DKT

INCREASE LIVING STANDARDS WITH IMPROVED BROADBAND

DKTCOMEGA.COM

FTTH NETWORKS

SIMPLICITY IN INSTALLATION AND SERVICE ACTIVATION

We believe that the future competitive advantages lie within simplicity in installation and end-user activation.

DKT creates Gateways with a focus on neutral design, product durability, and service flexibility for the operator.

The entire DKT product range are designed as "layer 2" devices for a 2-box structure with a separate 3rd party router. With this the operator gains more flexibility and scalability in their network and can reuse the same router across several network topologies.

Our solution offers Operating Expense (OPEX) reductions through:

–   Less technician work

–   Customer Do-It-Yourself (DIY)

–   Neutral design and technology-agnostic fiber termination

–   Layer-2 functionality suitable for 2-box solutions

PRODUCT OVERVIEW

FIRST METER® INITIATIVE
The FIRST METER® initiative makes your network more user-centric and intelligent, while deskilling its installation.
FIRST METER® User Centric FTTH

FTU
Our fiber termination units increase lifetime and flexibility with a unique click-on interface. It supports 1 Gbps, 10 Gbps, and Active Ethernet/GPON/XGSPON.

GATEWAY
Our interoperable and high quality 1 Gbps and 10 Gbps (XGS-PON) Gateways provide superior service, resilience, and stability.
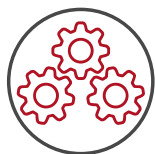
RF/TV PASSIVE
A comprehensive line of optical passives for data, telecom and CATV applications. DKT offers huge flexibility in style, outline, and density.

RF/TV ACTIVE
DKT RF/TV active products support optical transmission of CATV signals, embedded with GPON/XGSPON.

OUR PHILOSOPHY:
INTEROPERABILITY!

Interoperable 2-box solution with out-of-the-box functionality.

We have made it our business to develop solutions that make installation as easy as possible. At the same time, we have set our focus specifically on interoperability, resilience, and reliability.

With interoperability, we particularly refer to the advantage of our 2-box solution, consisting of Fiber Termination Units (FTUs) and Gateways, to be compatible with all standard third-party OLTs and independent from third-party routers. We value this no-vendor-lock-in philosophy as an imperative basis for every operator's future network expansion!

FTU　　　　　**1 Gbps Gateway**　　　　　**10 Gbps Gateway**

The interoperability, independency, and range of variants, combined with an advanced performance, have made us a leading provider of cost-optimized and superior Gateways since 2001. Additionally, our 2-box solution is designed to enable the end user to activate the connection, which lowers the operator's costs, increases flexibility and customer satisfaction. To give you the maximum interoperability and flexibility for current and future network operations, we are happy to adapt and customize our product's technical specifications to your requirements.

Benefits of our interoperable two-box solution.

Save in OPEX

–   No license fee
–   No maintenance fee
–   No support fee

Flexibility

–   Interoperable with different OLT providers
–   Independent from third-party routers
–   Ability to adapt and customize technical specifications to network requirements

WHY CALL IT THE LAST MILE?

In the industry, the customer connection is often called the "last mile".

Why FIRST METER®?

At DKT, we strive to make the world a better place by providing reliable broadband to everyone.

The purpose of our FIRST METER® initiative is to enhance the end customer's satisfaction by providing reliable, fast broadband and rapid troubleshooting, while, at the same time, deskilling the network's installation to face the increased shortage of skilled workers and reducing OPEX.

FIRST METER® combines the use of selected FTTH components and concepts, such as Extallation, Centralized PON testing, and the DKT 2-box network termination, consisting of FTUs and Gateways. Across the whole initiative, we put a high value on interoperability, resilience, and reliability. This supports the increase in customer satisfaction dramatically and reduces OPEX for the operator due to the simplified installation and troubleshooting.

The FIRST METER® initiative makes your network more user-centric and intelligent, while deskilling its installation.
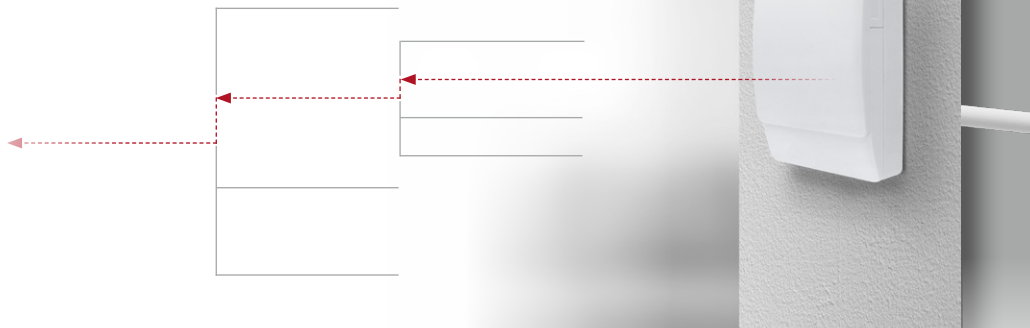
FIRST-METER.COM

VALUE CUSTOMER SATISFACTION

We believe the "last mile" should be called the FIRST METER® because customer satisfaction should be the operator's priority.

