Einmalige Aktivierung ohne Endgerät von SWU TeleNet
Zugangsdaten und technische Anforderungen für den passiven Netzzugang

Für FTTH-Anschlüsse:
- Erforderlich ist eine Mitteilung an SWU TeleNet über Hersteller, Gerätetyp und Seriennummer des zu aktivierenden Endgerätes
- **Zugangsdaten für Internet**: IP-Adresse über DHCP und VLAN ID 100
- **Zugangsdaten für Telefon**: IP-Adresse über DHCP und VLAN ID 200

• 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 20 km (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 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 ONT’s with 18 dbmV receivers

<table>
<thead>
<tr>
<th>RF video features</th>
<th>Channel mix 80 analog/33 digital</th>
<th>Channel mix 40 analog/63 digital</th>
<th>Channel mix 9 analog/125 digital</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF output level</td>
<td>+18 dbmV @ 10 MHz using a per analog channel measurement</td>
<td>+18 dbmV @ 40 MHz using a per analog channel measurement</td>
<td>+12 dbmV @ 400 kHz using a per digital channel measurement</td>
</tr>
<tr>
<td>RF slope correction (kHz)</td>
<td>2 dB from 50 to 870 MHz</td>
<td>2 dB from 50 to 870 MHz</td>
<td>2 dB from 88 to 870 MHz</td>
</tr>
<tr>
<td>Optical power range</td>
<td>-1 to -6 dB</td>
<td>+2 to 7 dB</td>
<td>+1 to -9 dB</td>
</tr>
<tr>
<td>CNR</td>
<td>40 dB</td>
<td>48 dB</td>
<td>-</td>
</tr>
<tr>
<td>CSO/CTB</td>
<td>53 dB</td>
<td>57 dB</td>
<td>-</td>
</tr>
<tr>
<td>MER</td>
<td>32 dB</td>
<td>32 dB</td>
<td>32 dB</td>
</tr>
<tr>
<td>QAM signal-to-noise ratio</td>
<td>40 dB</td>
<td>-40 dB</td>
<td>-40 dB</td>
</tr>
<tr>
<td>Measurement assumptions</td>
<td>Channel load 80 analog and 33 digital</td>
<td>40 analog and 63 digital</td>
<td>0 analog and 125 digital</td>
</tr>
<tr>
<td>Digital backoff QAM-236</td>
<td>6 dB</td>
<td>6 dB</td>
<td>6 dB</td>
</tr>
<tr>
<td>Digital backoff QAM-64</td>
<td>10 dB</td>
<td>10 dB</td>
<td>10 dB</td>
</tr>
<tr>
<td>PON input CNR</td>
<td>52 dB</td>
<td>52 dB</td>
<td>52 dB</td>
</tr>
</tbody>
</table>