

FTTH Anschluss ohne Endgerät von SWU TeleNet (passiver Netzzugang)

Zugangsdaten und technische Anforderungen:

Technische Anforderungen an den Router z.B. Fritzbox:

- 10/100/1000 Mbit/s Netzwerkschnittstelle zum Glasfasermodem
- VLAN tag fähig 802.1 Q
- Unterstützung von IPv4/IPv6

Folgende Konfiguration muss für den Internetzugang am Router/Endgerät vorgenommen werden:

- Anschluss an externes Modem über den WAN / LAN1 Anschluss des Routers
Internet selbst aufbauen
- **Zugangsdaten für Internet:** IP-Adresse über DHCP und VLAN ID 100;
- **Zugangsdaten für Telefon:** IP-Adresse über DHCP und VLAN ID 200; Zusätzlich müssen die Zugangsdaten für die Rufnummern eingetragen werden. Diese Zugangsdaten werden zugesandt.

SWU TeleNet kann nur Service und Support für die von SWU TeleNet bezogenen Endgeräte übernehmen. Bei Fragen und Problemen zur Einrichtung, wenden Sie sich bitte direkt an den Hersteller Ihres Routers.

Technische Anforderungen an das Glasfasermodem/SFU:

- Dynamic Bandwidth Allocation (DBA) for sharing amongst multiple users while maintaining QoS
- Forward Error Correction (FEC) for longer reach upstream and downstream
- Advanced Encryption System (AES) for downstream and upstream data security
- ONT Management Control Interface (OMCI) for ONT management and provisioning

The common features and functions for ONTs and MDUs include the following:

- GEM mode support for efficient IP/Ethernet service traffic transport
- GPON interface capable of 1.244 Gb/s upstream and 2.488 Gb/S downstream line rates
- integrated triplexers or bidirectional transceivers for single fiber with 1490 nm wavelength downstream, 1310 nm wavelength upstream, and 1550 nm downstream for RF video overlay
- class B+ 28 dB link loss budget with up to 20km (12.43 mi) reach

ONT ITU-T standards

- G.984.1(GPON Service requirements)
- G.984.2 (GPON PDM layer)
- G.984.2 (GPON PDM layer) amendment 1
- G.984.3 (GPON TC Layer)
- G.984.3 (GPON TC Layer) amendment 1 and 2
- G.984.4 (GPON OMCI)
- G.984.4 (GPON OMCI) amendments 1 and 2

The IGMP snooping function supports:

- the ability to enable and disable IGMP per Ethernet port
- the ability to age out multicast MAC addresses in the IGMP table
- G.984.3 compliant multicast using a single GEM port-ID for all video traffic (as mandated by G.984.3)
- up to of 64 video multicast streams per ONT

Anti-spoofing mechanism

The system supports two features to protect against spoofing:

- gratuitous ARP discard
- source address anti-spoofing

Ethernet Interface

The Ethernet interfaces on the ONT support the following primary features:

- Ethernet port compliance with IEEE 802.3

- IEEE 802.1Q, 802.1x port-based authentication, and 802.1p (QoS classification per Ethernet port)
- layer 3 DSCP to 802.1p mapping to allow layer 3 CoS over the layer 2 network
- full or half duplex operations
- auto-negotiation or manual setting by an operator
- layer 2 forwarding

RF video interface specifications for video overlay

- The system can provide RF video service through the video overlay function. The function operates downstream in the 1550 nm optical band
- 18 dbmV Receiver with F-type Connector
- Specifications are shown in the table below

Table 4-8 RF video interface specifications for ONTs with 18 dBmV receivers

RF video features	Channel mix 80 analog/33 digital ⁽¹⁾	Channel mix 40 analog/63 digital	Channel mix 0 analog/135 digital
RF output level	+18 dBmV @ 450 MHz using a per analog channel measurement	+18 dBmV @ 450 MHz using a per analog channel measurement	+12 dBmV @ 450 MHz using a per digital channel measurement
RF slope correction (tilt)	2 dB from 50 to 870 MHz	2 dB from 50 to 870 MHz	2 dB from 88 to 870 MHz
Optical power range	+1 to -6 dB	+2 to -7 dB	+1 to -9 dB
CNR	45 dB	46 dB	—
CSO/CTB	53 dB	55 dB	—
MER	32 dB	32 dB	32 dB
QAM signal-to-noise ratio	40 dB	40 dB	40 dB
Measurement assumptions			
Channel load	80 analog and 33 digital	40 analog and 63 digital	0 analog and 135 digital
Digital backoff QAM-256	6 dB	6 dB	6 dB
Digital backoff QAM-64	10 dB	10 dB	10 dB
PON input CNR	52 dB	52 dB	52 dB

Ihre SWU TeleNet GmbH