DKT COMEGA

INCREASE LIFETIME AND SERVICE ACTIVATION.

7975X SERIES | 10 Gbps Active Ethernet | XGSPON

FTTH NETWORKS

DKT COMEGA

DATASHEET

7975X SERIES | 10 Gbps Active Ethernet | XGSPON

INTRODUCTION

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

PRODUCT OVERVIEW

"7975x series"

Parameter	79751	79752	79757	79759
10 Gbps WAN	✓	✓	–	–
XGSPON WAN	–	–	✓	✓
1 Gbps LAN	2	2	2	2
10 Gbps LAN	1	1	1	1
CATV	–	✓	–	✓
Switch engine [3]	✓	✓	✓	✓
CATV RF filter option	–	✓	–	✓
WDM filter	–	[2]	–	✓
Fiber Connector	SC/UPC	SC/UPC + SC/APC	SC/APC	SC/APC
SFP WAN	✓	✓	✓	✓
Clickable FTU	✓	✓	✓	✓
TR-069	✓	✓	–	–
Item No.	**79751**	**79752**	**79757**	**79759**

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

DKT COMEGA

HIGH LEVEL SPECIFICATION

7975X SERIES | 10 Gbps Active Ethernet | XGSPON
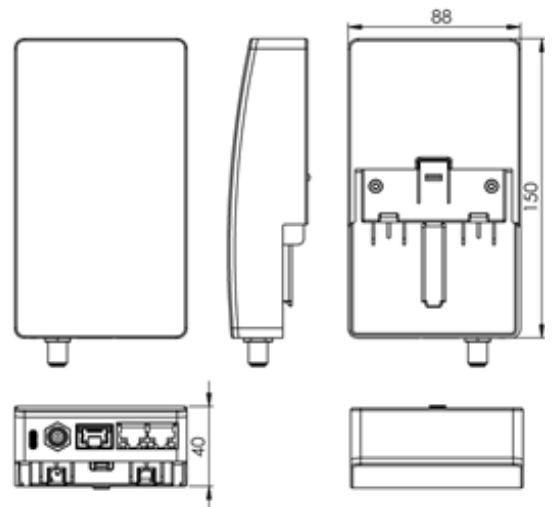
PRODUCT RATIONALE

The industry terms this a "2 box solution", where there is clear differentiation between FTU/ CPE and the router/home gateway. This solution optimizes sourcing/logistics as well as support and technical upgrade which remains flexible and smooth, and allow operators to offer an FTTH infrastructure suitable for both a retail and wholesale business model.

The FTU layout is based on a standard euro outlet form factor, customer perceives this unit as an outlet, not "yet another appliance in my house", and the active part can be clicked directly on top of the FTU.

The active unit comes with 1x SC/ UPC + 1x SC/APC (CATV option) for 10 Gbps Active Ethernet, and 1x SC /APC for XGSPON (WDM built- in), based on a "none proprietary" solution, it can be adopted in environments with 3rd party equipment. It has low power dissipation, supporting the recommendation of "Code of Conduct on Energy Consumption of Broadband Equipment".

PRODUCT MECHANICALS

All dimensions in mm.

ORDERING INFORMATION

All passive FTUs has to be ordered seperately.
- 79751:   FTTH-10G-1F-3P, 10 G WAN, 1x 10 G and 2x 1 G LAN,
- 79752:   FTTH-10G-2F-3P-CATV, 10 G WAN, 1x 10 G and 2x 1 G LAN, CATV
- 79757:   FTTH-XGS-1F-3P, XGSPON WAN, 1x 10 G and 2x 1 G LAN
- 79759:   FTTH-XGS-1F-3P-CATV, XGSPON WAN, 1x 10 G and 2x 1 G LAN, CATV

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HIGH LEVEL SPECIFICATION

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System

Cortina CA8271 Multi-protocol, 10 G SoC (System-on-Chip)

