ARGUS®
testing the telecom network

G.fast
VDSL
ADSL
SHDSL
SFP
GigE
LTE
ISDN
POTS
Cu
TDR
Line-scope
Data
IP TV
Vo IP
PESQ
USB
WLAN



ARGUS® 166

» Overview of menu and test leads

valid from firmware version R1.01.00

intec
GESELLSCHAFT FÜR INFORMATIONSTECHNIK mbH

Legend, Status, Protocol overview

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Others	page
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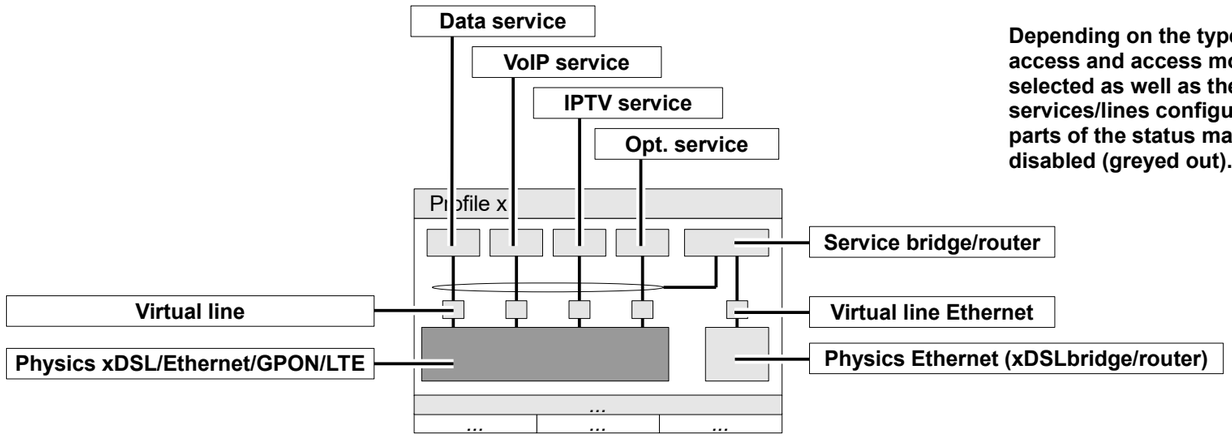
Legend General

Menu
Configuration menu
Defaul Config.menu
Input menu
Default input menu

Depending on the specified interface, menu item will be shown

Menu item only matters for specified interface

Legend Status



Depending on the type of access and access mode selected as well as the services/lines configured, parts of the status may be disabled (greyed out).

Protocol overview

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE

Access	ADSL						VDSL / G.fast						SHDSL														ETH		LTE	GPON
													ATM						EFM						TDM		ITC		HDLC				
Mode	ATU-R	ATU-R bridge		ATU-R router		2 port access	VTU-R / FTU-R	VTU-R bridge FTU-R bridge		VTU-R router FTU-R router		2 port access	STU-R	STU-C	STU-R bridge		STU-R router		STU-R	STU-C	STU-R bridge		STU-R router		2 port access	STU-R	STU-C	STU-R	STU-C	STU-R	STU-C			
Socket	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	Line	LAN/SFP	Line	LAN/SFP	Line	Line	Line	LAN/SFP	Line	LAN/SFP	LAN/SFP	Line	Line	Line	Line	Line	Line	LAN 1	LAN 2	SFP 1	USB	SFP
Protocol / **ATM/Ethernet**																																			
without	-	without		**a**	**a**					**a**	**a**				**a**	**a**	**a**					**a**	**a**	**a**			**a**	**a**	**a**	**a**	**a**	**a**					
IP	-	IP					**a**		•			•	**a**						**a**		•			•	**a**							•	•	•		•
	Yes	EoA	•			•								•				•																	
	No	IPoA	•			•																													
PPP	Yes	PPPoE	•			•		•			•			•				•				•										•	•	•	•	•
	No	PPPoA	•			•																													
PPTP	-	PPTP																														•	•	•		

• – Protocol configurable (see page 20)
a – Protocol set automatically

Note

The basic ARGUS *166* package includes support for at least one DSL interface (VDSL or SHDSL) with a variety of functions and tests for the interface(s). Support for other interfaces and functions is optional (see the options in the data sheet). Consequently, depending on the scope of the functions delivered, certain menu items may be hidden. The type of access and access mode can affect this, too.

Hotkeys

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Menu Hotkeys

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE

Key	ADSL / SHDSL ATM	G.fast / VDSL / SHDSL EFM	Ethernet	GPON	LTE
0	ARGUS status				
1	Help hotkeys				
2	-				
3	IP ping				
4	Trace route				
5	HTTP download				
6	Test status				
7	FTP download				
8	Copper Box		-		
9	IPTV			-	
⎍	Status				
✆	VoIP call			-	
✳ then 0	Access				
✳ then 1	ARGUS info *1				
✳ then 2	Restore config.				
✳ then 3	Factory setting				
✳ then 5	Test result upload (FTP)				
✳ then 6	Test status				
✳ then 7	Store				
✳ then 8	Configuration import				
✳ then 9	Firmware update				

BRI S / BRI U / PRI / POTS

Key	BRI S / BRI U	PRI	POTS
0	ARGUS status		
1	Help hotkeys		
2	Service check		-
3	Supp. Serv. test		-
4	Auto. Test		-
5	Test data to PC		
6	Test manager		-
7	Numbers		
8	-		
9	BERT start		-
⎍	Level measuring	L1 status	Voltage measuring
✆	Connection		
✳ then 0	Access		
✳ then 1	ARGUS info		
✳ then 2	Restore config.		
✳ then 3	Factory setting		
✳ then 5	-		
✳ then 6	Test manager		-
✳ then 7	-		
✳ then 8	-		
✳ then 9	-		

Copper tests

Key	Copper tests	Copper Box autotest
0	ARGUS status	-
1	Help hotkeys	-
2	-	
3	-	
4	-	
5	Test data to PC	-
6	-	
7	-	QR code
8	Copper Box	-
9	-	
⎍	-	
✆	-	
✳ then 0	Access	-
✳ then 1	ARGUS info	-
✳ then 2	Restore config.	-
✳ then 3	Factory setting	-
✳ then 5	-	
✳ then 6	-	
✳ then 7	-	Store
✳ then 8	-	
✳ then 9	-	

Graphic hotkeys

ADSL / VDSL / G.fast / RFC / xDSL trace

Key	ADSL / VDSL / G.fast	RFC2544 tests	xDSL trace
0	-	-	-
1	-	-	Legend
2	Zoom	-	-
3	Cursor		
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-
9	x-axis setting	-	-
0	min / max	-	-
#	-	-	-
✔	Continue	-	-
⎍	-	-	-
✳ then 0	-	-	-
✳ then 7	Store	-	-

Test hotkeys

Copper tests

Key	Line scope (Frequency domain)	Line scope (Time domain)	TDR
0	-	-	-
1	-	-	-
2	Zoom	-	Zoom
3	Cursor		
4	Measurement range		
5	Total power	-	Pulse width/height
6	-	-	Wire type/VoP
7	Probe		-
8	Symmetry		-
9	Time domain	Frequency domain	-
0	Peak hold (min/max)		-
#	100 Ohm Input resistance		-
✔	-	-	-
⎍	Run/Hold		
✳ then 0	Reference curve		
✳ then 7	Store		

User-Info / Inventarnummer

ARGUS info

*1

ARGUS info	
Type:	ARGUS166
SW:	…
Date:	…
Loader:	…
Ser.No.	…
...	

...		
User info	...	...

User info

...		
Inv.:	Delete	12>ab

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Single tests

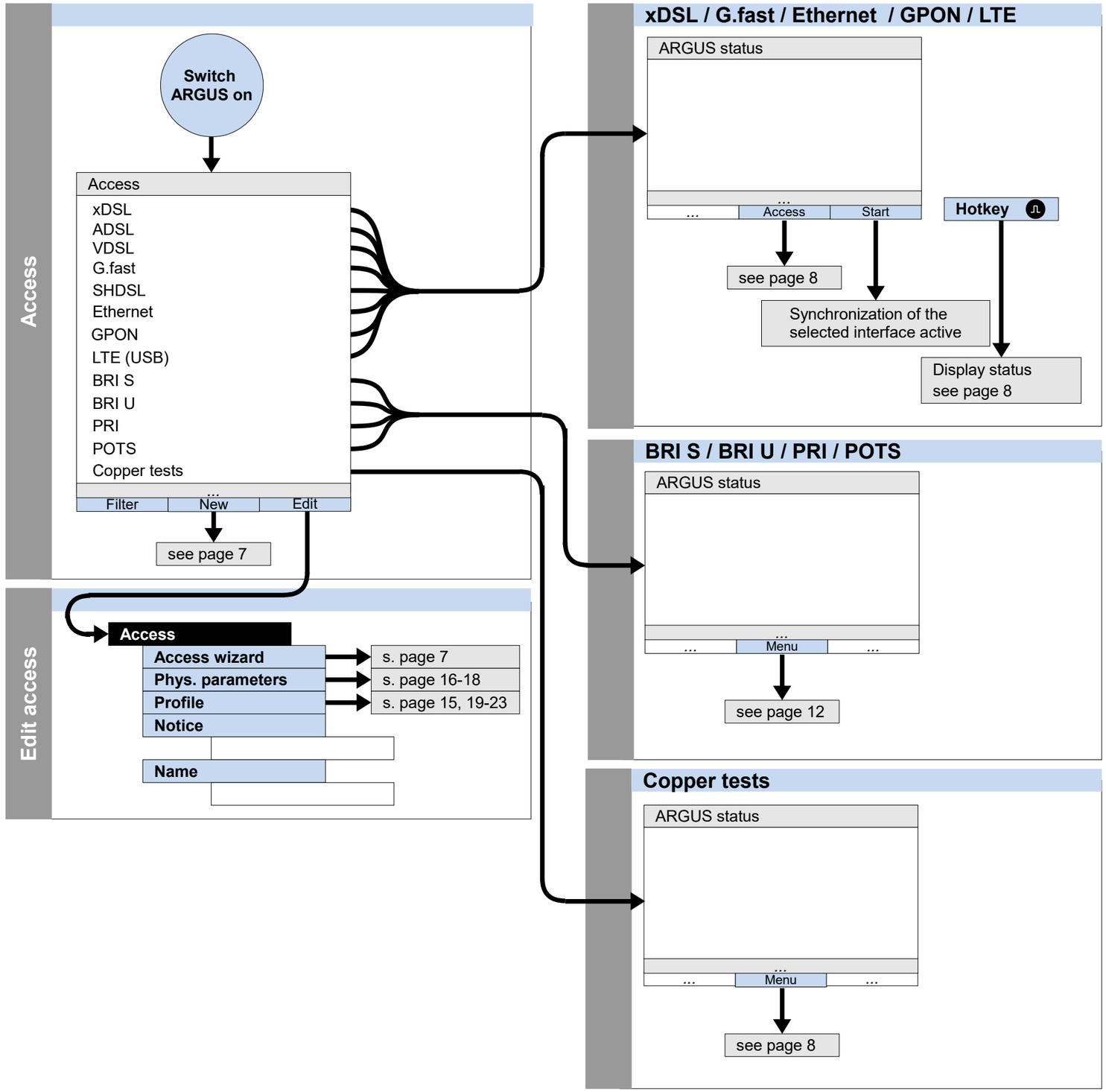
ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE / Copper tests

	ADSL / VDSL / G.fast	ADSL- / VDSL- / G.fast- / SHDSL bridge	ADSL- / VDSL- / G.fast- / SHDSL router	SHDSL STU-R TE	SHDSL STU-C	Ethernet IP based / GPON	Ethernet cable test	LTE	Copper tests
IP ping	x	-	x	only ATM / EFM	only EFM	x	-	x	-
Trace route	x	-	x	only ATM / EFM	-	x	-	x	-
HTTP downl./ upl.	x	-	x	only ATM / EFM	-	x	-	x	-
FTP downl. / upl.	x	-	x	only ATM / EFM	-	x	-	x	-
FTP server	x	-	x	only ATM / EFM	only EFM	**x**	-	-	-
Text browser	x	-	x	only ATM / EFM	-	x	-	x	-
Network scan	-	-	-	-	-	only ETH-IP based	-	-	-
VoIP call / call generator / wait / PESQ test	x	-	x	only ATM / EFM	-	x	-	-	-
IPTV / IPTV scan	x	-	x	only ATM / EFM	-	x	-	-	-
IPTV passive	-	not SHDSL STU-C bridge	x	-	-	only ETH-IP based	-	-	-
Video on demand	x	-	x	only ATM / EFM	-	x	-	-	-
LTE scan	-	-	-	-	-	-	-	x	-
Loop	only VDSL	-	not ADSL	only ATM / EFM	only ATM / EFM	only ETH-IP based	-	-	-
Traffic generator	only VDSL	-	not VDSL router / SHDSL EFM STU-R router	only ATM / EFM	only ATM / EFM	only ETH-IP based	-	-	-
RFC2544	only VDSL	-	not VDSL / SHDSL EFM STU-R	only ATM / EFM	only ATM / EFM	only ETH-IP based	-	-	-
Port flash	-	-	-	-	-	-	x	-	-
Copper Box	x	x	x	x	x	-	-	-	x
Line scope / TDR	-	-	-	-	-	-	-	-	x

Switch on and access menu

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Access wizard

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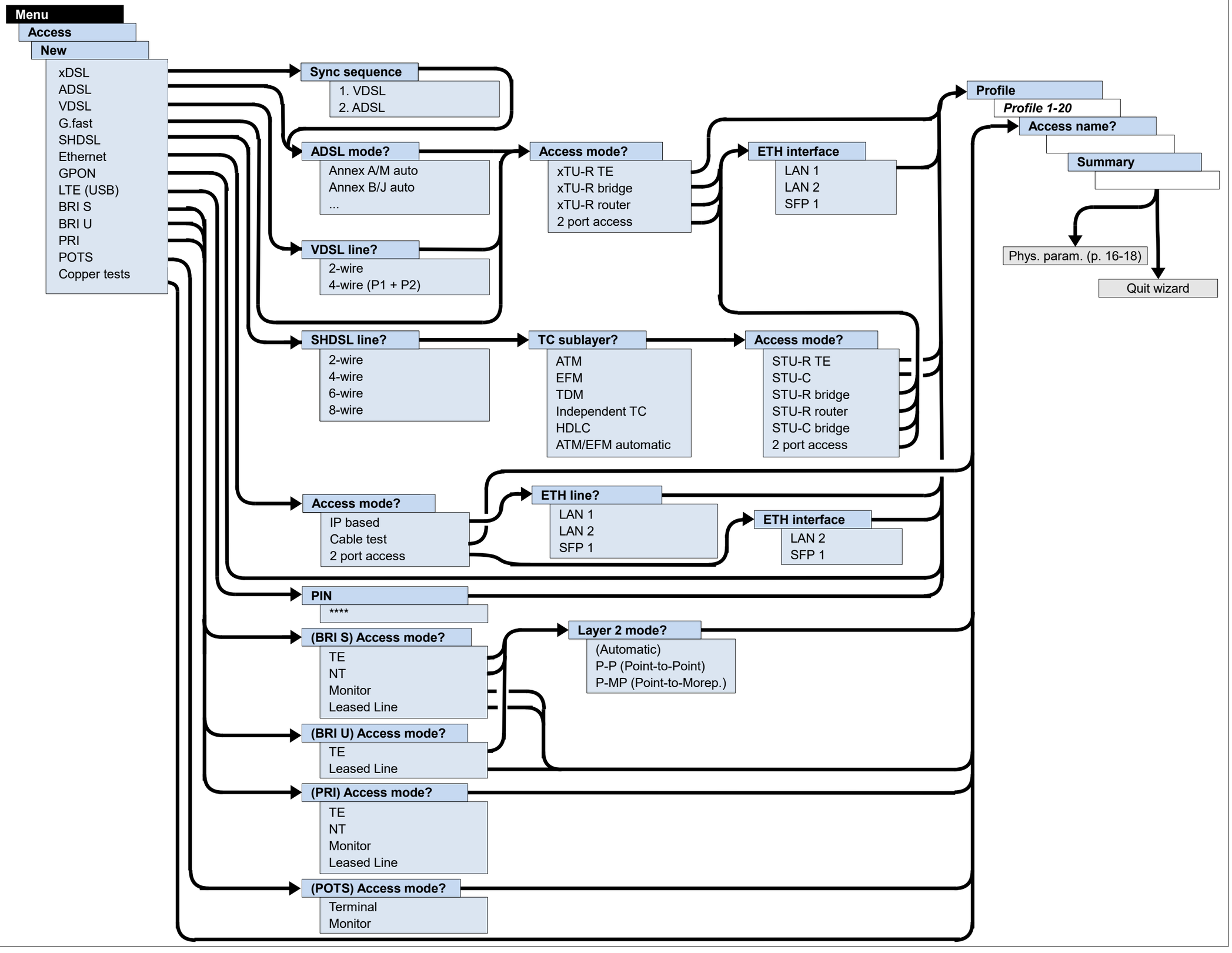
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Access wizard



Main menu, Single tests, Test results, Status
(Access: ADSL, VDSL, G.fast, SHDSL, GPON, LTE, Ethernet, Copper tests)

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Main menu

xDSL / G.fast / ETH / GPON / LTE / Copper tests

- **Menu**
  - **Single tests** → see page 11
  - *1 **Auto test** → see page 10
  - *1 **Test status**
  - **Test results**
  - **Status**
  - **Access** → see page 7
  - **ARGUS manager**
    - **Managem. Interf. WLAN**: ***Off*** / on
    - **Web server start**: ***Off*** / on
    - **VNC server start**: ***Off*** / on
    - *2 **Update firmware**: Update firmware started
    - **LCD brightness**: Level 0 … ***Level 15***
    - **Automatic shutdown**: ***After 5 minutes*** / After x minutes / disabled
    - **Automatic charge**: ***On*** / Off
    - **Alarm bell**: ***Off*** / on
    - **Configuration import**: Configurat. Imp. start
    - *2 **Test result uplo. (FTP)**: Test result uplo. start
  - **Settings** → see page 13-25
  - **Battery (status,...)**
    - **Status** → Display Battery status
    - **Automatic char.**: Off / ***on***
  - **Help**
    - **Hotkeys** → see table page 4

Menu Test results

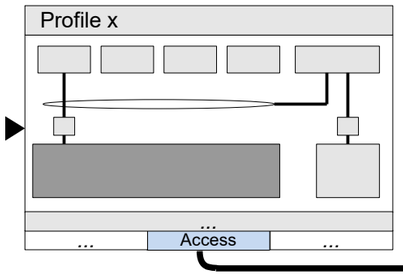
xDSL / G.fast / ETH / GPON / LTE / Copper tests