FIRST METER® initiative

INTEROPERABILITY
With all standard OLTs (page 2)

CENTRALIZED TESTING
Simplify troubleshooting (page 6)

EXTALLATION
Deskill the customer connection (page 7)

CLICK ON GATEWAYS
Simplify upgrade processes (page 8)

RESILIENCE
Rely on battery back up

Thanks to our new FTTH-Battery, people using a corded telephone are able to make emergency calls from their landline, even when the electricity supply fails!
The FTTH-Battery is compatible with any DKT Gateway.

CENTRALIZED PON TESTING

If your customer notices a fault, you are already in the process of fixing it!

FTTH is the highest technology and future of broadband networks. Nevertheless, network operators report an error rate of up to 30%.

What is centralized PON testing?

"Centralized PON testing" is a method to test the signal from the central office to the Fiber Termination Unit (FTU) through the splitter. This ensures more rapid and accurate problem diagnosis with shorter repair times, using fewer face-to-face customer visits. **Centralized PON testing runs completely from the central office to the FTU and uses a reflector to terminate the fiber.**

WHY CENTRALIZED PON TESTING?

In case of a fault, it will be fixed 75 % faster.
Provide great service reliability to improve satisfaction!

Whole-life condition monitoring

Rapid fault diagnosis & repair

Simplify build & customer identification

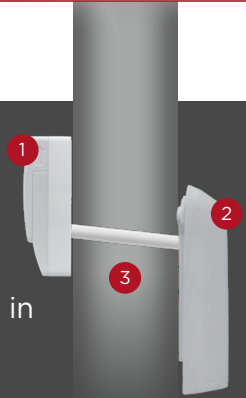**DKTCOMEGA.COM/CENTRALIZED-PON-TESTING**

EXTALLATION

Deskill the customer FTTH connection!

1. **FTU**

2. **WALLBOX**

3. **TUBE**
   The tube is pushed through a pre-drilled hole in the wall to connect the FTU and the Wallbox.

EXTALLATION PROCESS

The DKT FTU is delivered pre-assembled with fibers and a connecting tube. After the installer feeds the fibers through the tube, it is closed with a spearhead and pushed from the customer's premises through a pre-drilled hole to the outside. Outdoors the installer connects the tube and fibers to the wallbox.

Deskilling the installation saves time for both user and installer, reduces the time spent inside the customer's premises, and allows the installation to be carried out with semiskilled workers!

Extallation continues on the next page

EXTALLATION
DESKILLED
FTTH INSTALLATION

Extallation deskills the FTTH installation and faces the lack of skilled workers.

Simplified & deskilled FTTH connection

Ensure customer satisfaction

Faster installation & more reliable

"WE ARE MAKING THE CUSTOMER INSTALLATION TRIVIAL"

PRODUCT OVERVIEW

Parameter	FTU AND SPEARHED	EXTA-2F-APC/UPC-IN75	EXTA-2F-APC-IN75
Fiber Type	Corning ClearCurve ABL Optical Fiber G6573B	
Connectors/Ferrules	1 x SC/APC & 1 x SC/UPC	2 x SC/APC
User disposable fiber length [cm]	139	
Dimensions [mm] (H x W x D)	88.1 x 115.4 x 38.5	
Operational and storage temperature [°C]	-40 – +80	
Color	White	
Spearhead		
Total length [mm] (Ø10 mm section)	115	
Item No.	**79810**	**79811**

Parameter	TUBE	EXTA-TUBE-750/Ø10mm
Lenght [mm]	750
Diameter [mm] (Outside, Inside)	10, 8
Item No.	**79820**

Parameter	EXTA-2F-APC/UPC-OUT	EXTA-2F-APC-OUT
Adapter	SC/UPC + SC/APC	2x SC/APC
Dimensions [mm] (H x W x D)	110 x 191 x 38	
Color	Grey / RAL 7035	
Operational and storage temperature [°C]	-10 to 80	
System environment, Max operating humidity	85 % RH (non-condensing)	
System environment, Storage temperature [°C]	-40 to 70	
System environment, Max storage humidity	95 % RH (non-condensing)	
Feed and outlet options [mm]	In 2 x Ø 5, 6, 8, 10, 14 & OUT 1 x Ø up to 10	
Tamper Lock	Wire feed-through in bottom , both sides	
Item No.	**79830**	**79840**

DKTCOMEGA.COM/EXTALLATION

INTEROPERABLE 10G ENVIRONMENT

10G Gateways with click-on interface and Active Ethernet/XGSPON/EPON.

