service description

blizznet lambda

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Contents

1. Basic service

Wien Energie offers the blizznetλ product based on its fibre optic network. With blizznetλ, one or more transmission wavelengths on a fibre optic connection are agreed with the customer as required. This customer-specific transmission wavelength λ represents a passive optical channel with high transmission capacity in Wien Energie's fibre optic network.

A special multiplex process enables up to six wavelengths and therefore six customer services to be transmitted simultaneously, but independently of each other, via one fibre optic connection. At the remote end, the individual transmission wavelengths are separated again using a special demultiplexing process.

The product is offered in two variants:

1.   blizznetλ Basic
2.   blizznetλ Advanced

All information refers to the fact that the realisation takes place exclusively with network infrastructure from Wien Energie. This service description applies exclusively to contracts with entrepreneurs within the meaning of § 1 of the KSchG [Austrian Consumer Protection Act].

1.1. blizznetλ Basic

blizznetλ Basic is used to connect two customer sites. Network components with corresponding optical transmission equipment are required at each customer site. The customer must ensure that the transmission signal is provided in the agreed wavelength. This enables blizznetλ to provide the customer with a maximum transmission speed of 10 GBit/s. The bidirectional connection between two sites is implemented using a fibre pair. With blizznetλ Basic, no active equipment from WIEN ENERGIE is used on the entire connection. The customer is independently responsible for providing suitable equipment for its use.
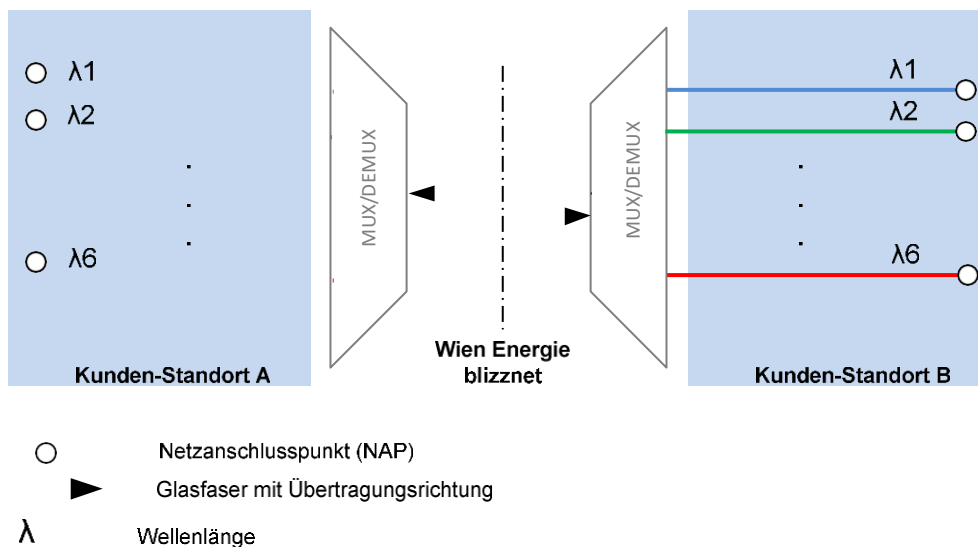

Figure 1: blizznetλ Basic

1.2. blizznetλ Advanced

blizznetλ Advanced is a customised extension of blizznetλ Basic, in which Wien Energie enables the customer to connect network components by providing additional equipment.

At the customer's request, the blizznetλ wavelengths (see 9.1) can be converted to the end points of the connection. The following conversions are possible:

- **Electrical-optical conversion**
With this conversion, the customer's electrical signal (see 9.2) is converted to the dedicated wavelength (see Figure 2).