- **Test results**
  - Select test results
    - **Display result** → Display test results
    - **Rename** → Test results rename
    - **Send report to PC** → Send report to PC
    - **Upload (FTP)**
      - Test result is uploaded
    - **Delete** → Delete report

Display Status

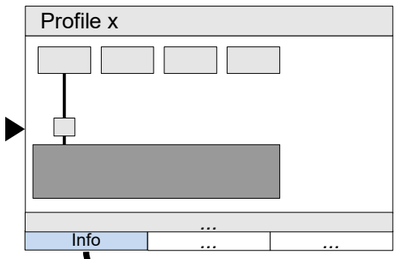
xDSL / G.fast / ETH / GPON / LTE

General



→ see page 7

Physics xDSL / G.fast / Ethernet / GPON / LTE active



Hotkey

Display physical access results and the xDSL trace

Menu Single tests

xDSL / G.fast / ETH / GPON / LTE / Copper tests

- **Single tests**
  - **Copper Box** → see page 42-43
  - **IP ping** → see page 26
  - **Trace route**
  - **HTTP download**
  - **HTTP upl. (BRITT)**
  - **FTP download** → see page 27
  - **FTP upload**
  - **FTP server**
  - **Text browser** → see page 28
  - **Network scan**
  - **VoIP call**
  - **VoIP call generator** → see page 31
  - **VoIP wait**
  - **VoIP PESQ test** → see page 41
  - **IPTV**
  - **IPTV scan** → see page 29
  - **IPTV passive**
  - **Video on Demand** → see page 30
  - **LTE scan** → LTE scan is active
  - **Loop** → see page 32
  - **Traffic generator** → see page 33
  - **RFC2544 test** → see page 34
  - **Port flash** → see page 35
  - *3 **Copper Box** → see page 42-43
  - *3 **Line scope**
  - *3 **TDR** → see page 44

Note

- *1 = ADSL, VDSL, G.fast, SHDSL, Ethernet, GPON
- *2 = not for Copper tests
- *3 = Copper tests

Service tests: Data tests, VoIP tests, IPTV tests, opt. tests, Bridge tests, Physic tests (Access: ADSL, VDSL, G.fast, SHDSL, Ethernet, GPON, LTE)

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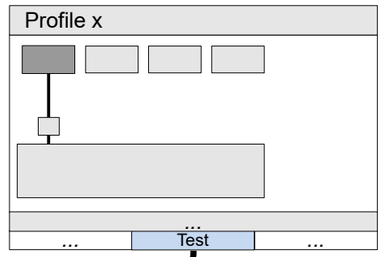
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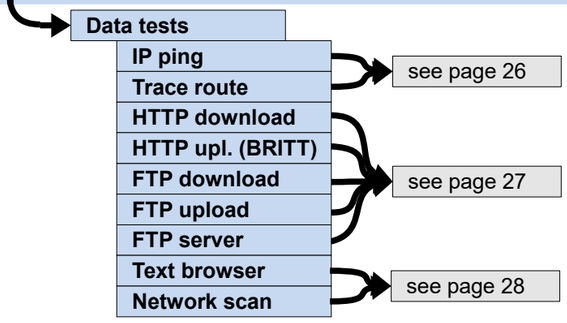
xDSL / G.fast / Ethernet / GPON / LTE

Service active

Display Status



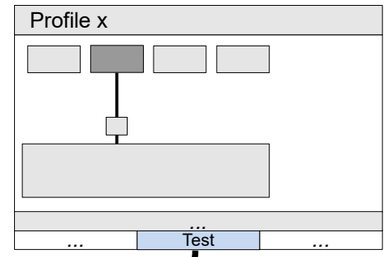
Menu Data tests



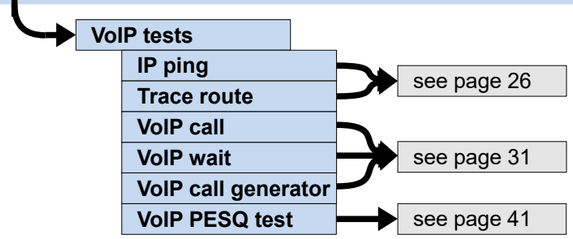
xDSL / G.fast / Ethernet / GPON

Service active

Display Status



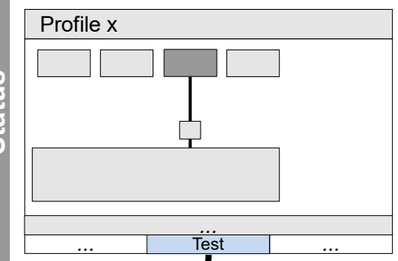
Menu VoIP tests



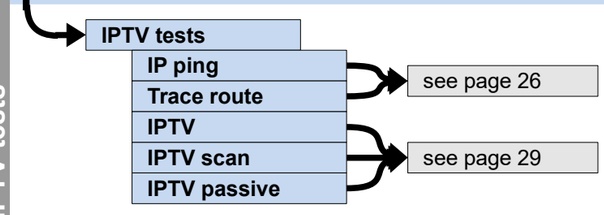
xDSL / Ethernet / GPON

Service active

Display Status



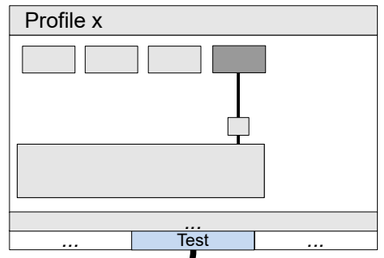
Menu IPTV tests



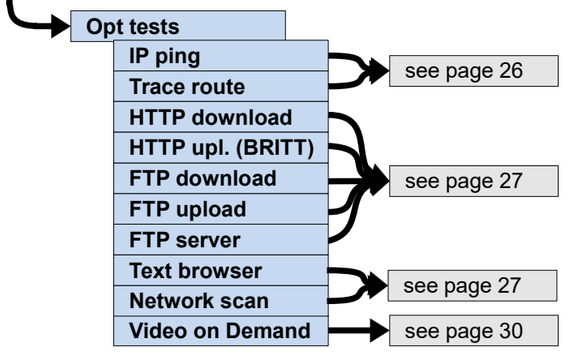
xDSL / G.fast / Ethernet / GPON

Service active

Display Status



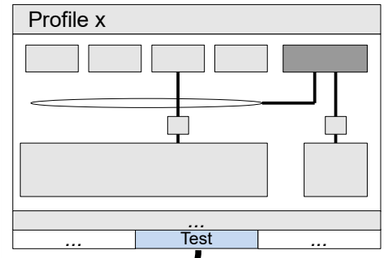
Menu Opt. tests



ADSL / VDSL / G.fast / SHDSL - Bridge

Service active

Display Status



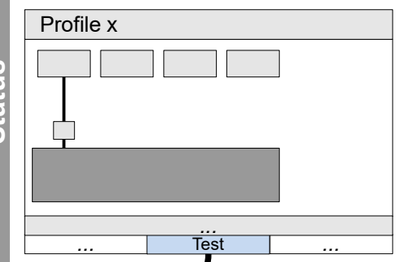
Menu Bridge tests



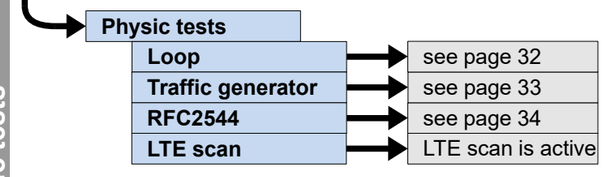
ADSL / SHDSL / Ethernet / GPON / LTE

Physics xDSL/Ethernet active, Services inactive

Display Status



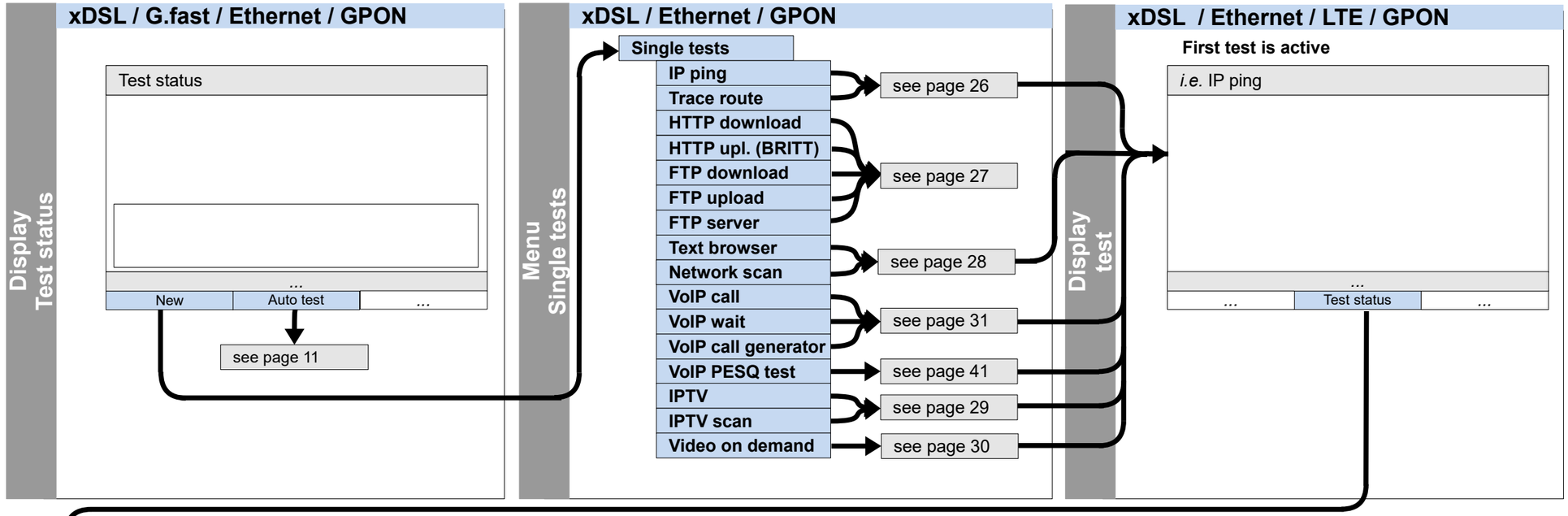
Menu Physic tests



Service tests: Parallel tests
Test status

Cross reference:

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Profiles, Virt. profiles VoIP account	15-23
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Battery (status,...)	8, 12
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IP tests	**page**
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VoIP call / call generator /wait	31
ISDN tests	**page**
BERT	36
Supp. Serv. test Service check	37
X.31	38
CF tests, Connect.	39
Time measuring Auto. Test	40
Copper tests	**page**
Copper Box	42-43
Line scope, TDR	44
Other tests	**page**
Text br., Netw. scan	28
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Traffic generator	33
RFC2544 test	34
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ETH cable tests	35
Others	**page**
Legend Protocol-overview	3
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Test leads	45-48



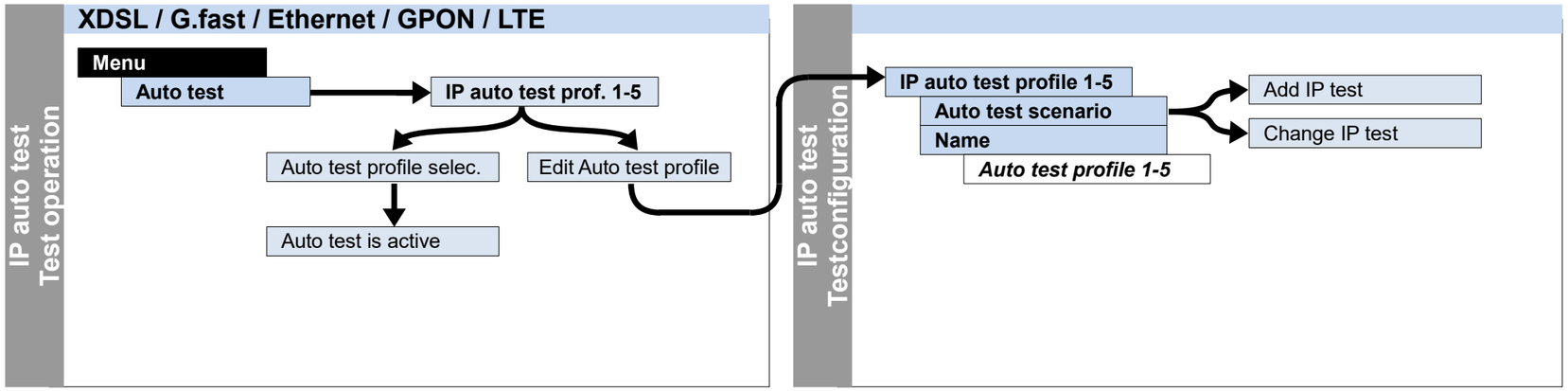
Note

The display and operation of VoIP and IPTV tests are presented in the same way as for Data tests.

Service tests: IP auto test

Cross reference:

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Status	8
Parallel-, auto tests	10, 11
Settings	13-25
Device, Rem. acce.	14
Profiles, Virt. profiles VoIP account	15-23
ISDN / POTS	24-25
Battery (status,...)	8, 12
Help	8, 12
IP tests	**page**
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IPTV / passive /scan	29
Video on Demand	30
VoIP call / call generator /wait	31
ISDN tests	**page**
BERT	36
Supp. Serv. test Service check	37
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Line scope, TDR	44
Other tests	**page**
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Main menu, Single tests, Test results
(Access: BRI S, BRI U, PRI, POTS)

Cross reference:

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Help	8, 12

IP tests	page
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ISDN tests	page
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Supp. Serv. test Service check	37
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CF tests, Connect.	39
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Copper tests	page
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Other tests	page
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Others	page
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Main menu – BRI S / BRI U / PRI / POTS

- **Menu**
  - **Single tests** → Menu Single tests
  - *1 **Auto test** → Start ISDN tests
  - *1 **Test manager**
    - **Cancell all** → Cancell all tests
    - **Start new one** → Start new single test
  - *2 **Listen to** → see page 40
  - *3 **Start monitor** → see page 40
  - **Test results** → Menu Test results
  - **Level measurem.**
    - *2 **Connected line**
    - **Other TE**
    - BRI U **Volate BRI U**
    - **Power BRI U**
    - *4 **Connected line**

    → Display Level measuring
  - *2 **L1 status** → Display L1 status
  - **Access** → see page 7
  - **ARGUS manager** → see page 8
  - **Settings** → see page 13-25
  - **Battery (status,...)**
    - **Status** → Display Battery status
    - **Automatic char.**
      - ***On***
      - Off
  - **Help**
    - **Hotkeys** → see table page 4

Menu Test results – BRI S / BRI U / PRI / POTS

- **Test results**
  - Select test results
    - **Display result** → Display Test result
    - **Rename** → Rename Test result
    - **Send report to PC** → Send to PC active
    - **Delete** → Delete test result

Menu Single tests – BRI S / BRI U / PRI / POTS

- **Single tests**
  - BRI S, BRI U
    - **BERT** → see page 36
    - **Supp. Serv. test** → see page 37
    - **Service test** → see page 37
    - **X.31 test** → see page 38
    - **CF interrogation** → see page 39
    - **CF activation** → see page 39
    - **CF delete** → see page 39
    - **Phone / connection** → see page 39
    - **Time measurement** → see page 40
    - **PESQ test** → see page 41
  - PRI
    - **BERT** → see page 36
    - **Supp. Serv. test** → see page 37
    - **Service test** → see page 37
    - **X.31 test** → see page 38
    - **CF interrogation** → see page 39
    - **CF activation** → see page 39
    - **CF delete** → see page 39
    - **Phone / connection** → see page 39
    - **Time measuring** → see page 40
  - POTS
    - **Phone / connection** → Phone/con. active
    - **PESQ test** → see page 41

Note

*1 = BRI S, BRI U, PRI
*2 = BRI S, PRI
*3 = BRI S, PRI, POTS
*4 = POTS

Settings and reset
Numbers, Backup/Restore, Cloud services

Cross reference:

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Menu Settings

- **Menu**
  - **Settings**
    - *1 **Profiles** → see page 15-23
    - **ISDN and POTS** → see page 24-25
    - **Copper/Cable tests** → see page 42-44
    - **PESQ** → see page 41
    - **Cloud services**
    - **Remote access** → see page 14
    - **Device** → see page 14
    - **Company address**
      - **Company name**
      - **Street**
      - **ZIP/City**
      - **Phone number**
    - **Backup/Restore**
      - **Back up configuration**
        - Save current configuration
      - **Restore configuration**
        - Restore saved configuration
      - **Factory settings**
        - Reset to factory settings
      - **Configuration import**
        - Configuration import started

Menu Cloud services

- **Cloud services**
  - **Firmware update**
    - **Server**
    - **Update check**
      - ***off***
      - on
      - Update
  - **Configuration import**
    - **Server**
    - **Check**
      - ***off***
      - on
      - Import
    - **Import destination**
      - Current configuration
      - Cur. & backed up config.
    - **Importieren**
  - **Test result upload**
  - **Server selection**
    - ***Firmware***
    - Configuration
    - Test result
    - Select server
    - Edit server
  - **Server**
    - **Use FTPS**
      - ***No***
      - Yes
    - **FTP server address**
      - *2 ***Firmware.argus.info***
    - **Username**
      - *2 ***argus***
    - **Password**
      - *2 ***update***
    - **Profilename**
      - *2 ***Firmware***
      - *3 ***Configuration***
      - *4 ***Test result***

Note

A firmware update and a configuration import can only be performed successfully when a connection to the service „date“ exists.

Note

Selecting "Factory settings" or "Backup configuration" requires a password to avoid an unintentionally deleting of the system configuration. Please contact the ARGUS support team at +49 2351 9070-90 to ask for the password. All settings will be set to default and test results will be deleted.