The DKT 7975x series is built to fit the well-proven DKT FTU. The newly developed active part is based upon a sophisticated wirespeed Layer 2 switching-based "System-on-Chip" (SoC) solution.

1G and 10G high-performance DKT Gateways can be flexibly combined with third-party OLTs.

This solution implies that fiber termination and service activation occur as part of the operator's "demarcation point" at the end customer in an FTTH 10Gbps environment.

PRODUCT OVERVIEW
"7975x and 7976x series"

Parameter	FTTH-10G-1F-3P	FTTH-10G-2F-3P-CATV	FTTH-XGS-1F-3P	FTTH-XGS-1F-3P-CATV	FTTH-10G EPON-1F-3P
10Gbps EPON WAN	–	–	–	–	✓
10 Gbps WAN	✓	✓	–	–	–
XGSPON WAN	–	–	✓	✓	–
1 Gbps LAN	2	2	2	2	2
10 Gbps LAN	1	1	1	1	1
CATV	–	✓	–	✓	✓
Switch engine [2]	✓	✓	✓	✓	✓
WDM filter	–	[1]	–	✓	–
Fiber Connector	SC/UPC	SC/UPC + SC/APC	SC/APC	SC/APC	SC/APC (SC/UPC on request)
SFP WAN	✓	✓	✓	✓	✓
Compatible with DKT clickable FTUs	✓	✓	✓	✓	✓
TR-069	✓	✓	–	–	–
Item No.	79751	79752	79757	79759	79761

[1]   Optional

[2]   Support for VLANs, Q-in-Q, QoS, IGMP, Jumbo Frames, and traffic shaping and manipulation

GREAT FLEXIBILITY IN A SMALL FORM

1G Gateways with click-on interface and Active Ethernet/GPON.

The small form factor, combined with ease of installation due to its click-on interface, makes our Gateways an extremely flexible solution, with optimized handling and efficiency.

The solution is built to allow the customer to perform the activation. The combined solution for FTU and Gateway service is formed in an extremely compact form factor, 88 x 88 x 65 mm, making it viewed by the customer as just another outlet.
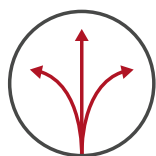
PRODUCT OVERVIEW
"7973x, 7974x and 7975x series"

Parameter	JUMA-1F-WAN-OAM	FTTH-1F-CATV	FTTH-1F-4P-S	FTTH-2F-4P-S-C	FTTH-GPON-1F-1	FTTH-GPON-1F-1/C	FTTH-GPON-1F-4P	FTTH-GPON-1F-4P/C
1 Gbps WAN	✓	1)	✓	✓	–	–	–	–
GPON WAN	–	–	–	–	✓	✓	✓	✓
1 Gbps LAN	1	–	4	4	1	1	4	4
CATV	–	✓	–	✓	2)	2)	2)	2)
Switch engine 3)	✓	–	✓	✓	✓	✓	✓	✓
SFP WAN	Fixed	–	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
Fiber Connector	SC/UPC	SC/APC	SC/UPC	SC/UPC + SC/APC	SC/APC	SC/APC	SC/APC	SC/APC
WDM filter	–	–	2)	2)	–	–	–	–
WBF blocker	–	–	–	–	–	✓	–	✓
GPON Optics	–	–	–	–	CLASS B+	CLASS C+	CLASS B+	CLASS C+
Compatible with DKT clickable FTUs	✓	✓	✓	✓	✓	✓	✓	✓
TR-069	✓	–	✓	✓	–	–	–	–
Item No.	79734	79740	79741	79742	79753	79754	79755	79756

1)   Data port loop through, adapter SC/APC

2)   Optional

3)   Support for VLANs, Q-in-Q, QoS, IGMP, Jumbo Frames, and traffic shaping and manipulation

THE MOST FLEXIBLE FTU IN THE INDUSTRY

Extremely compact form factor to optimize your services.

The DKT philosophy of separating the basic FTU media converter functionality from the Service Box creates a neutral demarcation point between the in-home network and the operator's network.

DKT's FTUs consist of a neutral base/FTU in which fiber can be mounted, connected, and terminated. The active Gateway is designed as a click-on interface with the possibility for end-user activation.

The FTU is ideal as a 2-box solution in combination with our DKT Gateways and 3rd party routers.

