)
- Click onto "Network-Router/ DynDNS"
- Click onto "DynDNS" and enter the necessary data:

Wild Card:	Enable the Wild Card function.
Service-Typ:	Set the Service Type to "dynamic".
DynDNS- Server Host Name:	On the left enter the Domain Name of the LAN-Module. On the right you have a list of available selections. Select the required setting, or enter your own.

DynDNS-	
User Name:	Enter your DynDNS User Name here.
DynDNS-Passwort:	Enter the relevant Password

- Click "Accept" to save these settings in the LAN-Module.

### Display Status of LAN-Module on System Phone

The name of the LAN-Module, internal IP -, WAN IP -, MAC address and the DHCP status can be easily displayed on the System Phones ST 21, ST 30, ST 31 and ST 40. The two line display of the ST 21 can be scrolled through via the arrow buttons.

Press 🖘 📧 to display this on the System Phones. Should you have more than one LAN Module in your telephone system, then use the arrow buttons to select the required module and confirm by pressing "OK".

The DHCP Status will be displayed in an abbreviation after the IP address:

**DN** denotes static IP

**DS** denotes DHCP Server

### **Reset LAN-Module to default**

The following programming procedure will reset all LAN-Modules within the Telephone System to the default settings:

Start Programming Mode:	×
Reset LAN-Module:	*
End Programming Mode:	×

\*705 \*73791346 \*700

# TK-Suite Client Installation under Windows

Start the installation routine of TK-Suite Client from the enclosed CD and follow the instructions on the monitor. A connection to the LAN-Module must be established after the first start of TK-Suite Client. To do this you must set up a user account in the LAN-Module (see page 10) and a user account in TK-Suite Client. Please observe the instruction regarding the number of users on page 10. Starting TK-Suite Client for the first time will prompt for a user account to be set up:

Create TK-Suite Client User Account	- Please select "Within Network"
Concidential Ti State Server Parese opting under the 'Bi-State Server's normaly. Tri Anadomer Wither Hanson A On the Computer Apple	- Please select within Network
Conde Tic Suite Glore Dare Account X Address of Ti-Suite Server Dare the P advess or the Ord near of you Tic-Suite-Server.  Tite 164.1001	<ul> <li>Enter the IP address (default "192.168.100.1") or the DNS name of your LAN-Module (default "LAN_Module.510") and click "Next".</li> </ul>
cigat 2 just Canad Maja	<b>NOTE:</b> The DNS name can only be used if the DHCP-Server has been enabled within the LAN-Module!
Create TK-Suite Client User Account	
Determined and an experience of the theory of the the	<ul> <li>Enter a User Name and Password for the user account and click on "Next".</li> <li>NOTE: The User Name "admin" can not be utilised in TK- Suite Client!</li> </ul>
< Back > Best Cancel Help	
Setup a new User Account a	afterwards:



- Click onto "File/Account"
- Click onto the Plus-Symbol, to setup a new account.
- Continue as described above under TK-Suite first start up.

# Addendum

# TK-SuiteClient Installation under Linux

From the supplied CD please unpack the tgz-Archive anywhere within the file system. Start the TK-Suite Client via "run\_client.sh" script.

Setup the User Account as descriped in the Windows version (see page 24).

# TK-SuiteClient Installation under MAC OS X

TK-Suite Client is supplied as ZIP-Archive or DMG-Image. A double click will unpack the ZIP-Archive or incorporate the DMG-Image as a drive. In any case you can drag and drop the TK-Suite Symbol in the "Application" folder.

Double click on the TK-Suite Client symbol to start the program.

Setup the User Account as described in the Windows version (see page 24).

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## Addendum

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### Help

In the first instance please contact your Dealer should you have any questions or technical issues. Alternatively you may contact us directly via the internet where you will find a special enquiry form designed for this purpose. Please complete the requested information so that you query can be handled efficiently.

Note: Some features may not be available in your country or must be specially provided by your service provider.

Please contact your service provider should you require information regarding the availability of network features.



The crossed out wheeled bin on the product means that this belongs to the group of Electro- and electronic apparatus.

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