- **Optical-optical conversion**
With this conversion, the customer's optical single or multi-mode signal (see 9.2) is converted to the dedicated wavelength.
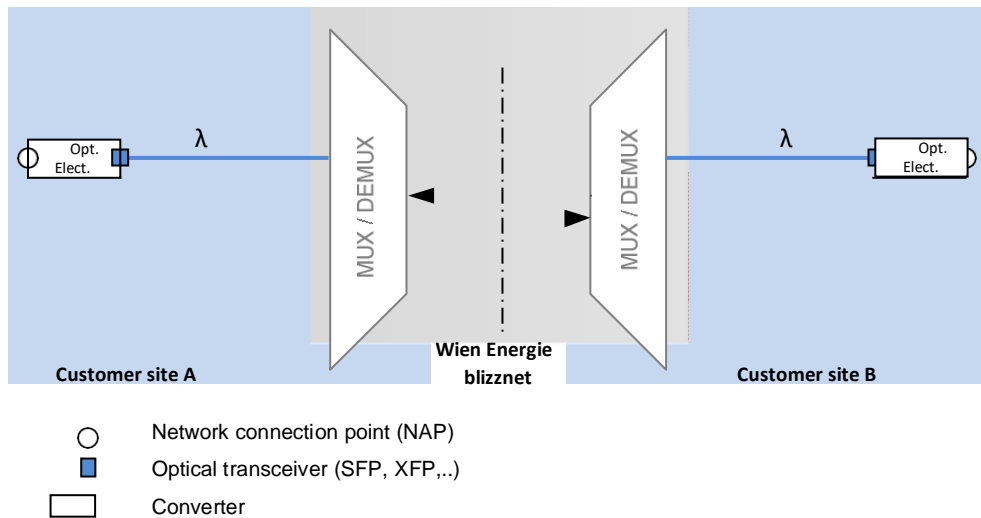
Figure 2: blizznetλ Advanced with electrical-optical conversion

Wien Energie is responsible for coordinating all the technical requirements so that the customer's network components can communicate perfectly via the optical connection provided. This includes planning the transceivers for the customer's network components from various suitable manufacturers of the customer's components, signal type, speed, as well as planning the attenuation budget and operation.

A redundant connection of the customer sites is optionally possible.

2. Prerequisites

2.1.   Physical availability

blizznetλ is available wherever Wien Energie can provide a fibre optic connection.

2.2.   Structural/spatial requirements

The installation site for the equipment provided by Wien Energie at the customer's premises must be clean, dry, safe and adequately ventilated. The customer must ensure all structural and spatial conditions for the operation of blizznet Lambda. In particular, the customer must ensure at its own expense that the following framework conditions are guaranteed:

blizznetλ Basic:

- Space requirement: usually 1 HU (height unit) in a 19″ cabinet

- Relative humidity: 5% to 95% (non-condensing)

blizznetλ Advanced:

- Power supply: 230 V AC/300 W
- Space requirement: usually 2 HU (height unit) in a 19″ rack incl. power supply
- Ambient temperature: 0°C to +35°C
- Relative humidity 5% to 95% (non-condensing)

Deviating requirements will be announced on request.

2.3.   Applicable legal provisions

Details can be found in the General Terms and Conditions of Wien Energie GmbH for blizznet products as amended ('blizznet GTCs', download at https://www.wienenergie.at/agb/).

3. Access

Access to the Wien Energie equipment/network connection point (NAP) at the customer's premises is regulated in the GTCs.

4. Network connection point (NAP)

Wien Energie is responsible for all network equipment up to the network connection point. This does not include components and connections provided by the customer (e.g. in-house cabling).
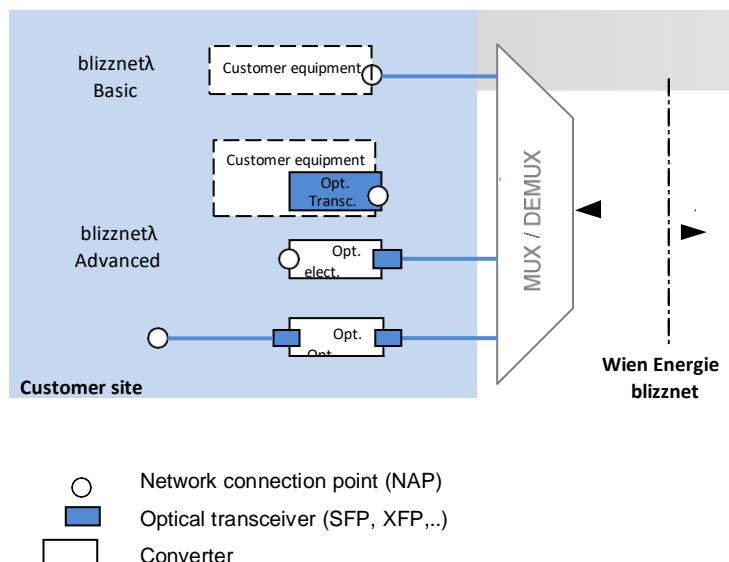
The possible design variants are described below.