NEUTRAL DESIGN,   **DURABILITY**   **AND SIMPLICITY**

Do-It-Yourself-kit FTTH

The Do-It-Yourself-kit FTTH offers a practical self-install possibility for the end user or an enormous saving of time for the technician.

We provide individual lengths of the pre-assembled fiber cable, removing the splicing within the customer premises.
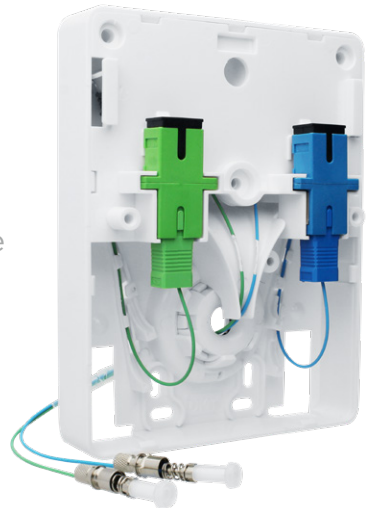
Pre-assembled FTU for Extallation

For our Extallation concept, the DKT FTU is delivered pre-assembled with fibers which deskills the FTTH installation to face the lack of skilled workers. The Extallation concept is part of our FIRST METER® initiative to enhance the end customer's satisfaction.

Please go to page 7 for more information on Extallation or visit:

DKTCOMEGA.COM/EXTALLATION

WHAT IS
OUR "SECRET"?

A technology, "agnostic" design and possible service activation by the end user.

CLAIM:

A separation in Layer 1, 2, and 3 improves your business case and freedom to optimize your services, such as WiFi and router selection.

WHY:

– Interoperability, flexibility, and scalability in roll-out and upgrades

– Better lifetime/depreciation

– Decreased OPEX

– Improved customer satisfaction/churn

– Reduced call center cost and truck roll

The solution will work with 3rd party products, resulting in optimized interoperability and flexibility, better WiFi coverage, and better sourcing opportunities.

HARDENED EDFAS BY
braun teleCom

**Optical amplifiers for outdoor cabinets.
Designed for most demanding environments!**

With an enhanced operating temperature range of -30°C to +65°C and an installation depth of only 24 cm, these optical amplifiers are perfectly suitable for usage within narrow street cabinets.

Features:

- Space saving and compact design

- Extremely high optical output power per port

- Output power is adjustable from -3 to 0 dB

- Intelligent temperature control system

DKT IS MEMBER OF BROADBAND GROUP BTV MULTIMEDIA!

BTV Multimedia is a rapidly growing group of medium-sized companies in the broadband industry. The group bundles the activities of well-known international manufacturers, distributors, and service providers, including, ANEDiS, braun teleCom, DKT, FIONIS, Holm, and POTT. This makes the group one of the few full-service providers on the European market.

"At DKT, we continuously translate ideas and feedback from customers into a new set of innovative solutions, creating a new level of ease of installation and performance. With an ambition to improve both broadband infrastructure and roll-outs in Europe, we have combined our technology with the product and service portfolios of the BTV Multimedia Group. Jointly, we deliver leading network performance and improved end-user satisfaction."

Joe Doering, CEO of DKT A/S and BTV Multimedia Group

BTV Multimedia Group

ANEDiS®
So einfach ist Breitband.

braun teleCom
Quality on Line.

DKT

FIONIS®
fiber network competence

Holm GmbH
KABEL • SATELLIT • LOGISTIK

POTT

BTV-MULTIMEDIA.COM

WAVEPACE®
PASSIVE OPTICAL INNOVATIONS

WAVE PACE

INNOVATIVE, COST-OPTIMIZED, AND HIGHLY-CUSTOMIZABLE FTTH PRODUCTS, INCLUDING:

– P2MP Cabinets

– ODF Systems

– MDU & SDU Wall Boxes

– FTTH Wall Outlets

– Patch Cords

✓ **PRE-ASSEMBLED**

✓ **HIGHLY CUSTOMIZABLE**

✓ **SPACE-SAVING**

WAVEPACE.COM

OUR VISION

SMALL DIFFERENCES. BIG IMPACT.

Strategic product categories

FTTH NETWORKS
Simplicity in installation and service activation!
FIRST METER® initiative.

COAXIAL NETWORKS
Proven higher performance
and more cost-efficient networks!

HOME NETWORKS
Smooth end user
activation and support!

DKT **ISO**
9001

CERTIFIED QUALITY MANAGEMENT SYSTEM

DKT

SMALL DIFFERENCES. BIG IMPACT.

HAVE WE AROUSED YOUR INTEREST?
Do not hesitate to contact us for more information.

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