

SIMPLICITY IN INSTALLATION AND SERVICE ACTIVATION.

7973X / 7974X SERIES | 1 Gbps Active Ethernet | GPON



FTTH NETWORKS

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Version 1.1.4

DATASHEET

7973X / 7974X SERIES | 1 Gbps Active Ethernet | GPON

INTRODUCTION

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 service activation. The combined solution for FTU and gateway services are 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 though, adapter SC/APC

²⁾ Option

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

HIGH LEVEL SPECIFICATION

7973X, 7974X AND 7975X SERIES | 1 Gbps Active Ethernet | GPON

Hardware

100/1000 Base-BX-U auto sense WAN

The following is applicable for 79734:

1x 10/100/1000 Base-T (RJ-45) LAN

The following is applicable for 79741/2:

4x 10/100/1000 Base-T (RJ-45) LAN

Optical Interface

SMF ITU-T G.652

Optical Connector: SC/UPC

TX 1260 – 1360 nm

RX 1480 – 1580 nm

15km range

Laser Class 1

Ethernet

Auto-negotiating full/half duplex

Auto-MDI/MDIX

Layer 2 wire speed packet switching

IEEE 802.1Q VLANs (4k VLANs) incl Q-in-Q

IEEE 802.1Q tag insertion and stripping

DHCP relay/Option 82

4k MAC address database

Ingress and egress rate limiting

IGMP v1/2/3 snooping

Support for Jumbo Frames

QoS

IEEE 802.1p prioritization and reclassification

4 QoS queues per port

DSCP/ToS

The device layout is based on a standard euro outlet form factor, customer perceives this unit as an outlet, not “yet another appliance in my house”. Analogy to power, CATV and telephony outlet, where the utility company and the operator make a clear demarcation point between the network and home installation. Comes as standard with 1x SC/UPC + 1x SC/APC, based on a none proprietary solution, can be adopted in environments with 3rd party equipment. Low power dissipation, supporting the recommendation of “Code of Conduct on Energy Consumption of Broadband Equipment”.

Power and Characteristic

Power supply: External 5VDC, 2A

Europlug, white color

Power dissipation: < 4.5 W typical

Environmental Specifications

Operating temperature: 0 °C to 40 °C
Max operating humidity: 85 % RH (non-condensing)

Storage temperature: 0 °C to 70 °C
Max storage humidity: 95 % RH (non-condensing)

Physical Characteristics

Operating temperature: 0 °C to 40 °C

Dimensions (H x D x W): TBD x 88 x 88 mm

Weight: < 0.3 kg

Approvals and Certifications

CE marking

Safety EN 60950

Emission: EN55022 Class B

Immunity: EN55024

Management

DKT OS based on Linux, provisioning via DHCP/TFTP

TELNET

SSH

SNMP v1/2/3

OAM as option supporting IEEE 802.3 ah, Dying Gasp, Discovery and Loopback

TR-069, including support for TR-181

CATV

The following is applicable for 79740/42:

1x RF-out F-connector (75 Ohm)

Optical wavelength: 1310 ... 1550 nm

Max optical input level: 0 dBm

Operational optical input level: -10 ... -3 dBm

RF bandwidth: 65 ... 1006 MHz

RF output: 84 dBuV at -5 dBm input, no AGC

RF flatness: < +/- 1dB

CNR: > 49 dB

CSO: > 60 dB

CTB: > 60 dB

Status LEDs

WAN link/activity

LAN link/activity

Power On

CATV (when applicable):

< -10 dBm (red) > -10 dBm (green)

GPON

79753, 79754, 79755 and 79756 | GPON ONT

PRODUCT OVERVIEW

To deliver triple-play services to the subscriber in Fiber-to-the-Home or Fiber-to-the-Premises application, the DKT GPON ONT incorporates interoperability, key customers' specific requirements and cost-efficiency. Equipped with ITU-T G.984 compliant 2.5 Gbps Downstream and 1.25 Gbps Upstream GPON interface, the ONT supports the full Triple Play of services including video, and high speed internet access.

Compliant with standard OMCI definition, the ONT is manageable at remote side and supports the full range FCAPS functions including supervision, monitoring and maintenance.

SERVICES

Data

The ONT is delivered with one 10/100/1000 Base-T Ethernet data interface, supporting:

- Auto-negotiation and MDI/MDIX auto-sensing
- Built-in layer-2 switch
- Advanced data features such as VLAN tag manipulation, classification, and filtering

Voice

To enable VoIP access, the ONT supports interfacing external IAD box or Home Router with voice capability through the Ethernet Interface.

Video

The ONT supports video contents delivered in the form of data (by multicast or unicast).

In case where multicast technology is used for delivering video contents through data channel, the ONT supports the dedicated multicast GEM port on the Downstream.

So the video contents are received and processed by all the ONTs through the unified channel and this greatly improves the bandwidth efficiency.

In addition, the ONT supports IGMP snooping function to be applied for further optimization. When IGMP snooping is enabled, the ONT monitors the member joining and leaving activities at the Ethernet service port, and then selectively delivers the multicast streams.



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]	Recommended (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

Environment

Operational temperature 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