Note

*1 = not for ISDN

Note

*2 = Default only for server „Firmware“

*3 = Default only for server „Configuration“

*4 = Default only for server „Test result“

Settings and reset
Remote access, Device

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Copper Box	42-43
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Other tests	**page**
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Menu
Remote access

- **Menu**
  - **Settings**
    - **Remote access**
      - **Management interface** → **Start manage. Interf.**: ***Off***, on
      - **Web server**
        - **Start web server**: ***Off***, on
        - **Password protection**: Off, ***on***
      - **VNC server**
        - **Start web server**: ***Off***, on
        - **Password protection**: Off, ***on***
        - **VNC zoom factor**: Factor 1, ***Factor 2***, Factor 3, Factor 4
      - **Interface selection**: ETH, ***WLAN***
      - **WLAN**
        - **SSID**: ***ARGUS166_SN01234***
        - **Password**: ***argus166***
        - **Channel**: ***Channel: 1***
        - **DHCP server**
          - **Start/end address**: ***192.168.20.30*** / ***192.168.20.40***
          - **Domain**
          - **Reserve time**: Hours: ***240***
        - **IP settings**
          - **IP address**: ***192.168.20.1***
          - **Netmask**: ***255.255.255.0***
          - **Gateway**: ***0.0.0.0***

Menu
Device

- **Menu**
  - **Settings**
    - **Device**
      - **Menu language**: German, ***English***, Francais
      - **LC brightness**: dark------light
      - **Date/time setting**
        - **Time offset**: ***UTC+01:00***
        - **Daylight saving time**: off, ***Central europ. (CEST)***
        - **Date/time**: Manual, ***Automatic*** → ***Date:*** / ***Time:***
      - **Ringer volume**
        - **Start volume**: ***Level 1***, ..., Level 7
        - **End volume**: Level 1, ..., ***Level 7***
      - **Alarm bell**: On, ***Off***
      - **Einschaltton**: On, ***Off***
      - **Power management**
        - **Automatic shutdown**: ***after 5minutes***, after x minutes deactivated
        - **Lighting**: ***Off after 30 sec***, Off after x minutes
      - **Company address**
        - **Company name**
        - **Street**
        - **ZIP/City**
        - **Phone number**
      - **Software option**: Input SW option key
      - **Licenses** → Displays all the licenses available in the device
      - **As IPv4 number**: ***0.0.0.0***
      - **As name**: ***0.de.pool.ntp.org***

Cross reference:

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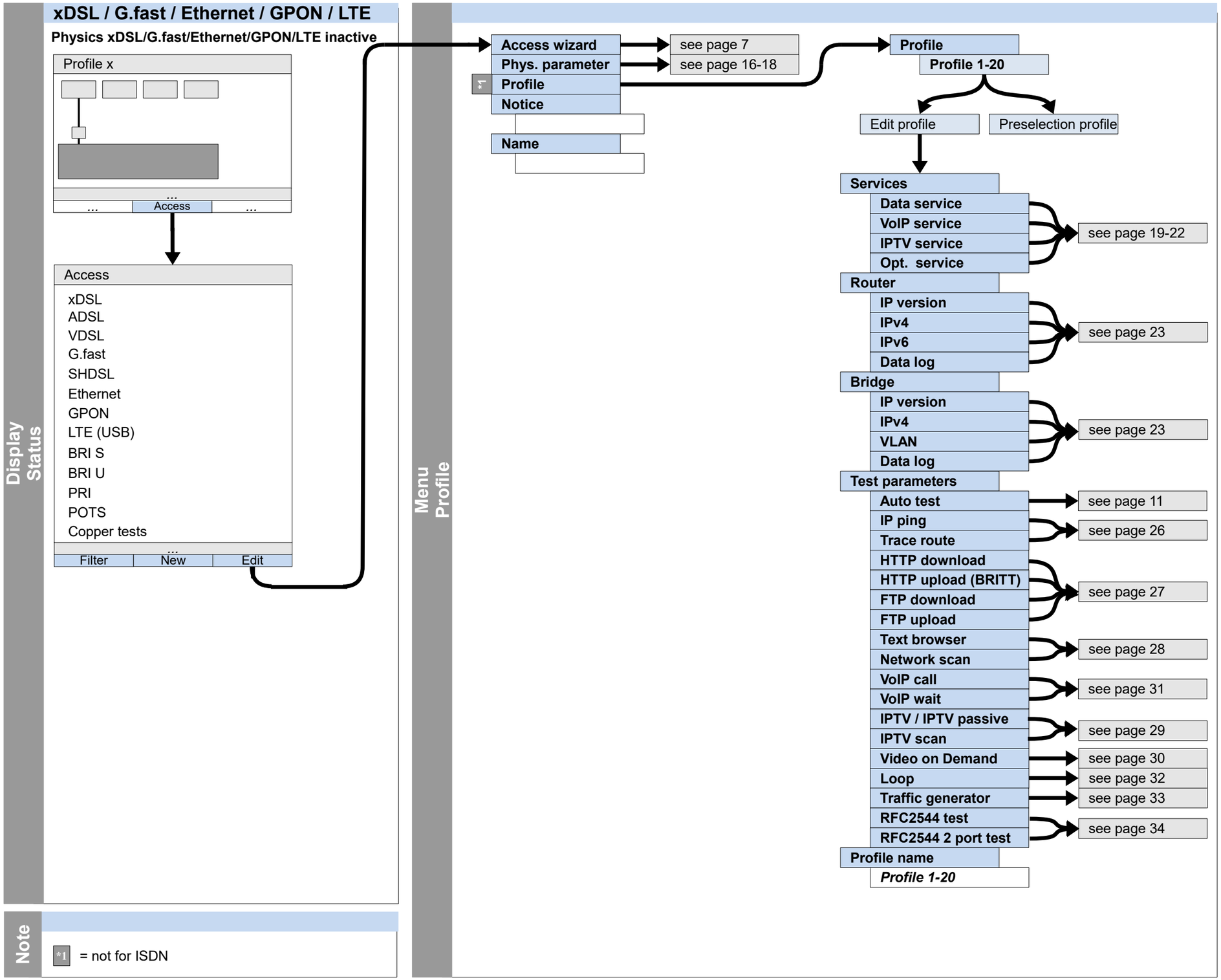
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IP ping / Trace route	26
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Settings
Phys. parameters: ADSL, VDSL, G.fast, Ethernet

Cross reference:

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Display ADSL Status

ADSL

Physics ADSL inactive

Profile x

... | Edit | ... | ...

Menu ADSL

ADSL
- **Rated/threshold values**
  - **Bitrate**: Downstream: ***0 kbit/s*** / Upstream: ***0 kbit/s***
  - **CRC**: far: * / near: *
  - **FEC**: far: * / near: *
  - **HEC**: far: * / near: *
- **INP/SNRM**: Favour DS INP / ***Favour DS SNRM***
- **Retransmission (G.INP)**: off / Downstream / Upstream / ***Down- & upstream***
- **MAC address**: ***Default MAC address*** / Dynamic MAC address / 00:00:00:00:00:00
- **Gratuitous ARP**: ***Off*** / On
- **free definable**: 00 00 00 00 00 00

Display VDSL / G.fast Status

VDSL / G.fast

Physics VDSL / G.fast inactive

Profile x

... | Edit | ... | ...

Menu VDSL / G.fast

VDSL / G.fast
- **Rated/threshold values**
  - **Bitrate**: downstream: ***0 kbit/s*** / upstream: ***0 kbit/s***
  - **CRC**: far: * / near: *
  - **FEC**: far: * / near: *
- *1 **Firmware**: ***A*** / B
- *1 **Carrier Set**: ***B 43*** / ***A 43*** / ***V 43***
- *1 **Vectoring mode**: Off / ***Full vectoring***
- *1 **Retransmission (G.INP)**: off / Downstream / Upstream / ***Down- & upstream***
- **Suppress profile 30a**: ***No*** / Yes
- **MAC address**: ***Default MAC address*** / Dynamic MAC address / 00:00:00:00:00:00
- **Gratuitous ARP**: ***Off*** / On

Display ETH Status

Ethernet

Physics Ethernet inactive

Profile x

... | Edit | ... | ...

Menu Ethernet

Ethernet
- **Autonegotiation**: ***On*** / Off
  - **Autonegotiation Off**
    - **Speed**: ***1000 Mbit/s*** / 100 Mbit/s / 10 Mbit/s
    - **Duplex**: ***Full*** / Half
    - **Flow control**: ***On*** / Off
- **MAC address**: ***Default MAC address*** / Dynamic MAC address / 00:00:00:00:00:00
- **Gratuitous ARP**: ***Off*** / On
- **LACP mode**: ***Off*** / On
- **free definable**: 00 00 00 00 00 00

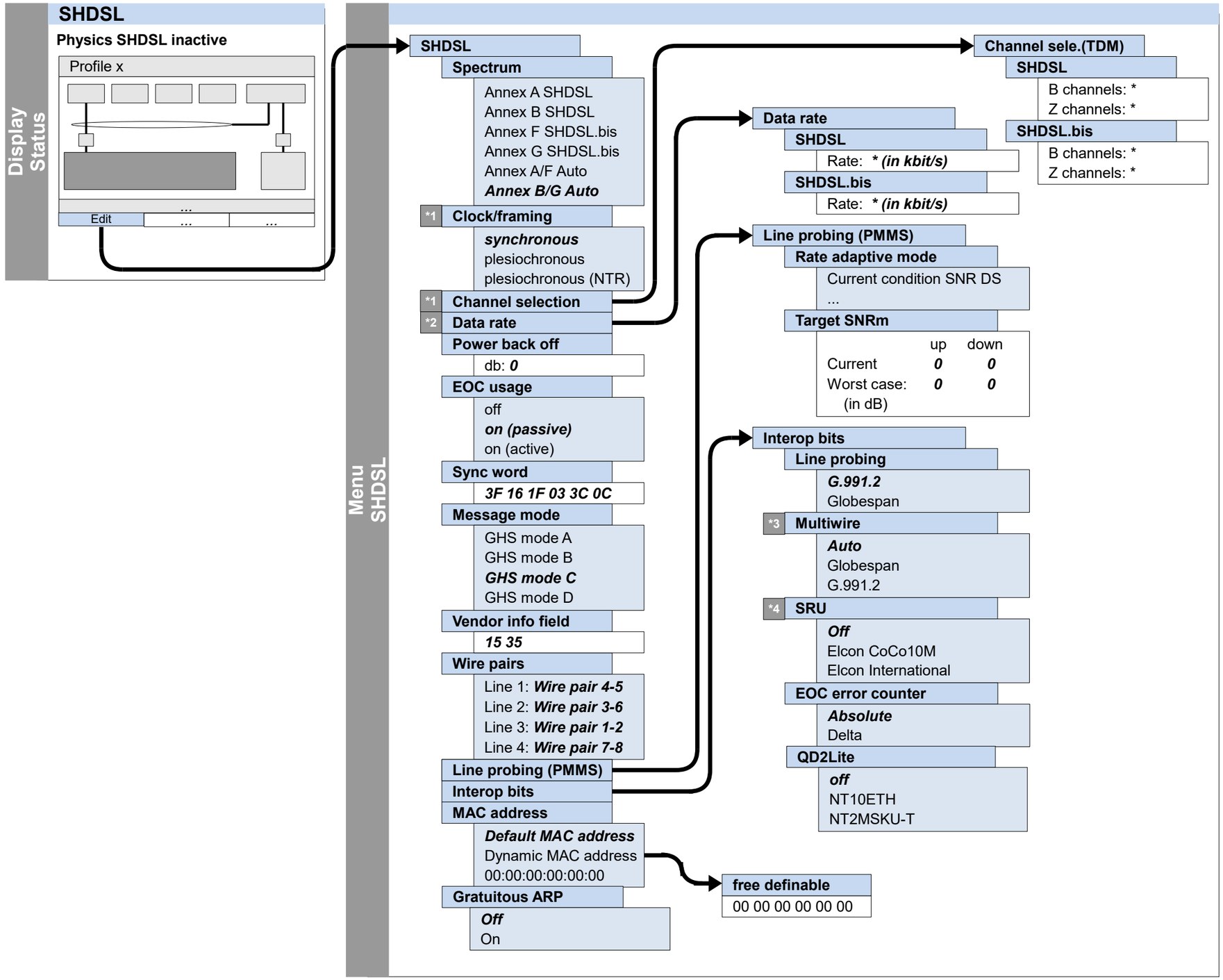
Note

*1 = only for VDSL

Settings
Phys. parameters: SHDSL

Cross reference:

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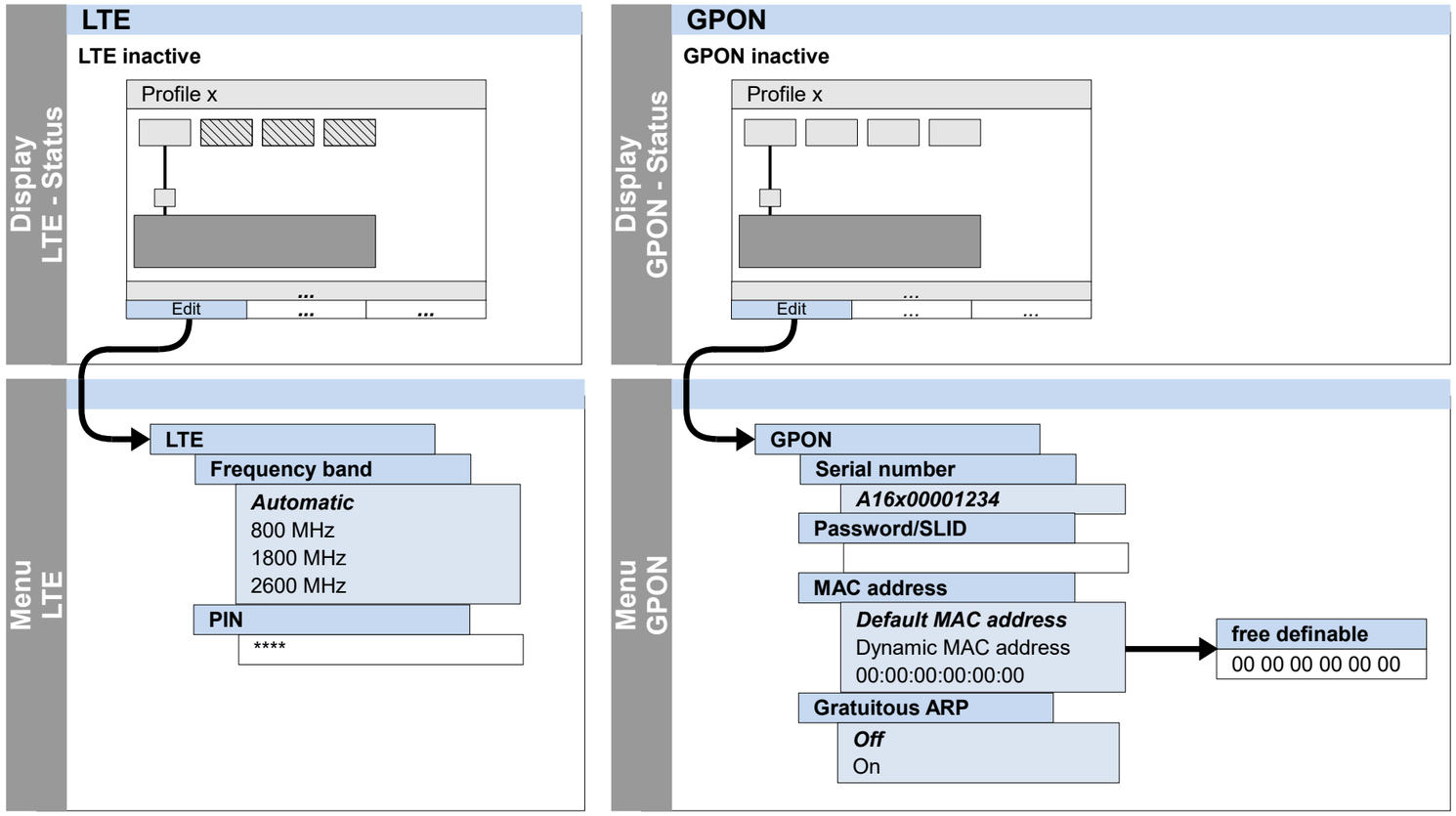
Note

*1 = TDM, Independent TC, HDLC
*2 = ATM, EFM
*3 = ATM, TDM
*4 = EFM, Independent TC

Settings
Phys. parameters: LTE, GPON

Cross reference:

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Settings
Profile – Services (Data service, VoIP service, IPTV service, Opt. service), Virt. Profile

Cross reference:

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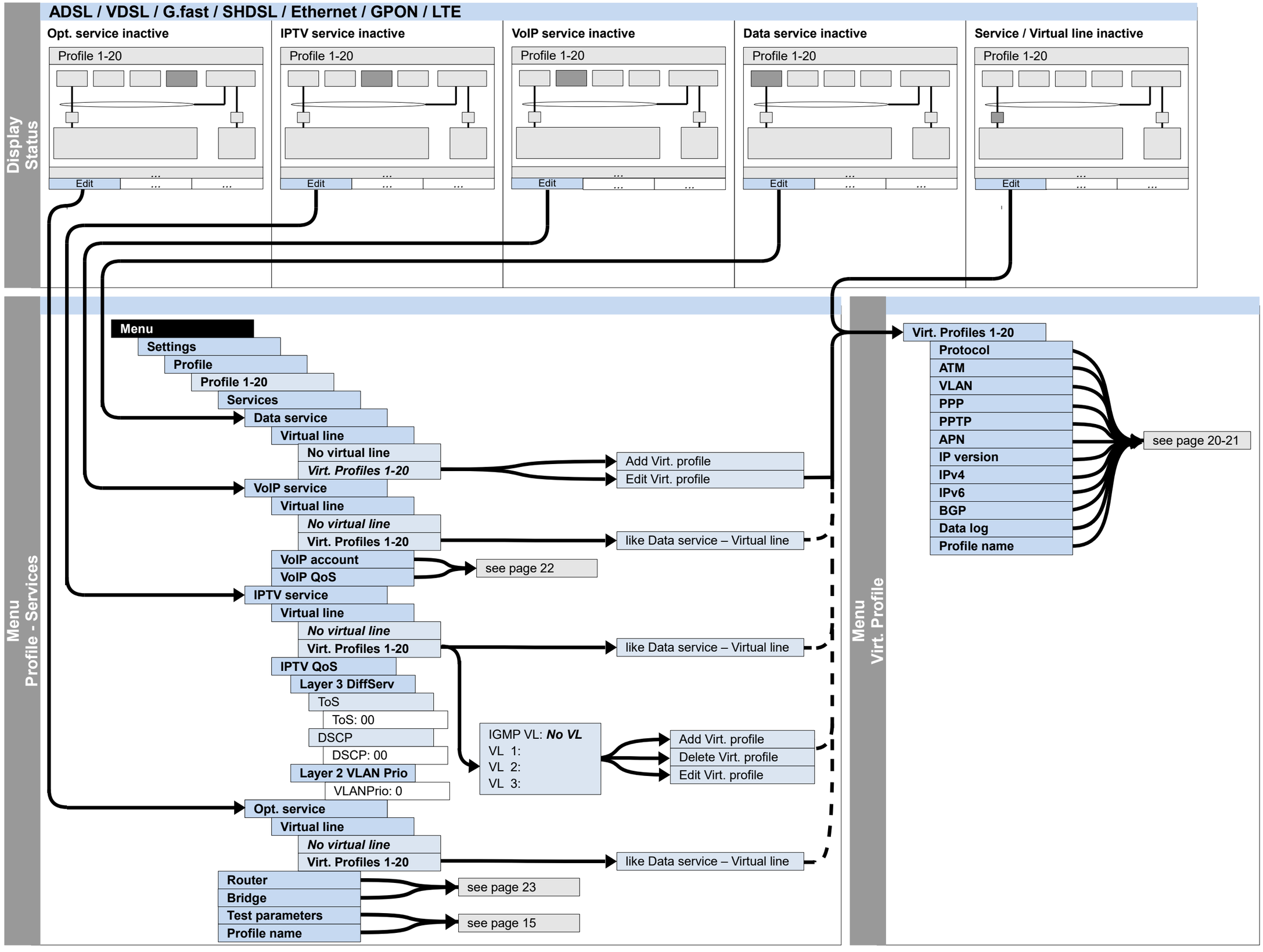
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ISDN tests	page
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Others	page
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Test leads	45-48