128 MB NAND FLASH

256 MB RAM

10Gbps WAN

1x WAN SMF, IEEE 802.3ae

10 GBASE-LR
TX: 1270 nm; RX: 1330 nm;

Range: 20 km

Laser Class 1

Optical Connector: SC/UPC

XGSPON WAN

1x WAN SFP+, ITU T G.9807.1

X GSPON, Tx: 1270 nm, Rx: 1577 nm

Range: 20 km

Laser Class 1

Optical Connector: SC/UPC

10 Gbps LAN

1x RJ-45, support for 10 G BASE-T

2 LEDs:
- YELLOW: SPEED (10 Gbps);
- GREEN: LINK/ACTIVITY

1 Gbps LAN

2x RJ-45, support for 10/10/1000 BASE-TX

Auto-negotiating HD/FD

Auto-MDI/MDIX

2 LEDs:
- YELLOW: SPEED (1 Gbps);
- GREEN: LINK/ACTIVITY

Layer 2 Ethernet

Layer 2 wire speed

IEEE 802.1 Q VLANs incl Q-in-Q

IEEE 802.1 Q tag insertion and stripping

DHCP relay/option 82

IGMP v2/3 snooping

Flow packet policing

Traffic shaping

Support for Jumbo Frames, 2k frames

CATV

85 dBuV@-5 dBm, input

Optical wavelength: 1310 ... 1550 nm

Max optical input level: +3 dBm

Typ operational optical input level: -10 ... -3 dBm

Optical Connector: SC/APC

RF flatness: <+/- 1 dB

CNR: Typ. 49 dB

CTB: > 60 dB

CSO: > 60 dB

F-connector, 75 Ohm

LED: GREEN: >-10 dBm Signal; RED: <-10 dBm

Monitoring

Digital Optical Monitoring, SFF-8472

OAM as option supporting IEEE 802.3 ah, Dying Gasp, Discovery and Loop-back

CATV signal level, higher/lower than -10 dBm

Management

DKT OS based on Linux, provisioning via DHCP/TFTP

TR-069, incl. TR-181

SNMP /2/3

SSH

HTTP(S) WEB

Physical Characteristics

Operating temperatur: 0 ºC ... 40 ºC

151 x 40 x 88 mm (HxDxW)

Weight: < 0.5 kg

Power

USB-C adapter

Europlug, white color (UK/US available upon request)

Power dissipation: < 10 W

LED: GREEN: Power on

Approvals and Certifications

CE marking, RoHS, WEEE

Safety EN 60950

Emission: EN55022:2010 Class B; EN 55032:2015

Immunity: EN 55024: 2010 + A1: 2015; EN 55035: 2017; EN 60728-2

"7975x series"

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Version 1.1

DKT | COMEGA

FTTH-BATTERY-STD

PRODUCT OVERVIEW

"FTTH-Battery-STD"

Electrical parameter	
Input	12 V; 3.3 A
Combined Output Power [W]	< 30
Output	12 ± 5 %V DC; < 2.5 A
USB	5 ± 5 %V DC; < 2 A
Transfer time	< 1 mS
3 cell Battery type	2600 mAH Lithium
Typical charge duration [h]	3 – 4

Mechanical parameters	
Outer dimensions [mm]	130 x 67.3 x 27
Weight [g]	~400
Wall hang screw [mm]	Recommented (Not included): Flat head countersunk Pozi drive 3.5 x 25
Wall hang Screwhead Ø [mm]	5.5 – 6.5

In-Box accessories
150 cm USB A to DC Ø 5.5 mm/1.45 mm cable
150 cm DC to DC Ø 5.5 mm Cable
Countersunk Pozidrice screw for wall mount

Enviroment	
Operational temperaruer range [°C]	0 – 40
Humidity [%]	20 – 90
Recommended battery replacement cycle	1.5 – 2 years or 300 full charge/discharge cycles
Item No.	**79731**

ADDITIONAL INFORMATION

- Fast and easy battery installation
- Long lasting capacity
- Support for both 5 V/12 V, capable of sourcing both ONT and router
- compact form factor, discrete design
- Suitable for wall mount or desktop placement
- exchangeable battery pack