

CARRIER ETHERNET

MEF compliant, carrier-grade and next generation Ethernet network services.



Are you looking for a Swiss domestic Ethernet carrier with synchronous services that has coverage beyond traditional IP-MPLS networks and, all this with attractive conditions? Carrier Ethernet from UPC Wholesale includes MEF compliance with carrier-grade synchronous Ethernet services across Switzerland.

Ethernet without Limitations

Carrier Ethernet services have now become a mainstream solution, the traditional Ethernet Services were normally created using IP-MPLS networks, but UPC Wholesale has gone one step further and is now including MPLS-TP that better suits Carriers and Service Providers as this supports the ability to route over well known paths. This creates resilience options that were formally reserved for SDH networks.

The other headache was for the migration of legacy services, within the flexibility of this product and the availability of variable bandwidth the problem then disappears. There are no uncontrolled bandwidth limitations and the customer has flexibility for all of their services.

UPC Wholesale is strictly following MEF standards which creates a flexible, scalable and smooth interconnection with features such as port, VLAN based services and class of service (CoS), where a great Ethernet customer experience and a true end to end service transparency is assured.

Service providers and mobile operators can also benefit from the synchronous clocking provided across the next generation UPC Wholesale carrier Ethernet network.

Enhanced Service Management

The first-class OAM-performance management suite is designed so that carriers and service providers can truly manage networks from one service access point to another right across the network.

The OAM solution enables the efficient operation, administration and maintenance of customer networks according to individual processes. In the case of a problem the system's capabilities, which include alarming and rapid activation of automatic re-routing, will constantly detect faulty network elements and massively speed up the resolution of a case as well as meeting customer expectations for resilience. This system has the additional feature of measuring specific SLA parameters such as jitter and latency and keeping these indicators constantly monitored.

Next Generation Ethernet

Using multiple classes of service within this NGN Carrier Ethernet, increases Service provider and Mobile operators ability to lower cost structures and also increases interconnection possibilities for easy, efficient and manageable redundant Ethernet foot print.

Our service is based on the next generation Carrier Ethernet 2.0 standard.


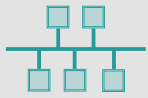
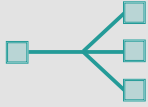

YOUR BENEFITS AT A GLANCE

- **MEF compliance:** MEF-industry standards delivered by UPC Wholesale enables you to deliver services in new spheres and to migrate legacy services without risks
- **True Quality of Service:** Well-defined, leading performance and quality parameters gives you the ability to operate at a significant higher service level than on traditional Ethernet networks
- **Service Management:** The first-class OAM-performance-management provides you deepest service detail views to efficiently manage networks end to end
- **Simplicity to drive costs down:** The Carrier Ethernet network-implementation from UPC Wholesale reduces complexity and provides you with more competitive pricing in combination with leading service availability and reliability
- **Exclusive Backbone for B2B:** Highly secure network architecture for wholesale customers

Choose UPC Wholesale options that fit your needs with low Latency and jitter-free performance

UPC Wholesale has the broadest, MEF compliant, transparent and synchronous Carrier Ethernet portfolio in Switzerland for your next generation Ethernet applications. The Carrier Ethernet service allows you to connect your sites as fully managed service from UPC Wholesale – securely and efficiently.

Carrier Ethernet 2.0 Services

E-Line (point to point EVC) UNI-UNI <i>Connect two sites end-to-end</i>	
E-LAN (multipoint to multipoint EVC) UNI-UNI <i>Sharing of regular data amongst sites</i>	
E-Tree (routed multipoint EVC) UNI-UNI <i>Connect multiple sites with strict communication-policies</i>	
E-Access (point to point OVC) UNI-ENNI <i>Connect a customer site to a carrier</i>	

E-Line

The site-to-site connectivity enables communication between two sites.

E-LAN

The multipoint-to-multipoint service is designed that multiple sites can communicate with each other.

E-Tree

This service lets you strictly rule, how sites can communicate. Central service roots can communicate with all leaves but leaves only with the root. This guarantees that leave-site traffic is kept secure and separate.

E-Access

The E-Access is a wholesale variant to connect a UNI with an ENNI (OVC).

TDM Service types

The TDM-based service type T-Line can be implemented in unstructured or structured emulation mode and complies with MEF-3/8

Synchronous Ethernet

EEC slave clock is provided according to ITU-T G.8262

MEF standard compliance

The Carrier Ethernet 2.0 service complies with MEF-6.1, MEF-3/8, MEF-10.2, MEF-22.1 and MEF-26.1

Performance Monitoring

UPC Wholesale supports IEEE 802.3ah Ethernet OAM and IEEE 802.1ag Service Layer OAM and ITU-T Y-1731 recommendations.

Service Value Additions

Configure and choose your Carrier Ethernet service from UPC Wholesale according to your and your customer's commercial and technical requirements.

- **Bandwidth options:** Easy and flexible bandwidth adaptations: Bandwidth can be chosen from 2 Mbit/s up to 1 Gbit/s with hierarchical bandwidth and information rates according to the MEF-standard (CIR/EIR). Higher bandwidths are available on request.
- **Resilience options:** Redundant and pre-configured connectivity paths between two or more sites can be designed according to your connectivity requirements. Dependent on the availability needs of your service, equipment resilience can be ordered as an option.
- **Quality of Service:** Choose the bandwidth profile-classifications as Class of Service. Fully transparent according to MEF 2.0
- **SLA options:** You can choose various leading SLAs that cover detailed commercial and technical parameters.
- **Interface types:** Carrier Ethernet with CPE options includes the interfaces: 10/100/1000Base-T, 100Base-TX, 1000Base-SX, 1000Base-LX and 10GBase-SR/LR
The option without CPE includes: 1000Base-BX, 1000Base-LX, 1000Base-ZX and 10GBase-SR/LR

Details in this document do not constitute a binding offer. Subject to modification without notice. Date of publication: April 2018