Settings
Profiles – Virt. profile (Protocol, ATM, VLAN, PPP, PPTP, APN, Data log, Profile name)

Cross reference:

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ETH cable tests	35
Others	**page**
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Menu Profiles – Virt. profile

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profile 1-20**
        - **Services**
          - **Data service**
            - **Virtual line**
              - **Virt. Profiles 1-20**
                - **Protocol**: IP / ***PPP*** / PPTP
                - **ATM**
                - **VPI/VCI**: VPI: ***1*** / VCI: ***32***
                - **Encapsulation**: ***LLC*** / VC-MUX
                - **Ethernet**: No (PPPoA, ...) / ***Yes (PPPoE, EoA)***
                - **VLAN** → Menu VLAN
                - **PPP** → Menu PPP
                - **PPTP**
                - **Server IP Adr.**: ***0.0.0.0***
                - **APN** → Menu APN
                - **IP Version**
                - **IPv4** → see page 21
                - **IPv6**
                - **BGP** → see page 21
                - **Data log**: ***Off*** / On
                - **Profile name**: **Virt. Profil 1-20**

Menu VLAN

- **VLAN**
  - **VLAN Mode**: **No VLAN** / 1 VLAN tag / 2 VLAN tags (QinQ)
  - **1. VLAN tag (C-VLAN)**
    - **ID**: ID: ***2***
    - **Priority**: Priority: ***0***
    - **TPID**: ***8100 Hex*** / 88A8 Hex
  - **2. VLAN tag (S-VLAN)**
    - **ID**: ID: ***2***
    - **Priority**: Priority: ***0***
    - **TPID**: 8100 Hex / ***88A8 Hex***

Menu PPP

- **PPP**
  - **PPP Profiles 1-20**
    - Edit profile
      - **User name**
      - **Password**
      - **Set IP**: ***no*** / yes
      - **Activation Delay**: sec: ***2***
      - **Profile name**: ***PPP Profiles 1-20***
    - Presel. profile

Menu APN

- **APN**
  - **APN Profiles 1-5**
    - Edit profile
      - **Access point**
      - **In-dialling nb.**: ****99#***
      - **Profile name**: ***APN Profile 1***
    - Presel. profile

Note

On page 3 you get a survey on the protocols, which are supported on the various interfaces.

Settings
Profiles – Virt. profile (IP version, Ipv4, Ipv6, BGP)

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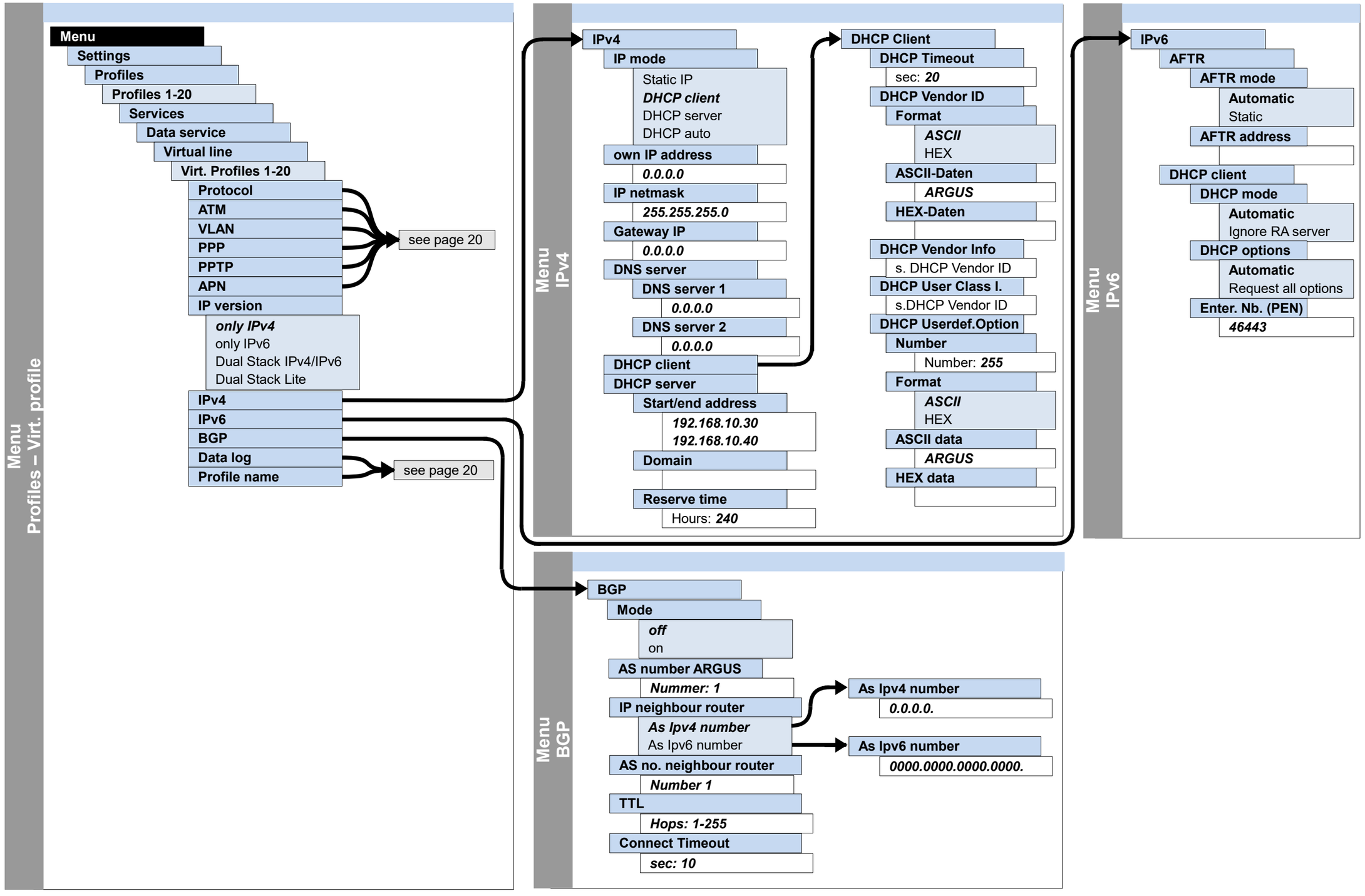
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Settings
Profiles – Services – VoIP service – VoIP account, VoIP QoS

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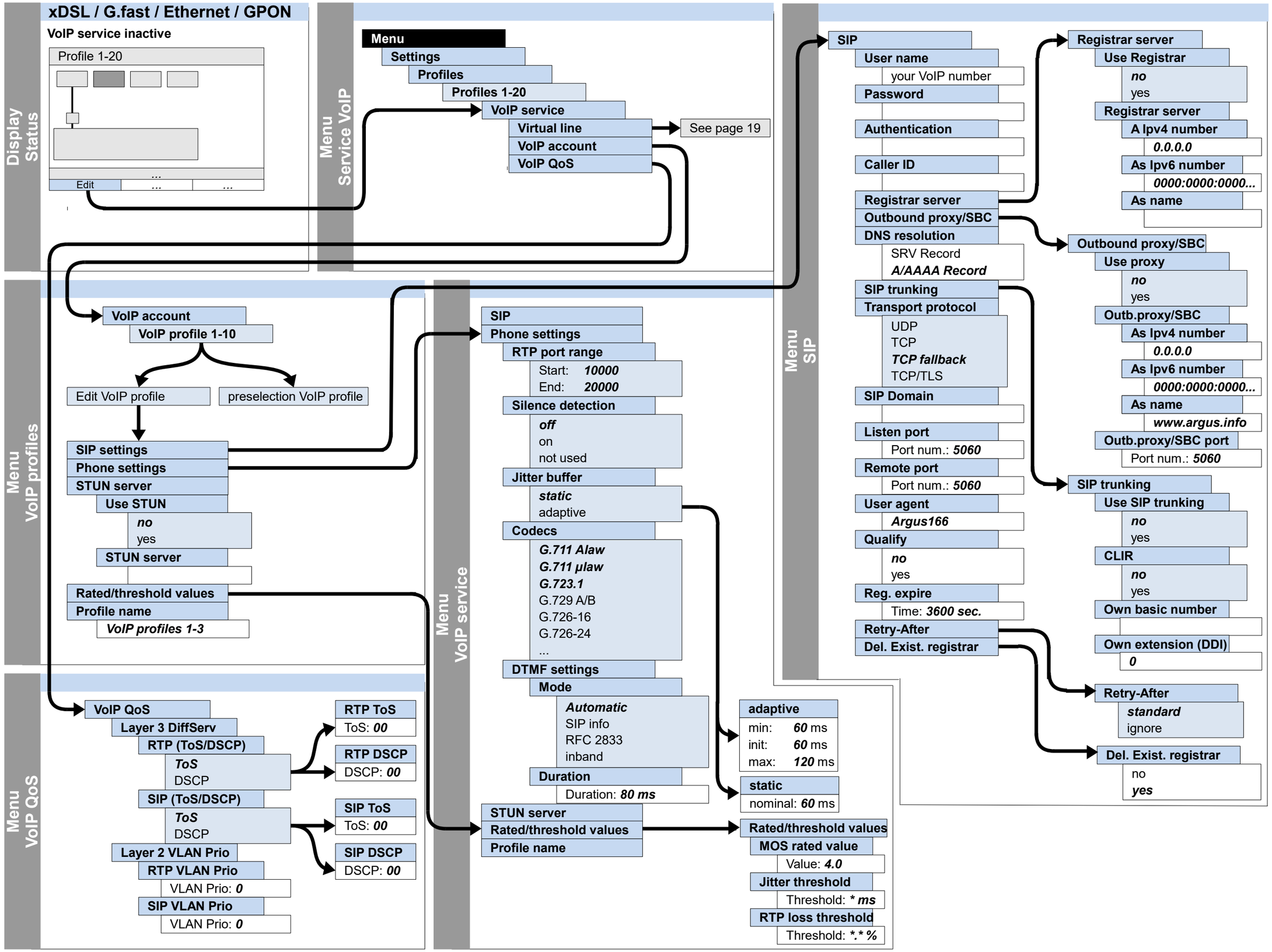
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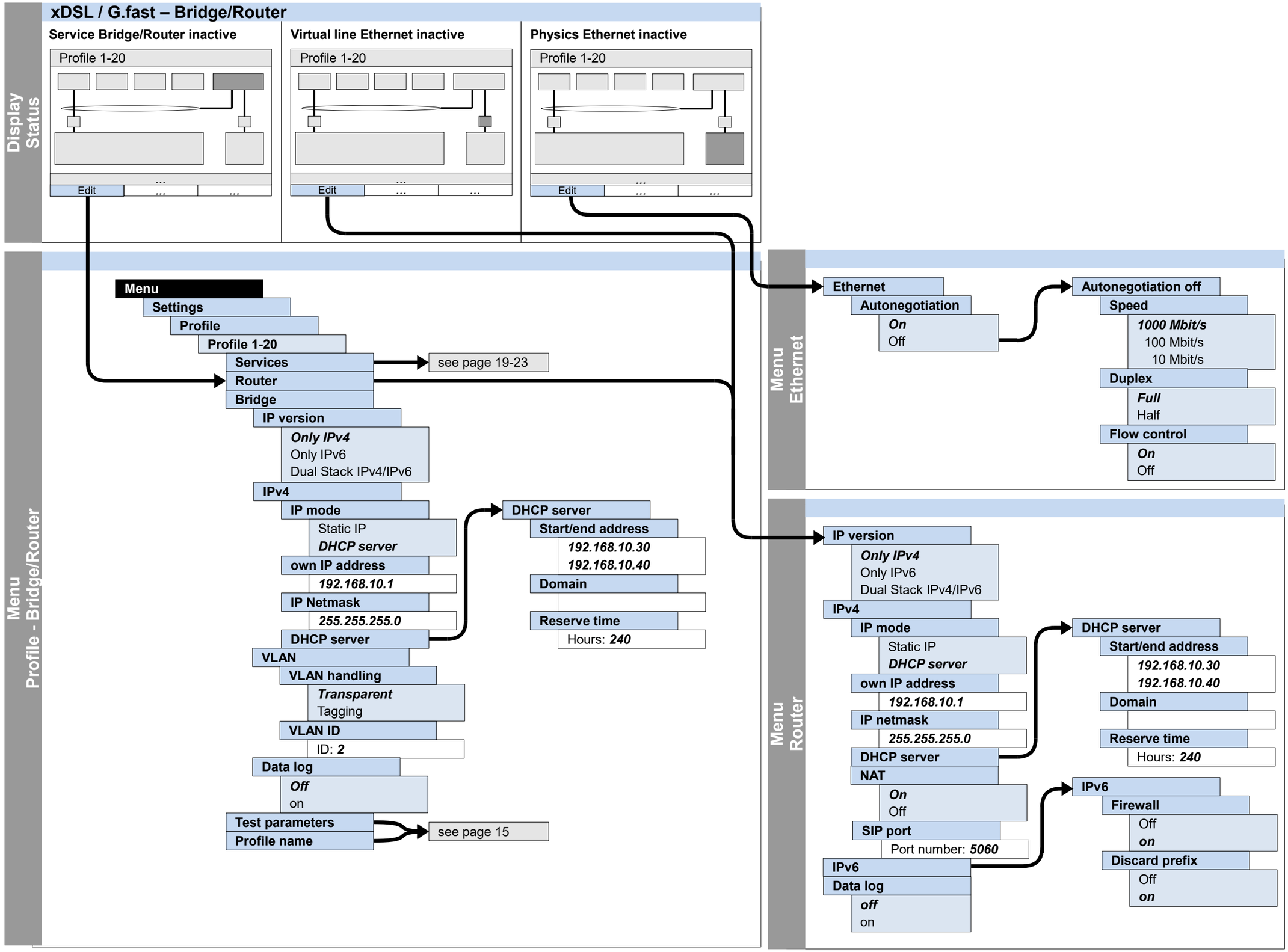
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Settings
Profile – Bridge/Router (Ethernet, Router, Bridge)

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Settings
ISDN (General, BRI S, BRI U)

Cross reference:

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Battery (status,...)	8, 12
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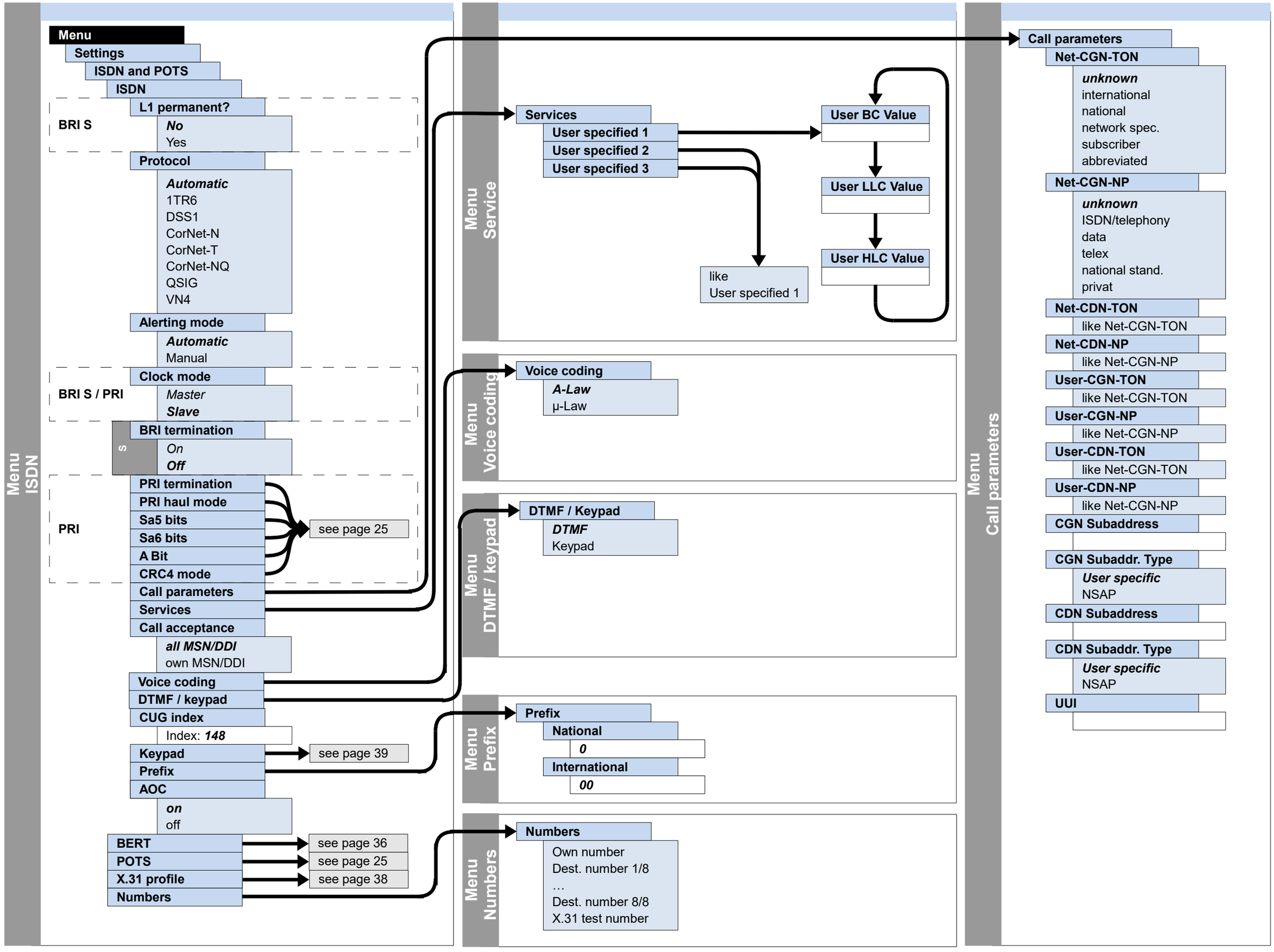
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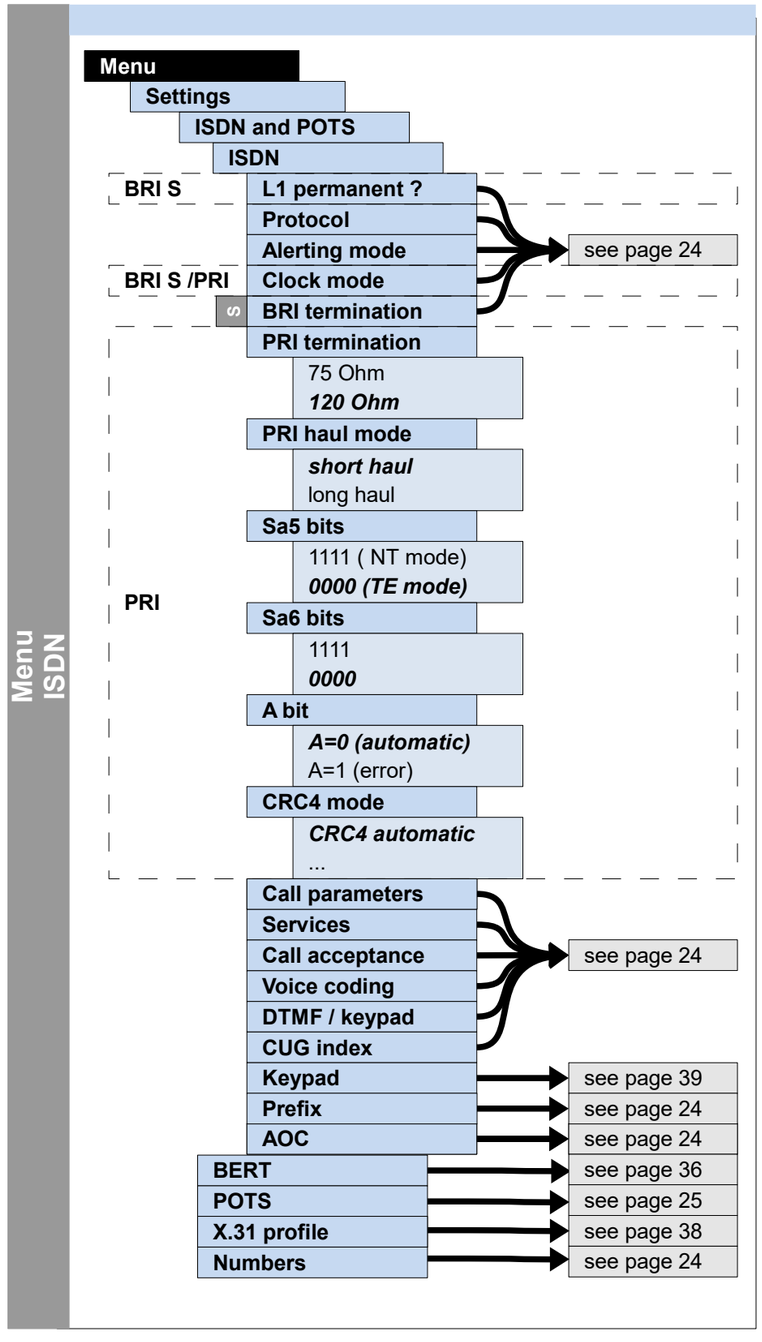
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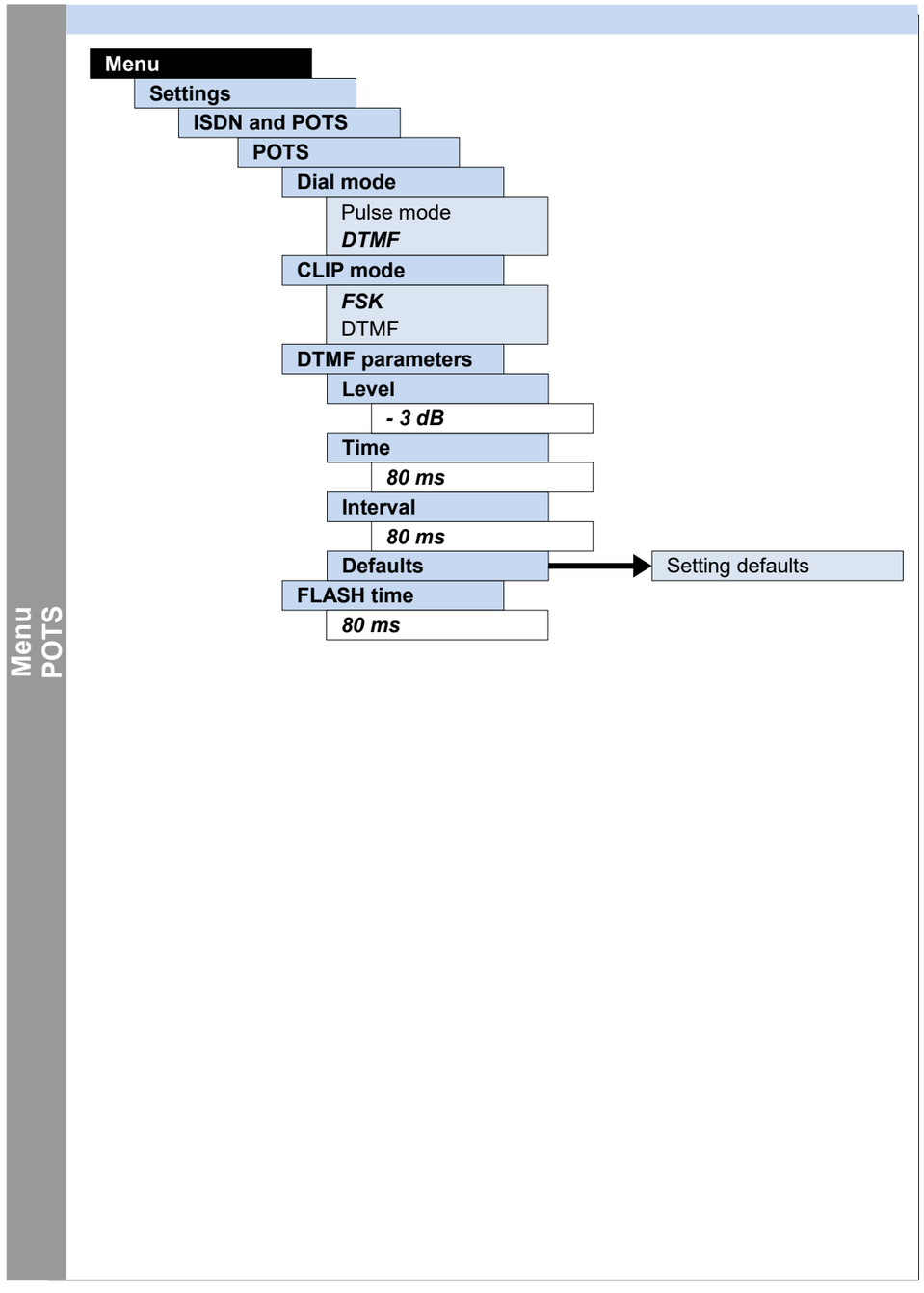


Settings
ISDN (PRI), POTS

Cross reference:

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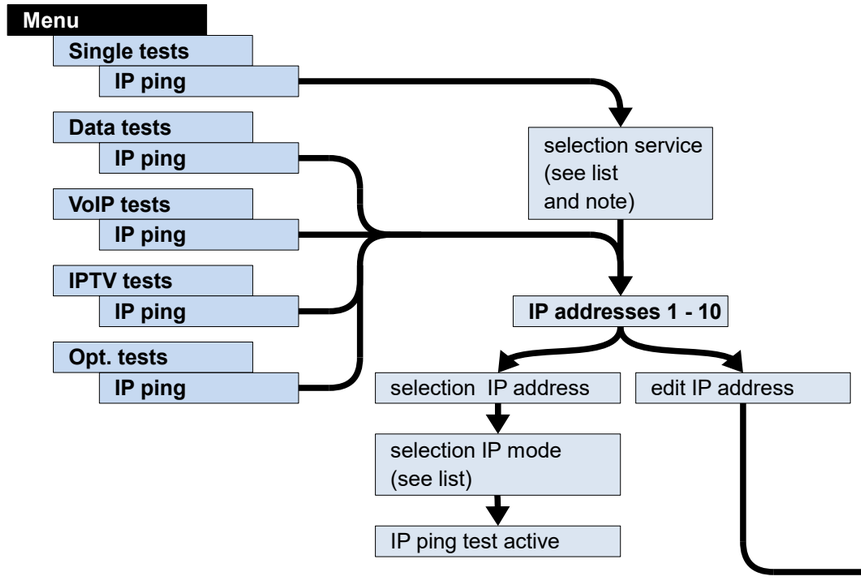


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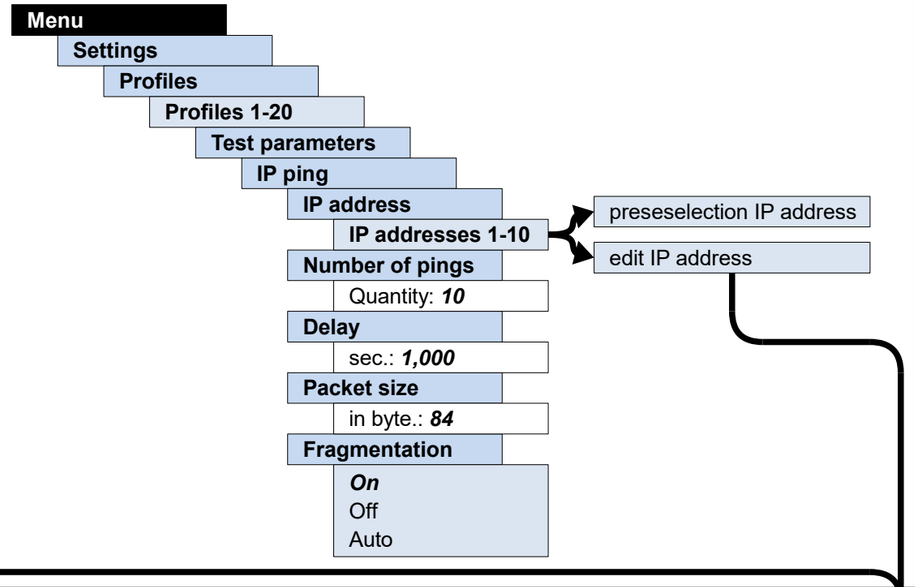
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IP ping Test operation

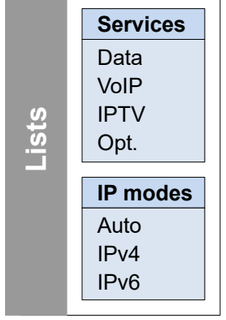
ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE



IP ping Test configuration

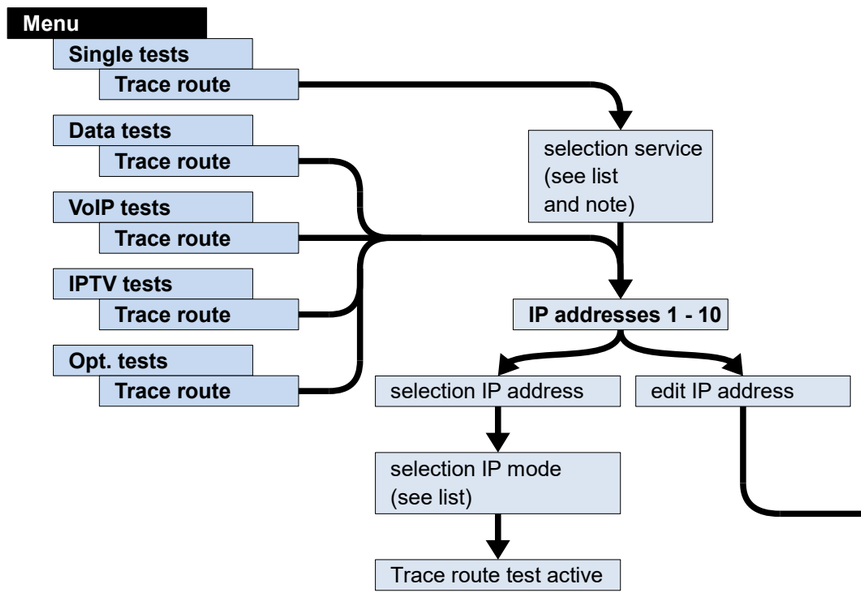


Lists

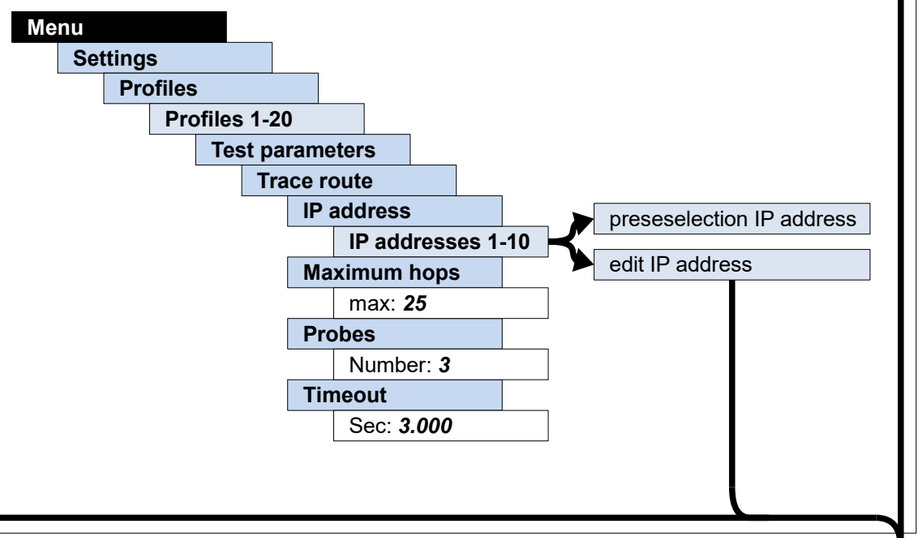


Trace route Test operation

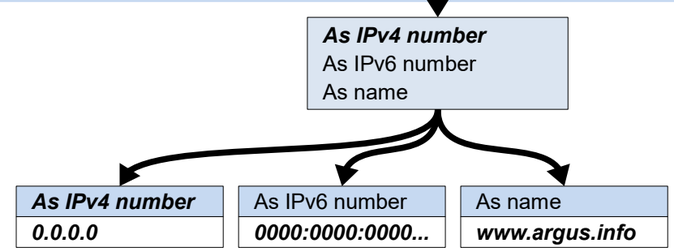
ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE



Trace route Test configuration



Menu IP address



Note

The number of services may vary depending on the configuration of the Data, VoIP, IPTV, VoD services. If a single service has been configured, the selection will be skipped.

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HTTP download/-upload Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE

Menu
- Single tests
  - HTTP down-/upl.
- Data tests
  - HTTP down-/upl.
- Opt. tests
  - HTTP down-/upl.

→ Server profiles 1-10
- selection server profile → HTTP down-/upl. test active
- edit server profile

HTTP download/-upload Test configuration

Menu
- Settings
  - Profiles
    - Profiles 1-20
      - Test parameters
        - HTTP down-/upl.
          - Server profiles 1-10
            - preselection server profile
            - edit server profile

Menu Server profile

Server profiles 1-10
- Server
- Download file name
- Upload file name
  - *file*
- Upload file size
  - ***100*** (MByte)
- User name
- Password
- Number of up-/downloads
  - Number: ***3***
- Num. of paral. downl.
  - Number: ***3***
- Profile name
  - ***Server prof. 1-10***

FTP download Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE

Menu
- Single tests
  - FTP download
- Data tests
  - FTP download
- Opt. tests
  - FTP download

→ Server profiles 1-10
- selection server profile → FTP download test active
- edit server profile

FTP download Test configuration

Menu
- Settings
  - Profiles
    - Profiles 1-20
      - Test parameters
        - FTP download
          - Server profiles 1-10
            - preselection server profile
            - edit server profile

FTP upload Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON / LTE

Menu
- Single tests
  - FTP upload
- Datatests
  - FTP upload
- Opt. tests
  - FTP upload

→ Server profiles 1-10
- selection server profile → FTP upload test active
- Edit server profile

FTP upload Test configuration

Menu
- Settings
  - Profiles
    - Profiles 1-20
      - Test parameters
        - FTP upload
          - Server profiles 1-10
            - preselection server profile
            - edit server profile

FTP server Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON

Menu
- Single tests
  - FTP server
- Data tests
  - FTP server
- Opt. tests
  - FTP server

→ FTP server test active

Note

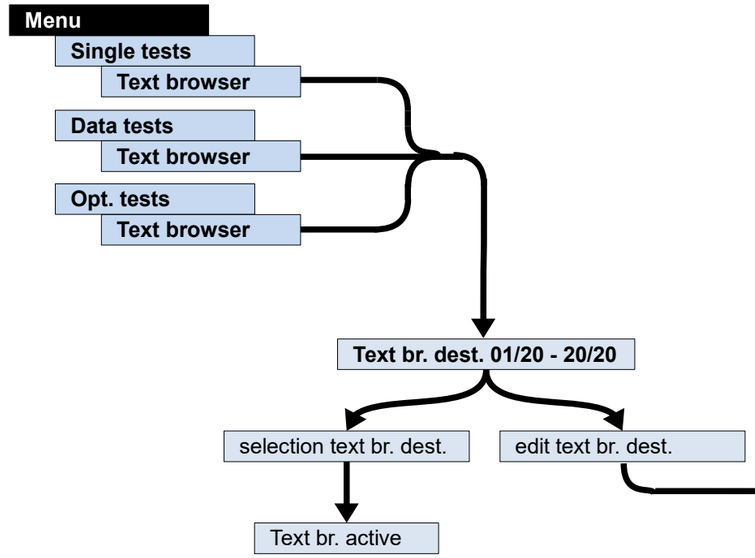
A test configuration of the FTP server is not necessary.