Figure 3: Overview of the possible network connection points

4.1. ***blizznetλ Basic***

The customer-side connection socket forms the network connection point. This is designed as an FC/PC or E2000/APC connection socket in consultation with the customer.

4.2. ***blizznetλ Advanced***

Depending on the desired version of blizznetλ Advanced, the following network connection points are possible (see Figure 3):

- **Version with electrical-optical conversion**

  The electrical RJ45 port of the electrical-optical converter forms the customer-side network connection point.

- **Version with optical-optical conversion**
  Depending on the converter site, the customer-side network connection point can be either the optical transceiver provided by Wien Energie (e.g. SFP, XFP) or the customer connection socket (see 5.1).

- **Version with optical transceiver**
  The customer-side network connection point is the optical transceiver (e.g. SFP, XFP) provided by Wien Energie.

5. Provision periods

The realisation times depend on the desired sites and are therefore specified in the respective offer. Details can be found in the GTCs

6. Service handover

Upon completion, Wien Energie hands over the service handover notification to the customer. This includes at least the following parameters:

- Confirmation of fulfilment of the ordered parameters
- Realisation date
- Start of billing
- Connection and service number(s)

7. Monitoring

The Network Operation Centre (NOC) monitors the Wien Energie network 24 hours a day, 7 days a week, 365/6 days a year.

8. Service management & SLA

Information on fault rectification, maintenance, guaranteed availability, contact persons and escalation levels can be found in the blizznetSLA (Service Level Agreement) (download at https://www.wienenergie.at/agb/).
It should be noted that faults of a blizznetλ connection can only be detected indirectly by Wien Energie (e.g. due to the failure of other active connections on the same fibre link).
Unless expressly offered otherwise, the STANDARD SLA class is deemed to have been agreed.

9. Technical service data

9.1. blizznetλ Basic

The technical characteristics of blizznetλ correspond to the specification of unexposed or unswitched fibre optic lines (optical fibres) with the following differences:

- The transmissible spectrum of a connection is restricted to a dedicated wavelength.

- The total attenuation increases by 2 x 1.5 dB per connection due to the passive optical filters.

Wavelengths

The wavelengths used lie within the standardised CWDM network in accordance with ITU-T G.694.2.

Depending on availability, customers can use one of the wavelengths listed in Table 1. Wien Energie will fulfil customer requests for a specific wavelength listed below, depending on availability on specific routes.

Other wavelengths from the CWDM network can be offered by Wien Energie at the customer's request.

Nominal wavelength (λ)	Drift
1610 nm	+7.5 nm/-5.5 nm
1590 nm	+7.5 nm/-5.5 nm
1570 nm	+7.5 nm/-5.5 nm
1510 nm	+7.5 nm/-5.5 nm
1490 nm	+7.5 nm/-5.5 nm
1470 nm	+7.5 nm/-5.5 nm

Table 1: Dedicated wavelengths

9.2. *blizznetλ Advanced*

Electrical-optical conversion

The following electrical interfaces are available:

- Ethernet 100Base-T RJ45 according to IEEE802.3u
- Ethernet 1000Base-T RJ45 according toIEEE802.3ab

Other versions of the electrical interface are available on request and may be subject to a surcharge.

Optical-optical conversion

With this conversion, a wavelength available from Wien Energie and used for the service is converted to a wavelength requested by the customer in order to be able to use the service.

The following are available:

Convertible wavelengths	Fibre type
850 nm	Multi-mode
1310 nm	Single-mode
1550 nm	Single-mode

Table 2: Convertible wavelengths

The conversion takes place independently of the protocol at a transmission speed of up to 1.25 Gbit/s. Conversion to other wavelengths or speeds is available on request. The options and conditions are listed separately in the written offer.

Version with optical transceiver

The technical data will be announced individually depending on the customer's equipment and the desired bandwidth.