Cross reference:

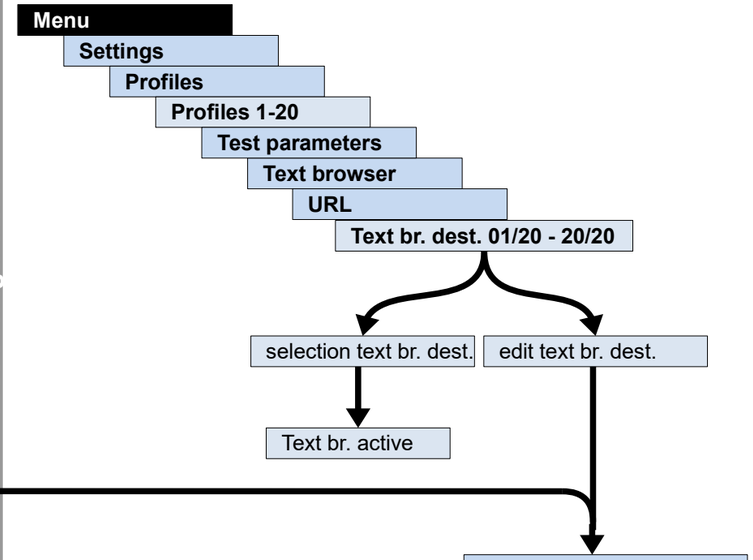
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xDSL / G.fast / Ethernet / GPON / LTE

Text browser Test operation

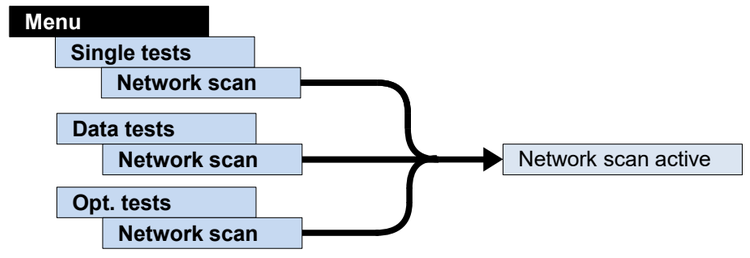


Text browser Test configuration

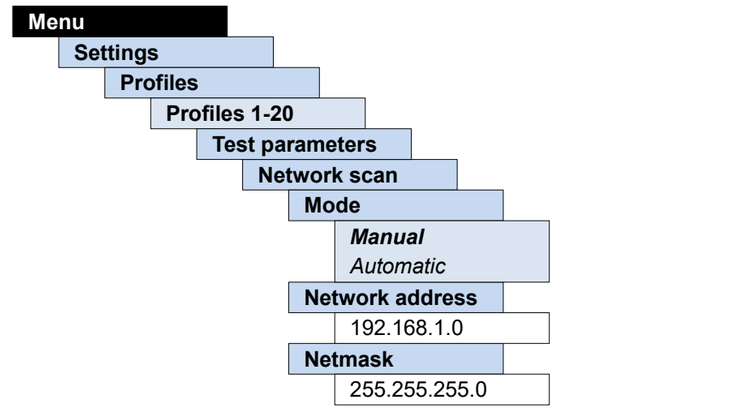


Ethernet

Network scan Test operation



Network scan Test configuration



IP

Configuration and operation
IPTV, IPTV passive, IPTV scan

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IPTV Test operation

xDSL / G.fast / Ethernet / GPON

- **Menu**
  - **Single tests** → **IPTV**
  - **IPTV tests** → **IPTV**
  - → **IPTV profiles 1-3**
    - selection IPTV profile → IPTV test active
    - edit IPTV profile

IPTV passive Test operation

xDSL / G.fast / Ethernet / GPON

- **Menu**
  - **Single tests** → **IPTV passive**
  - **IPTV tests** → **IPTV passive**
  - **Bridge tests** → **IPTV passive**
  - → **IPTV profiles 1-3**
    - selection IPTV profile → IPTV passive test active
    - edit IPTV profile

IPTV Test configuration

Menu

- **Settings**
  - **Profiles**
    - **Profiles 1-20**
      - **Test parameters**
        - **IPTV / IPTV passive**
          - **IPTV profiles 1-3**
            - edit IPTV profile
            - preselection IPTV profile

IPTV profiles 1-3

- **Channel selection** → IPTV channel 1-250 → preselection IPTV ch. / edit IPTV channel
- **IGMP version** → IGMP version: ***3***
- **Threshold**
- **Profile name** → ***IPTV profiles 1-3***

Menu IPTV thresholds

Threshold

- **IGMP latency** → Latency value: ***500 ms***
- **Sync error** → ***0***
- **PCR jitter** → ***100 ms***
- **Error indication** → ***0***
- **CC error** → ***0***
- **CC error ratio** → ***0,00 %***
- **Audio bytes** → ***0***
- **Video bytes** → ***0***
- **RTP jitter** → ***100 ms***
- **RTP sequence error** → ***0***
- **Current RTP loss ratio** → ***0.00 %***
- **Full RTP loss ratio** → ***5.00 %***

Menu IPTV channel

IPTV channels 1-250

- **Multicast address** → 224.0.0.0
- **Port** → Port number: ***0***
- **TV station** → ***IPTV channel 1-250***

IPTV scan Test operation

xDSL / G.fast / Ethernet / GPON

- **Menu**
  - **Single tests** → **IPTV scan**
  - **IPTV tests** → **IPTV scan**
  - → **IPTV scan profiles 1-3**
    - selection IPTV scan profile → IPTV scan test active
    - edit IPTV scan profile

IPTV scan Test configuration

Menu

- **Settings**
  - **Profiles**
    - **Profiles 1-20**
      - **Test parameters**
        - **IPTV scan**
          - **IPTV scan profiles 1-3**
            - preselection IPTV scan profile
            - edit IPTV scan profile

IPTV scan profiles 1-3

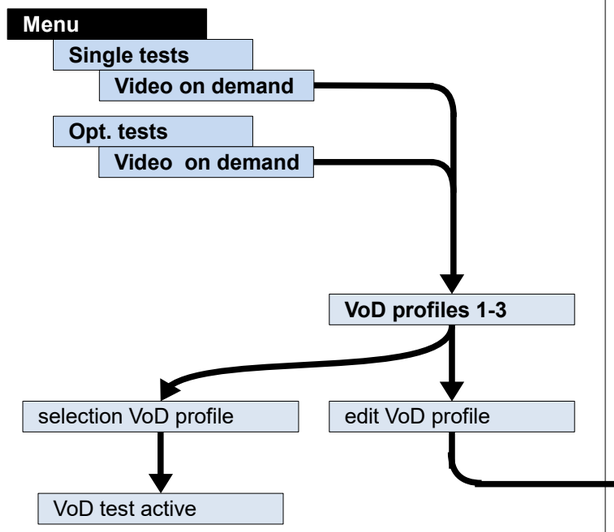
- **Channel selection** → add IPTV channel / remove IPTV Channel / edit IPTV Channel
- **IGMP Version** → IGMP version: ***3***
- **Max. zapping time** → Zapping time: ***5 s***
- **Profile name** → ***Scan Profile 1-3***

Cross reference:

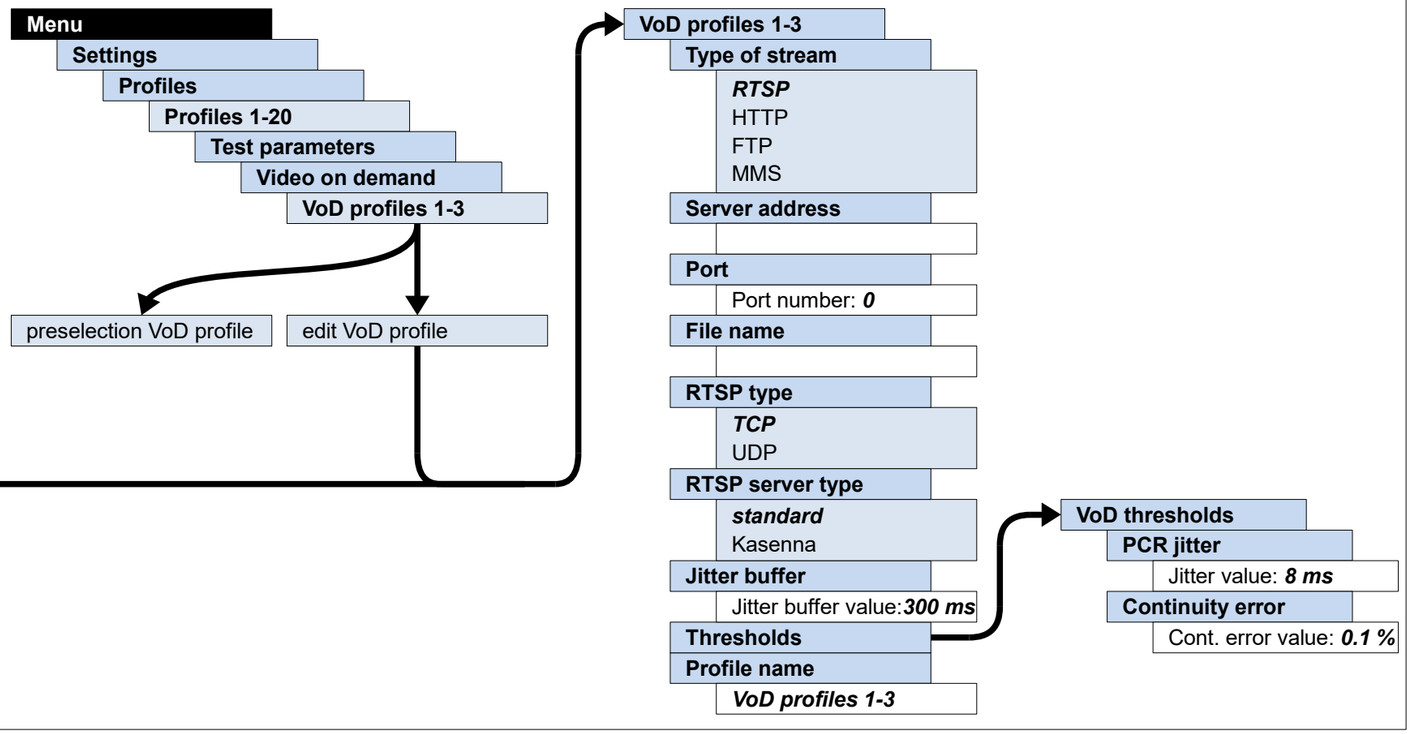
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xDSL / G.fast / Ethernet / GPON

Video on demand
Test operation



Video on Demand
Test configuration

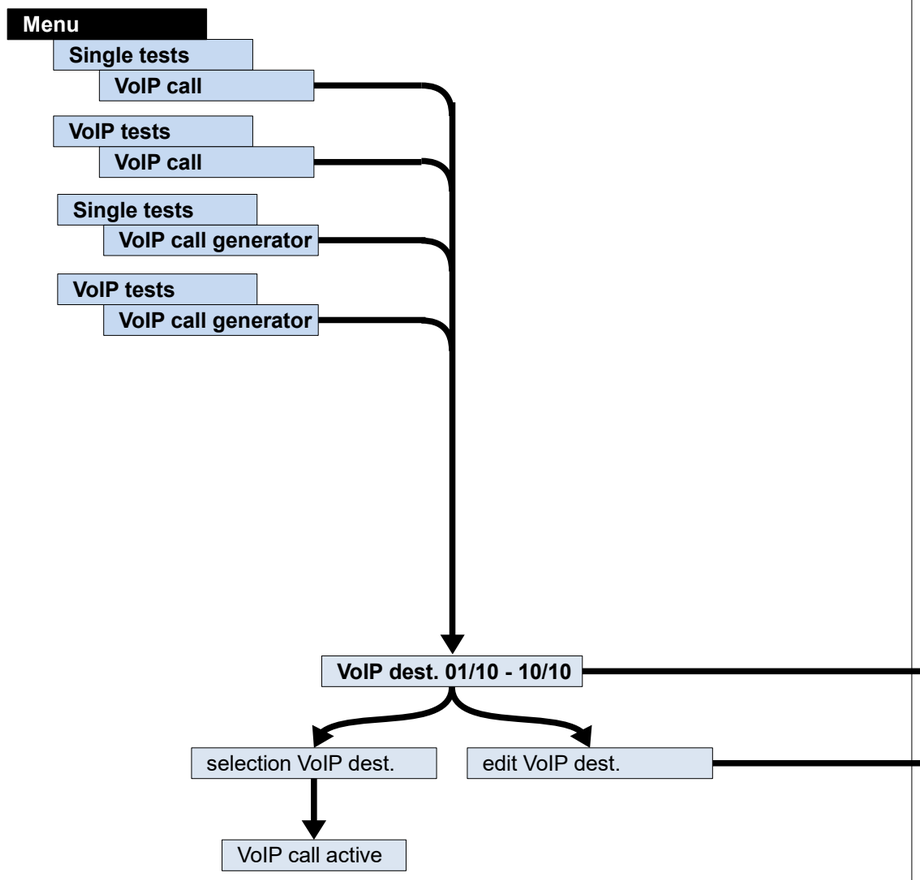


Cross reference:

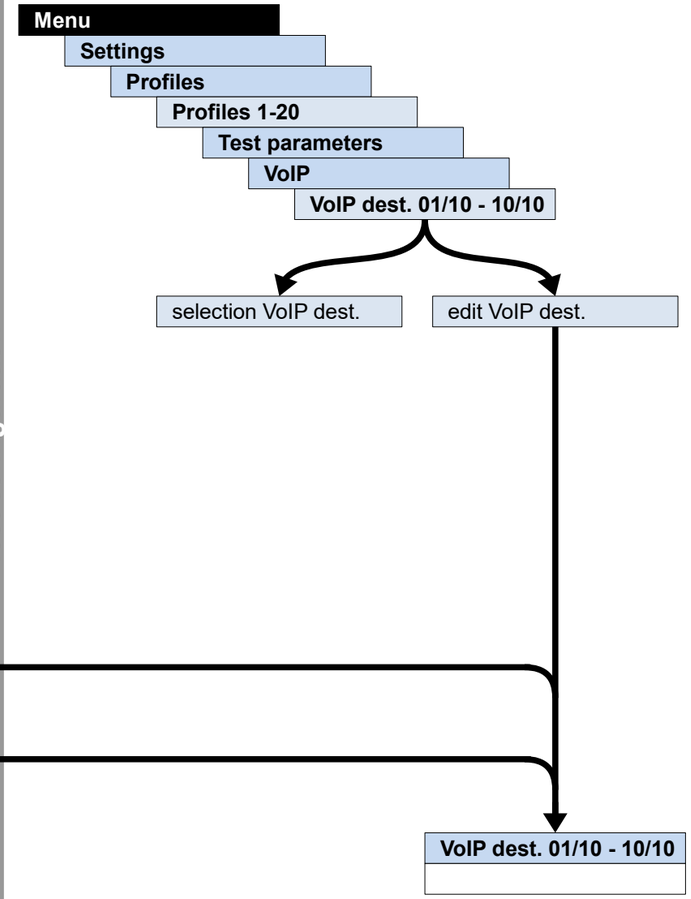
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VoIP call / VoIP call generator Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON

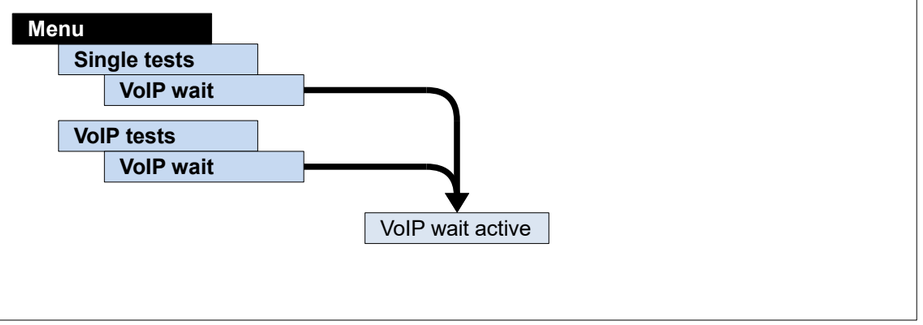


VoIP call / VoIP call generator Test configuration

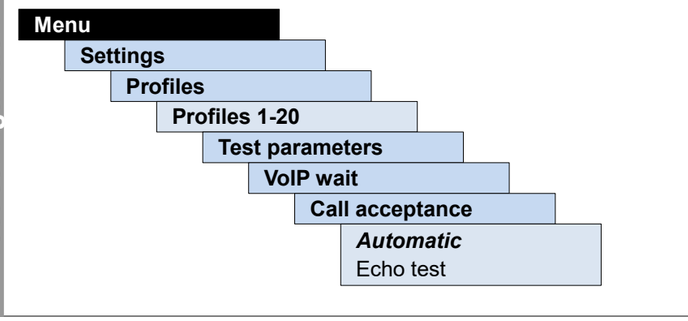


VoIP wait Test operation

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON



VoIP wait Test configuration



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SHDSL ATM/EFM / VDSL / Ethernet / GPON

Loop
Test operation

- **Menu**
  - **Single tests**
    - **Loop**
  - **Physic tests**
    - **Loop**

→ Loop active

Loop
Test configuration

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profiles 1-20**
        - **Test parameters**
          - **Loop**
            - **Layer 1**
            - **Layer 2**
              - **MAC mode**
                - ***Only own MAC***
                - Loop everything
              - **Own VPI/VCI**
                - VPI: ***1***
                - VCI: ***32***
              - **Own VLAN**
                - **VLAN mode**
                - ***No VLAN***
                - 1 VLAN tag
                - 2 VLAn tags (QinQ)
                - **1. VLAN tag (C-VLAN)**
                - **ID**
                - ID: ***2***
                - **Priority**
                - Priority: ***0***
                - **TPID**
                - ***8100 Hex***
                - 88A8 Hex
                - **2. VLAN tag (S-VLAN)**
                - **ID**
                - ID: ***2***
                - **Priority**
                - Priority: ***0***
                - **TPID**
                - 8100 Hex
                - ***88A8 Hex***
            - **Layer 3**
              - **IP version**
                - ***only IPv4***
                - only IPv6
              - **Own IP mode**
                - ***Static IP***
                - DHCP client
              - **Own IP address**
                - ***0.0.0.0***

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SHDSL EFM / ATM, VDSL, Ethernet IP based

Traffic generator
Test operation

- **Menu**
  - **Single tests**
    - **Traffic generator**
  - **Physic tests**
    - **Traffic generator**

→ Traffic generator active

Traffic generator
Test configuration

- **Menu**
  - **Settings**
    - **Profile**
      - **Profile 1-20**
        - **Test parameters**
          - **Traffic generator**
            - **Layer 1**
            - **Layer 2**
              - **Own VPI/VCI**
                - VPI: ***1***
                - VCI: ***32***
              - **Own VLAN** → Menu VLAN
              - **Own Mac check**
                - ***No check***
                - In soure
                - In destination
                - In soure or destination
              - **Dest. MAC address**
                - ***00 00 00 00 00 00***
            - **Layer 3**
            - **Layer 4**
              - **UDP ports**
                - Source port: **10000**
                - Dest, port: **20000**
            - **Bandwith**
              - ***1000.000 Mbit/s***
            - **Mode**
              - Time
              - Frame
              - ***Endless***
            - **Frame size**
              - ***1518 Bytes***
            - **Follow-up time**
              - ***Seconds: 3***
            - **TTL**
              - ***Hops: 128***

Menu VLAN

- **VLAN**
  - **VLAN mode**
    - ***No VLAN***
    - 1 VLAN tag
    - 2 VLAN tags (QinQ)
  - **1. VLAN tag (C-VLAN)**
    - **ID**
      - ID: ***2***
    - **Priority**
      - Priority: ***0***
    - **TPID**
      - ***8100 Hex***
      - 88A8 Hex
  - **2. VLAN tag (S-VLAN)**
    - **ID**
      - ID: ***2***
    - **Priority**
      - Priority: ***0***
    - **TPID**
      - 8100 Hex
      - ***88A8 Hex***

Menu Layer 3

- **Layer 3**
  - **IP version**
    - ***only IPv4***
    - only IPv6
  - **Own IP**
    - **Own IP mode**
      - ***Static IP***
      - DHCP client
    - **Own IP address**
      - ***0.0.0.0***
    - **Gateway**
      - ***0.0.0.0***
    - **Netmask**
      - ***255.255.255.0***
    - **IP protocol**
      - ***0x05***
  - **Dest. IP address**
    - ***0.0.0.0***
  - **Use ARP**
    - ***No***
    - Yes

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RFC2544 test Test operation

SHDSL EFM / ATM, VDSL, Ethernet IP based

- **Menu**
  - **Single tests**
    - **RFC2544**
  - **Phsyic tests**
    - **RFC2544**
  - RFC2544 test active

RFC2544 2 port Test operation

xDSL / Ethernet 2 port access

- **Menu**
  - **Single tests**
    - **RFC2544 2 port test**
  - **Phsyic tests**
    - **RFC2544 2 port test**
  - RFC2544 2 port Profile selection
  - RFC2544 edit profile
  - RFC2544 2 port Test active

RFC2544 test / 2 port Test configuration

- **Menu**
  - **Settings**
    - **Profiles**
      - **Profile 1-20**
        - **Test parameters**
          - **RFC2544 Test**
            - **RFC2544 Profile 1-20**
              - **Frames**
                - ***64 Byte***
                - ***128 Byte***
                - ***256 Byte***
                - ***...***
              - **Tests**
                - **Throughput**
                - **Latency**
                - **Frame loss rate**
              - **Layer**
              - **Profile name**
                - ***RFC2544 Profile 1-20***

RFC2544 test / 2 port tests

- Throughput def.
  - **Throughput**
    - **Test datarate**
      - In percent
        - ***100 %***
      - In Mbit/s
        - ***1000.000 Mbit/s***
    - **Test duration**
      - Duration: ***00:10***
    - **Resolution**
      - In percent
        - ***1.00 %***
      - In Mbit/s
        - ***10.000 Mbit/s***
    - **Interpretation**
      - **Treshold value**
        - **For all frames**
          - ****.* (off)***
        - **Per frame**
          - ***64 Byte***
          - ***...***
      - **Treshold underflow**
        - ***Test completely***
        - Abort package size
      - **Pause frames**
        - *Discard data rate*
        - ***Accept data rate***
- Throughput edit
- Latency def.
  - **Latency**
    - **Test datarate**
      - **Data rate for all frames**
        - In percent
          - ***100 %***
        - In Mbit/s
          - ***1000.000 Mbit/s***
      - **Data rate per frame**
        - ***64 Byte***
        - ***...***
      - **From Throughput**
    - **Test duration**
      - Duration: ***00:10***
    - **Repetitions**
      - Number: ***10***
    - **Interpretation**
      - **Treshold value**
        - **For all frames**
          - ****.* (off)***
        - **Per frame**
          - ***64 Byte***
          - ***...***
      - **Pause frames**
        - *Discard data rate*
        - ***Accept data rate***
- Latency edit
- Frame loss. def.
  - **Frame loss rate**
    - **Test datarate**
      - **Data rate for all frames**
        - In percent
          - ***100 %***
        - In Mbit/s
          - ***1000.000 Mbit/s***
      - **Data rate per frame**
        - ***64 Byte***
        - ***...***
    - **Test duration**
      - Duration: ***00:10***
    - **Step size**
      - In percent
        - ***10 %***
      - In Mbit/s
        - ***100.000 Mbit/s***
    - **Interpretation**
      - **Treshold value**
        - **For all frames**
          - ****.* (off)***
        - **Per frame**
          - ***64 Byte***
          - ***...***
      - **Treshold underflow**
        - ***Test completely***
        - *Abort package size*
      - **Pause frames**
        - *Discard data rate*
        - ***Accept data rate***
- Frame loss r. e.

RFC2544 test / 2 port Layer

- **Layer**
  - **Layer 2**
    - **Own VPI/VCI**
      - VPI: ***1***
      - VCI: ***32***
    - **Own VLAN**
      - **VLAN mode**
        - ***No VLAN***
        - 1 VLAN tag
        - 2 VLAN tags (QinQ)
      - **1. VLAN tag (C-VLAN)**
      - **2. VLAN tag (S-VLAN)**
    - **Dest. MAC address**
      - ***00 00 00 00 00 00***
  - **Layer 3**
  - **Layer 4**
    - Source port: **10000**
    - Dest. port: **20000**
- **1. VLAN tag (C)**
  - **ID**
    - ID: ***2***
  - **Priority**
    - Priority: ***0***
  - **TPID**
    - ***8100 Hex***
    - 88A8 Hex
- **2. VLAN tag (S)**
  - **ID**
    - ID: ***2***
  - **Priority**
    - Priority: ***0***
  - **TPID**
    - 8100 Hex
    - ***88A8 Hex***
- **Layer 3**
  - **Own IP**
    - **IP mode**
      - ***Static IP***
      - DHCP client
    - **Gateway IP**
      - ***0.0.0.0***
    - **IP netmask**
      - ***0.0.0.0***
    - **IP protocol**
      - ***0x05***
    - **Destination IP address**
      - ***0.0.0.0***
    - **ARP**
      - ***No***
      - *Yes*

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Ethernet cable tests

Port flash
Test operation

Menu
Single tests
Port flash
Port flash ... active

Port flash
Test configuration

Menu
Settings
Copper/Cable tests
ETH cable tests
Port flash
LED on time
1 s

ISDN

Configuration and operation
BERT (start, wait, loop)

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BERT Test operation

BRI S/U / PRI

TE ... / NT ...

Menu
- Single tests
  - BERT
    - BERT start
    - BERT wait
    - B-channel loop

→ Select number → Select service (see list) → Select B-channel → BERT active

BERT wait → BERT wait active

B-channel loop → B-channel loop wait active

BERT Test configuration

Menu
- Settings
  - BERT
    - BERT time: Durat.: ***00:01*** (hh:mm)
    - Bit pattern S / U: (2^15)-1 / ***(2^11)-1*** / User defined
    - Pattern PRI: like S/U
    - Error level: Threshold: ***1E-06***
    - HRX value: Value: ***15 %***

Bit pattern S / U → **User defined**: Enter (binary): 0000000000000000

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UDI 64 kBit
3.1 kHz audio
7 kHz audio
DFU-TA
Telephony ISDN
Fax G3
Fax G4
Mixed Mode
Teletex
Videotex
Telex
OSI
Telephony 7 kHz
Video telephony 1
Video telephony 2
User specified 1
User specified 2
User specified 3

MegaBERT pattern
2^15-1
2^15-1 inverse
2^20/QRSS
2^20/QRSS/inverse
Space (0000)
Mark (1111)

BRI S/U

Leased line

Menu
- Single tests
  - BERT
    - BERT start
      - B-channel (64k)
      - B-channel (128k)
      - D-channel
    - BERT wait
      - B-channel (64k)
      - B-channel (128k)
      - D-channel
    - B-channel loop
      - B-channel
      - all framed

B-chan. select → BERT active

B-chan. select → BERT wait active

B-chan. select → B-channel loop wait active

PRI

Leased line

Menu
- Single tests
  - BERT
    - BERT start
      - B-channel (64k)
      - B-channel (128k)
      - MegaBERT fr.
      - MegaBERT unfr.
      - D-channel
    - BERT wait
      - B-channel (64k)
      - B-channel (128k)
      - MegaBERT fr.
      - MegaBERT unfr.
      - D-channel
    - B-channel-loop
      - B-channel
      - all framed
      - all unframed

B-chan. select → BERT active

1. B-chan. select → 2. B-chan. select → Pattern select (see list) → BERT active

B-chan. select → BERT wait active

1. B-chan. select → 2. B-chan. select → Pattern select (see list) → BERT wait active

B-chan. select → B-channel loop wait active

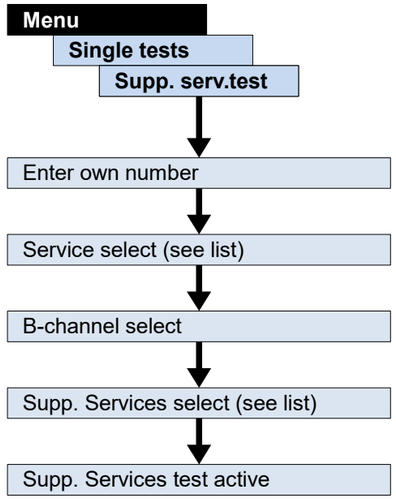
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X.31	38
CF tests, Connect.	39
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Copper tests	**page**
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Supplementary services Test operation

BRI S/U / PRI

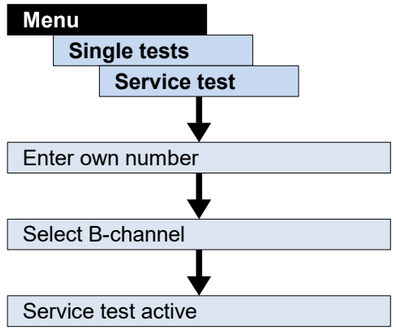
TE P-MP / TE P-P



Service test Test operation

BRI S/U / PRI

TE ... / NT ...



Lists

Services

- Speech
- UDI 64 kBit
- 3.1 kHz audio
- 7 kHz audio
- DFU-TA
- Telephony ISDN
- Fax G3
- Fax G4
- Mixed Mode
- Teletex
- Videotex
- Telex
- OSI
- Telephony 7 kHz
- Video telephony 1
- Video telephony 2
- User specified 1
- User specified 2
- User specified 3

Supp. services

- TP test
- HOLD test
- CLIP test
- CLIP / CLIR
- COLP/COLR
- DDI test
- MSN test
- CF test
- CFU
- CFB
- CFNR
- CW test
- CCBS test
- CCNR test
- MCID test
- 3PTY test
- ECTtest
- CUG test
- CD test
- AOC test
- SUB test
- UUS test

Cross reference:

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BRI S/U / PRI

X.31 test operation

TE P-MP / TE P-P

Menu
Single tests
X.31 test
X.31 profiles 1-3

Select X.31 profile
Edit X.31 profile

Automatic
Manual

Enter TEI
Enter LCN
Edit / select number
X.31 test active

Looking for TEI
Edit / select number
X.31 test active

X.31 test configuration

Menu
Settings
X.31 profiles
X.31 profiles 1-3

Edit X.31 profile
Select X.31 profile

Packet number
Packet countl: ***10***
TEI
TEI: **
LCN
LCN: ***1***
Packet size
16 Byte
32 Byte
64 Byte
128 Byte
256 Byte
Agree packet size
No
Yes
Window size
Agree window size
No
Yes
Throughput
Agree throughput
No
Yes
User data
CUG
No
Yes
CUG-Index
Index: ***1***
D-Bit
Local
End to end
Facilities
Profilename
X.31 profiles 1-3

Menu Throughput

Throughput
75 bit/s
150 bit /s
300 bit/s
600 bit/s
1200 bit/s
2400 bit/s
4800 bit/s
9600 bit/s

Menu Windowsize

Windowsize
1 packet
2 packets
3 packets
4 packets
5 packets
6 packets
7 packets

Menu User data

User data
Format
ASCII
HEX
ASCII data
ASCII data 1-3
HEX data
HEX data 1-3
Edit ASCII data
Edit HEX data
ASCII data 1-3
HEX data 1
01 00 00 00 45 43 48 4F
HEX data 2
01 00 00 00 30 30 47 47
HEX data 3

Menu Facilities

Facilities
Facility 1-3
Edit Facility
Facility 1-3

Cross reference:

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CF interrogation Test operation

BRI S/U

TE P-MP / TE P-P

Menu → Single tests → CF interrogation → CF interrogation test active

CF activation Test operation

BRI S/U

TE P-MP / TE P-P

Menu → Single tests → CF activation → Select service (see list services (CF)) → Select Cfx type (see list Cfx types) → Enter own number → Enter / select remote number → CF activation test active

CF delete Test operation

BRI S/U

TE P-MP / TE P-P

Menu → Single tests → CF delete → Select service (see list services (CF)) → Select Cfx type (see list Cfx types) → Enter own number → CF delete test active

Phone / connection Test operation

BRI S/U / PRI

TE … / NT …

Menu → Single tests → Phone / connection → Overlap sending / Enblock / Redialing / Keypad dial → Keypad info 1-3

Keypad info 1-3 → Edit Keypad Info / Select keypad info

Overlap sending / Enblock / Redialing / Keypad dial / Edit Keypad Info / Select keypad info → Edit / select number → Select service (see list) → Select B-channel → connection test active

Leased line

Menu → Single tests → Phone / connection → Select B-channel → Connection test active

Menu Keypad

Menu → Settings → ISDN → Keypad → Keypad info 1-3

Keypad info 1-3 → Select keypad info / Edit keypad info

Select keypad info / Edit keypad info → Keypad info 1-3

Lists

Services

speech
IDU 64 kBit
3.1 kHz audio
7 kHz audio
IDU TA
Telephony ISDN
Fax G3
Fax G4
Mixed Mode
Teletex
Videotex
Telex
OSI
Telephony7 kHz
Videotelephony 1
Videotelephony 2
User specified 1
User specified 2
User specified 3

Services (CF)

All
Spch
DFU
A3K1H
A7kHz
Tel31
TTX
FaxG4
ViSyB
ViTel
FaxG3
Tel7k

CFx types

CFU
CFB
CFNR

Cross reference:

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Others	page
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Time measuring Test operation

BRI S/U

TE … / NT … / Leased line

Menu → Single tests → Time measuring → Conn. setup time / B-channel delay / Interchannel delay

- Conn. setup time → Edit / select number → Select service (see list) → Interchannel delay test active
- B-channel delay → Edit / select number → Select service (see list) → Select B-channel → B-Channel delay test active
- Interchannel delay → Edit / select number → Select service (see list) → Select B-channel → Conn. setup test active

PRI

TE … / NT …

Menu → Single tests → Time measuring → Conn. Setup time → Edit/ select number → Select service (see list) → Select B-channel → Conn. setup test active

List

Services
Speech
IDU 64 kBit
3.1 kHz audio
7 kHz audio
IDU TA
Telephony ISDN
Fax G3
Fax G4
Mixed Mode
Teletex
Videotex
Telex
OSI
Telephony 7 kHz
Videotelephony 1
Videotelephony 2
User specified 1
User specified 2
User specified 3

Listening Test operation

BRI S

Monitor

Menu → Listening → Net side (NT) / Terminal (TE) / Both sides → Select B-channel → Listening active

PRI

Monitor

Menu → Listening → Net side (NT) / Terminal (TE) → Select B-channel → Listening active

Monitor Test operation

BRI S / PRI / POTS

Monitor

Menu → Start monitor → Monitor active

Auto test Test operation

BRI S / BRI U / PRI

TE P-MP / TE P-P

Menu → Test reports → Test no. 1-50 → Start → Enter test name → Enter own number → Edit / select number → Select service (see list) → Auto test active

Leased line

Menu → Test reports → Test no. 1-50 → Start → Enter test name → Select B-channel → Auto test active

Cross reference:

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PESQ Test operation

BRI S/U / POTS

Menu
Single tests
PESQ test
PESQ test active

ADSL / VDSL / G.fast / SHDSL / Ethernet / GPON

Menu
Single tests
VoIP PESQ test
VoIP tests
VoIP PESQ test
VoIP PESQ test active

PESQ Test configuration

Menu
Settings
PESQ
Mode
ARGUS Loop
Send
Call number POTS
Call number ISDN
VoIP destination

Cross reference:

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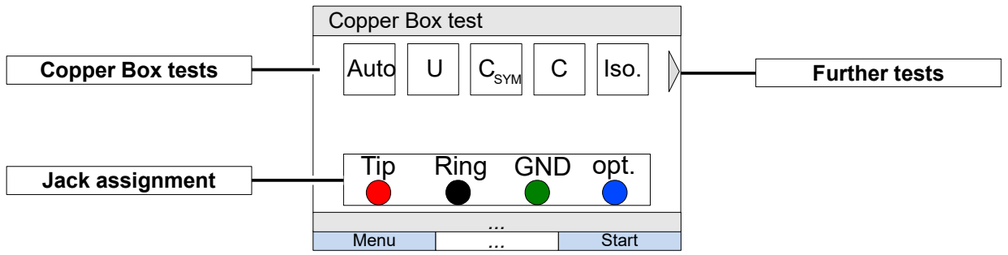
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Legend status

ARGUS Copper Box



Menu hotkeys

ARGUS Copper Box

Key	Auto test	Voltage measurement	Capacitve symmetry measurement	Capacitance measurement	Isolation resistance measurement	Resistance symmetry measurement	Loop resistance measurement	DC current measurement	Unbalance	Near-end crosstalk	Termination detection	Fast cable check	Remote control of loop assistant
0	-	Reset	-	Reset		-	Reset				-		
1	Auto test prof.	-											
2	-												
3	-				Polarity	-							
4	-				Meas. range	-							
5	-				Meas. voltage	-							
6	Wire types	-	Wire types		-	Wire types	-						
7	QR code	-											
8	-		Susceptibility				-						
9	-	Display mode	-	Display mode		-	Display mode		-				
⎍	-												
#	-	Input resistance	-										
✆	Information bell												
✳ then 0	-												
✳ then 1	Copper Box info												
✳ then 2	-												
✳ then 3	-												
✳ then 6	-												
✳ then 7	Store	-											
✳ then #	Remote kit command	-											
	Remote kit												

Note

The hotkeys can vary depending on the selected sockets.

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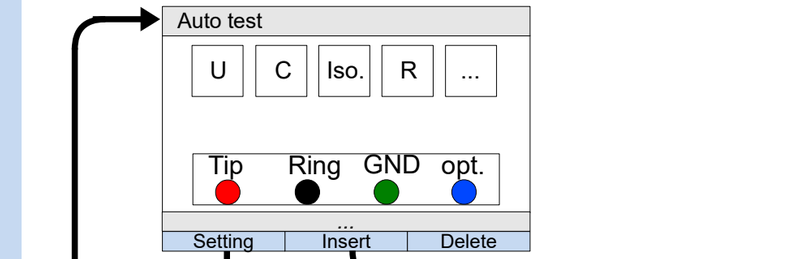
Copper Box Test operation

Copper Box

Menu
- Single tests
  - Copper Box
    - **Auto**
    - **U**
    - **CSym**
    - **C**
    - **Iso.**
    - **RSym**
    - **R**
    - **I=**
    - **LCL**
    - **NEXT**
    - **Sig.**
    - **Fast cable check**
    - **Rem.**

→ Copper Box active

→ Select command → Send remote kit command and wait for response



→ Insert a new test and select the jack assignment

Lists

Commands
- Short circuit a/T-b/R
- Exchange connect
- Short circ. A/T-b/R-GND
- Open circuit
- Tone mode
- Port 1 loop 3 sec.
- Port 1+3 connect
- P1+2 & 3+4 connect
- Port 1+4 connect
- Port 1+4 loop
- Port 4 loop 3 sec.
- Port 2+4 connect
- Port 3+4 connect

Copper Box
- *1 **Auto test profiles** → **Auto test profile**
  - **Autotest**
    - **Auto test sequence**
      - **Notice**
      - **Profile name**: ***Autotest***
- *2 **Polarity**: Standard / ***Invers***
- *2 **Measurement range**: ***Autom. (to 1 GΩ)*** / 25 MΩ - 1 GΩ / 2 MΩ - 500 MΩ / 200 kΩ - 50 MΩ / 100 Ω - 5 MΩ
- *2 **Measurement voltage**: ***High voltage (105 V)*** / Low voltage (8 V)
- *3 **Wire types** → see page 44
- *4 **Susceptibility**: ***Robust for ext. voltage*** / Insecure (fast)
- *5 **Display mode**: Normal display mode / ***Min/Max display mode***
- *8 **Input resistance** → see above
- **Remote kit command** → see command
- **Remote kit** → **Remote kit**: ***TX91x + 900/905 Remote*** / TX91x (orange) / 900/905 Remote (blue)
- *5 **Information bell**: off / ***on***

*8 **Input resistance**: High-resistance / ***Low-resist. (200 kΩ Last)***

- *2 **Polarity**
- *2 **Measurement range**
- *2 **Measurement voltage**
- *4 **Susceptibility**
- *6 **Start function**: ***Automatic start*** / Pause: manual loop
- *7 **Command**: Short circuit a/T-b/R / ***Exchange connect*** / Short circ. a/T-b/R-GND / Open circuit / Tone mode / ...
- **Waiting time**: ***100 ms***

Copper Box Test configuration

Copper Box

Menu
- Single tests
  - Copper Box
    - **Auto**
    - **U**
    - **CSym**
    - **C**
    - **Iso.**
    - **RSym**
    - **R**
    - **I=**
    - **LCL**
    - **NEXT**
    - **Sig.**
    - **Fast cable check**
    - **Rem.**

Hinweis

- *1 = Auto test
- *2 = Iso.
- *3 = Autotest, CSym, C, RSym, R
- *4 = CSym, C, Iso., RSym, R,
- *5 = U, C, Iso., R, I=, LCL, NEXT
- *6 = RSym, R
- *7 = Rem.
- *8 = U

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Line scope Test operation

Copper tests

Menu
→ Single tests
→ Line scope
→ Line scope active

TDR Test operation

Copper tests

Menu
→ Single tests
→ TDR
→ TDR active

TDR Test configuration

Menu
→ Settings
→ Copper/Cable tests
→ Copper tests
→ Wire types

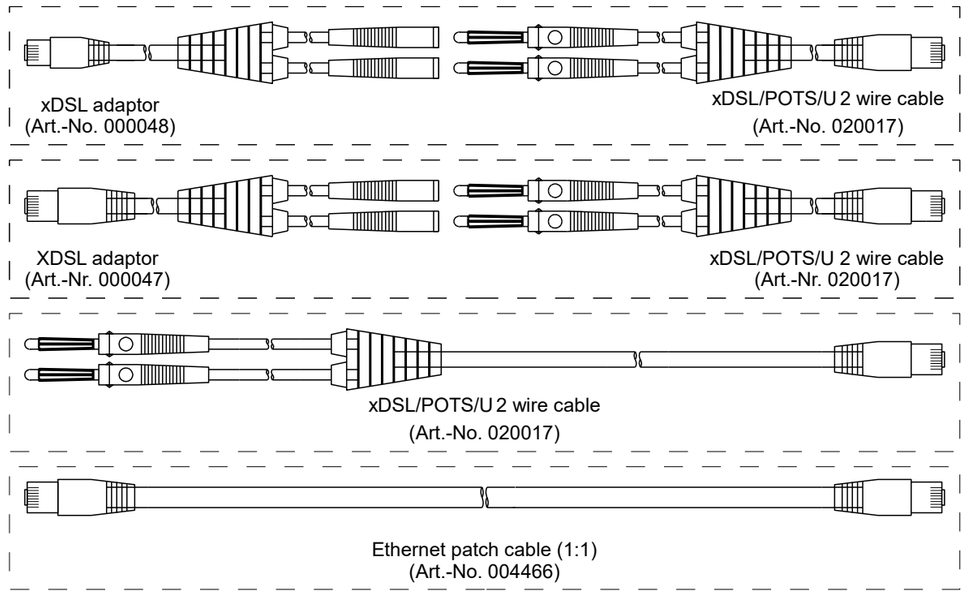
- Selection wire type
- Edit wire type
  - Speed of propagation: *98.9* → V/2 in m/µs
  - Line resistance: *80 Ohm/km*
  - Capacitance: *39 nF/km*
  - Name: *PE 0.5 AWG24*
  - V/2 in m/µs → VoP in %: *66.0*

Test leads and pin assignments
ADSL, VDSL, G.fast

Cross reference:

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ADSL / VDSL / G.fast

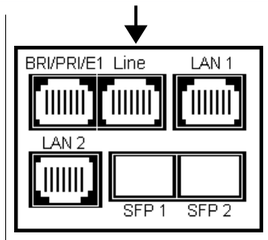


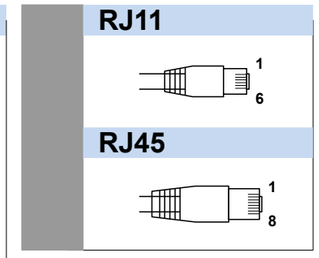
RJ11	Ban.	RJ45
3	rd	4
4	blk	5

RJ45	Ban.	RJ45
4	rt	4
5	sw	5

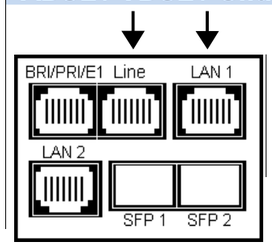
Ban.	RJ45
rd	4
blk	5

RJ45	RJ45
1-8	1-8

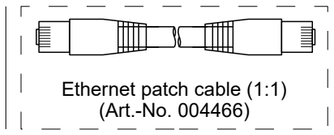




ADSL / VDSL / G.fast – Bridge / Router



RJ45	RJ45
1-8	1-8

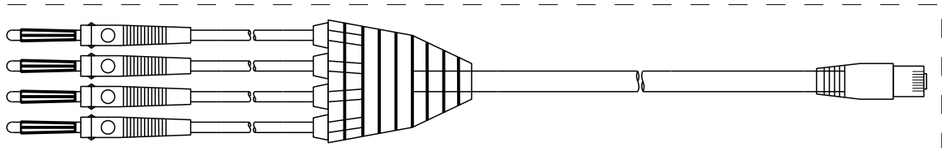


Test leads and pin assignments
SHDSL, Ethernet

Cross reference:

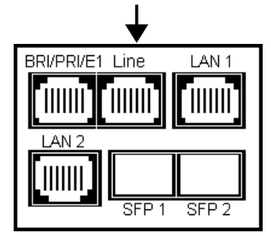
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SHDSL 2 / 4 wire

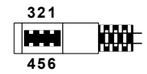


SHDSL 4 wire cable
(Art.-No. 000076)

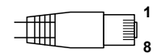
Ban.	RJ45
rd (L2)	3
rd (L1)	4
blk (L1)	5
blk (L2)	6



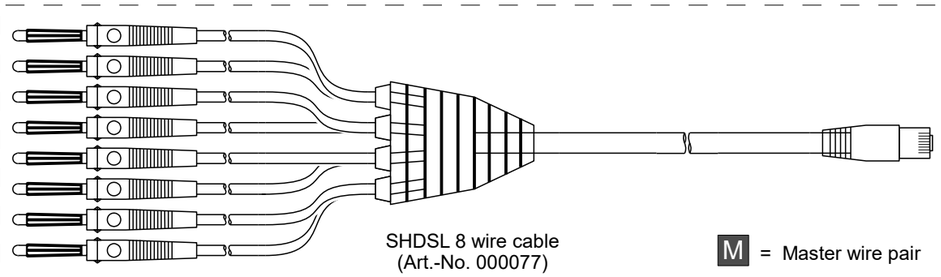
TAE



RJ45



SHDSL 2 / 4 / 6 / 8 wire

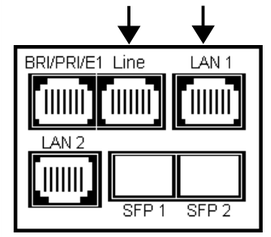


SHDSL 8 wire cable
(Art.-No. 000077)

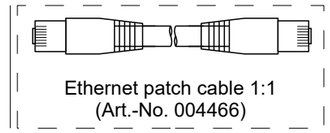
M = Master wire pair

	Ban.	Line	RJ45
M	rd	Pin 4	4/5
M	blk	Pin 5	
	rd	Pin 3	3/6
	blk	Pin 6	
	rd	Pin 1	1/2
	blk	Pin 2	
	rd	Pin 7	7/8
	blk	Pin 8	

SHDSL 2 / 4 / 6 / 8 wire – Bridge / Router

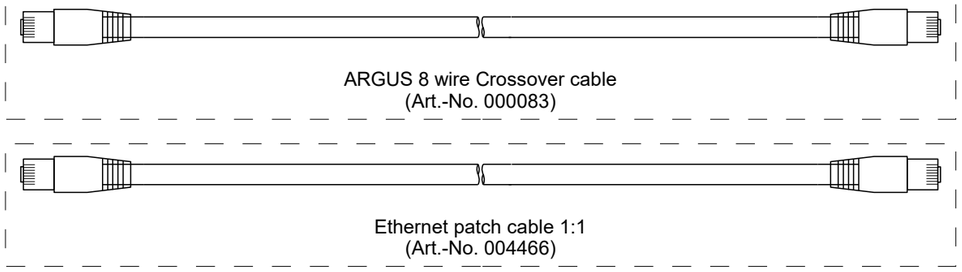


RJ45	RJ45
1-8	1-8



Ethernet patch cable 1:1
(Art.-No. 004466)

SHDSL 8 wire



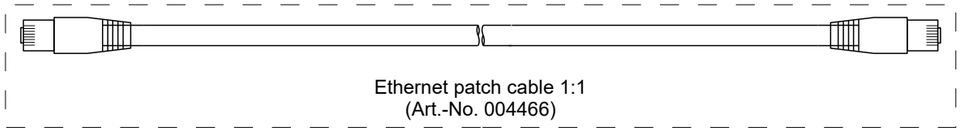
ARGUS 8 wire Crossover cable
(Art.-No. 000083)

Ethernet patch cable 1:1
(Art.-No. 004466)

Line	RJ45	RJ45
1	1/2	4/5
2	4/5	1/2
3	3/6	3/6
4	7/8	7/8

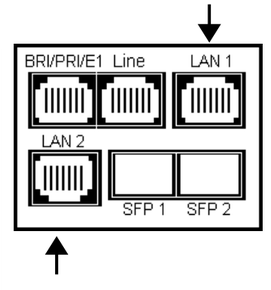
RJ45	RJ45
1-8	1-8

Ethernet

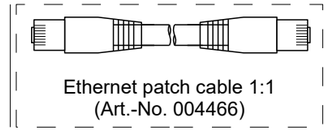


Ethernet patch cable 1:1
(Art.-No. 004466)

RJ45	RJ45
1-8	1-8



RJ45	RJ45
1-8	1-8



Ethernet patch cable 1:1
(Art.-No. 004466)

Notice

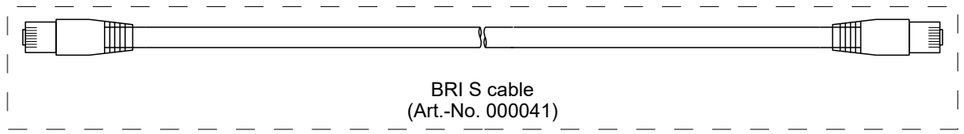
For the use of the SFPs, please contact your dealer or the intec support.

Test leads and pin assignments
BRI S, BRI U, PRI, POTS

Cross reference:

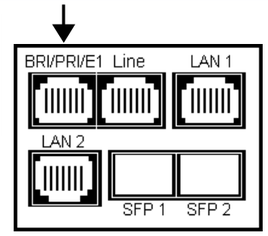
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BRI S

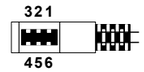


BRI S cable
(Art.-No. 000041)

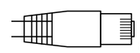
RJ45	RJ45
3/6	3/6
4/5	4/5



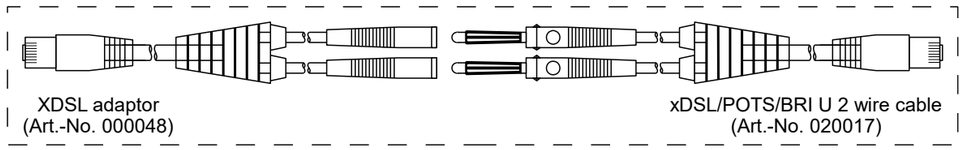
TAE



RJ45

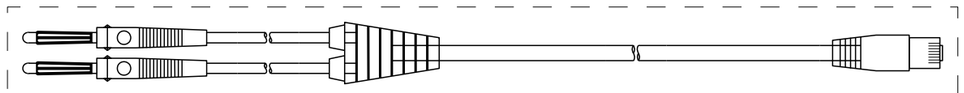


BRI U / POTS



XDSL adaptor
(Art.-No. 000048)

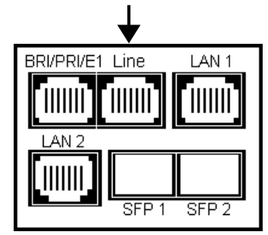
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020017)



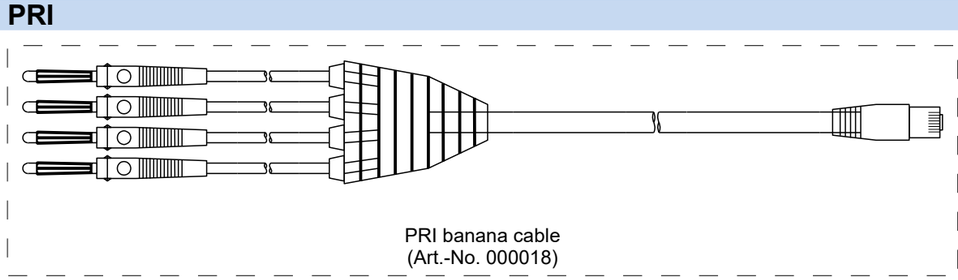
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020017)

RJ11	Ban.	RJ45
3	rd	4
4	blk	5

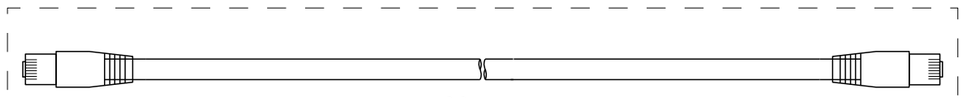
Ban.	RJ45
rd	4
blk	5



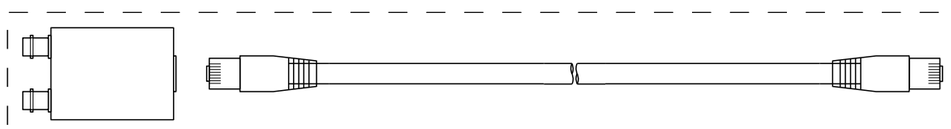
PRI



PRI banana cable
(Art.-No. 000018)

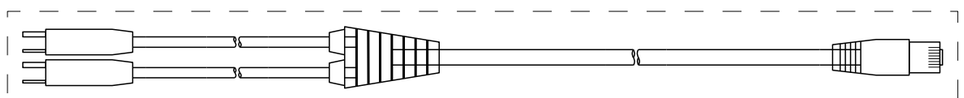


PRI cable
(Art.-No. 000025)



PRI coax adaptor
(Art.-No. 000014)

PRI cable
(Art.-No. 000025)



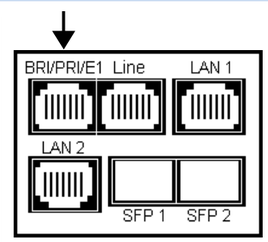
PRI ISEP cable
(Art.-No. 000098)

Ban.	RJ45
rd 1	8
rd 2	1
blk 1	7
blk 2	2

RJ45	RJ45
1/2	1/8
4/5	2/7

BNC	RJ45	RJ45
TX Out	1/2	1/8
RX In	4/5	2/7

ISEP	RJ45
1/2	1/8
4/5	2/7

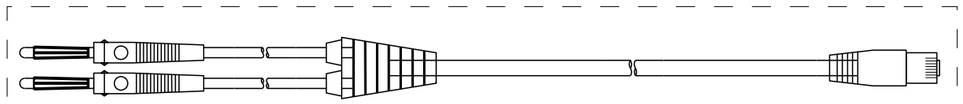


Test leads and pin assignments
Copper tests

Cross reference:

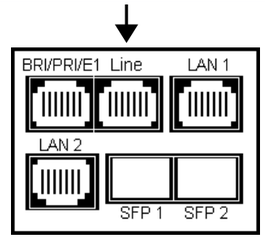
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Copper tests: R measurement / RC measurement / Line scope / TDR



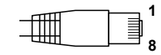
xDSL/POTS/BRI U 2 wire cable
(Art.-No. 020017)

Ban.	RJ45
rd	4
blk	5



The copper tests are performed using pin 4/5 of the line interface. Alternatively, the test can be carried out with every other test leads that is using pin 4/5.

RJ45

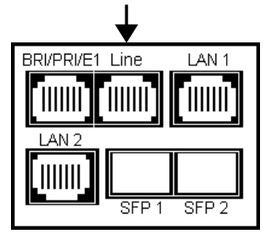


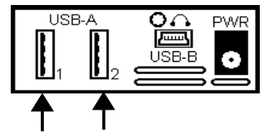
Copper tests: Line scope



Active Probe II
(Art.-No. 015091)

Ban.	RJ45
blk	4
blk	5





The Active Probe II needs to be powered by the USB-A interface. The power supply can be enabled in the settings or according tests.

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