



GE-PON-ONT

4-port FE + 2-port FXS + Wi-Fi (n) + EPON (Routing mode)

ST-3604-FX

Overview

The Spiktel ST-3604-FX is an EPON Optical Network Terminal designed for SFU (Single Family Unit) used in home and small office environment. It provides subscriber with rich, individualized, and comfortable triple-play services including video (IPTV), voice and high speed internet access. It has a glossy appearance and green, energy-saving advantage.

It supports 4 Fast Ethernet (UTP, RJ45) ports, 2 FXS (RJ 11) ports, and Wi-Fi (802.11 b/g/n) interface to the subscriber. It is connected to GE-PON OLT and RN (Re-mote Node) via a fiber optic cable to provide TPS (Triple Play Service).

By adopting the state-of-the-art GE-PON technology, C524W supports various features including Quality of Service (QoS) function, management function enabling prompt reactions against the problems in the system or a subscriber line, security function protecting subscriber information safe, and subscriber management function sheltering user information from illegal users.

Features

- * 4FE Downlink Interface
- * 2 FXS Telephone Line(RJ-11) Interface for VoIP service
- * Wireless LAN (802.11b/g/n)
- * NAT/NAPT
- * DHCP Function
- * Multicast Function
- * QoS Features
- * IPv4/IPv6 Compatibility
- * Maximum 1514 byte Ethernet frame (without VLAN*)
- * 128 MAC address learning for R end in FTTC scenario.
- * Compliant with 1000BASE-PX10 according to YD/T 1475-2006 - EPON.
- * Uplink throughput: no less than 360Mbps.
- * Downlink throughput: 380Mbps.
- * ONU queue priority: no less than 4.
- * Power consumption: less than 12W

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Hardware Features

Item	Description	
Type	DesktopType	
Interface	PON	1000Base-PX20
	LAN	10/100BaseTx (RJ-45: 4 ports), MDI/MDIX Auto-Negotiation
	VoIP	FXS Interface(RJ-11: 2 ports)
	Power Switch	On/Off
	Power (DC)	DC 12V 1.5A
	Reset Switch	Reset to factory
	EPS Switch	Wi-Fi Protected Setup
	ANT	Fixed Wireless LAN Antenna
Front Panel LED	Power	Power On/Off status
	PON	Logical Link status of PON, Loss Of Signal
	DATA	PON Link and Data Transmission status
	LAN 1/2/3/4	LAN Link and Data Transmission status
	VoIP	VoIP Link and Voice Call status
	Wireless	WLAN Link and Data Transmission status
	TEL 1/2	VoIP Link and Voice Call Status
Accessories	UTP Cat.5 Ethernet Cable(RJ-45, Straight) Power Adaptor (Input - AC: 100 ~ 220V (± 20%)) User Manual	

Network Features

- * Wire-speed LAN
- * Full-duplex Mode LAN
- * Auto MDI/MDIX (Medium Dependent Interface Cross) LAN
- * IEEE 802.1q VLAN(Tagged, untagged by port) for WAN port
- * Maximum 16 Active VLAN
- * VLAN ID range of 1~4094
- * 4K MAC Address

Multicast Features

- * IGMPv2
- * IGMPv3
- * IGMP Snooping
- * IGMP Join/Leave Suppression
- * IGMP Fast Leave
- * IGMP Proxy
- * 32 Multicast Group entry
- * Multicast throughput: 400M.
- * Multicast delay < 1.5ms*
- * Multicast address capacity: no less than 8.

VoIP Features

- * G.711A/u, G.729, G.723, G.722 etc.
- * T.38 Fax
- * Support different signals: dialing tone, ring back tone, etc.
- * Support SIP
- * Support MGCP
- * RTP / RTCP Support RFC 3550 & RFC 3551
- * Support call waiting
- * Support call holding
- * Support call forwarding
- * Three Party Service
- * Support caller ID display (Type 1 and 2)
- * Support DTMF

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DHCP Features

- * DHCP Client
- * DHCP Server
- * In NAT mode, IP will be assigned from the IP Pool of the device, and in Bridge mode, the IP will be assigned from the DHCP server in the network

NAT/NAPT

- * Selectable between NAT mode and bridge mode
- * Dynamic/static private IP in NAT mode
- * Wire-speed for bi-directional packets of more than 256 Byte in NAT/NAPT
- * Port Forwarding and DMZ Host function
- * Minimum 500 bi-directional concurrent sessions

QoS Feature

- Rate limiting ($\pm 10\%$)
- * QoS for both upstream and downstream

Item	Detail	Remark
Classification	Physical port 802.1p SRC/DST IP address TOS/DSCP TCP/UDP SRC/DST port	Layer 1, 2, 3, 4
Marking	802.1p DSCP	Layer 2, 3,
Scheduling	SPQ	3 Queues per interface

Security

- * Broadcast storm control
- * MAC filtering

WiFi Features

- * IEEE 802.11b/g/n
- * Functional condition
- * Automatic Fallback
- * 4-level adjustable channel Transmission Output
- * Manual or automatic selectable channel
- * Setting and changing of number of CPEs that can access at one time
- * Mixed use of 802.11b, 802.11g, 802.11n
- * Encryption (Keys such as Hex, ASCII, special character should be supported)
- * 64/128bit Static WEP Key
- * WPA
- * WPA2
- * WPA-PSK
- * WPA-PSK2(Option)
- * 4 or more Virtual AP (Multi SSID), and each SSID supports different encryption
- * SSID should support alphabet, numeric, special character
- * Hidden SSID
- * Wireless LAN QoS function: IEEE 802.11e(WMM)
- * Traffic classification by 802.1p and DSCP field value
- * IEEE 802.1x
- * EAP MD5/EAP TTLS
- * PEAP
- * RADIUS Client function
- * TR-069
- * Session Timeout function.

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- * Upon re-authentication due to Session Timeout, it should be managed by the same Session ID
- * Idle Timeout
- * Session Timeout value and Idle Timeout value shall be obtained from Authentication system
- * Web Redirection upon authentication failure
- * Session termination upon wireless link down
- * Account termination transmission function

Acct-Terminate-Cause	Value	Description
User Request	1	User logoff
Lost Carrier	2	Wireless link down for specific time period
Lost Service	3	When the previous AP sends Acct-stop in roaming mode
Idle Timeout	4	Idle Timeout termination
Session Timeout	5	Session Timeout termination
Admin Reset	6	When admin stops specific Session
Admin Reboot	7	When admin reboots the AP

Operating & Management

- * OAM
- * System or module LED.
- * SNMP v1, v2 MIB.
- * Memory structure that allows to save or modify Configuration File
- * Memory should keep the contents of the memory even when power supply is stopped.
- * Local and remote Firmware Upgrade (The existing Image should be kept when upgrade fails).
- * Normal session for system management even when CPU overload
- * Remote Management
- * Remote access through Telnet(RFC 854, 855)
- * CPE Management Server
- * Device Reset
- * LAN port reset
- * Setting and changing Config
- * Firmware download only through Web Server by TR069
- * VLAN ID change
- * MAC Filtering
- * Time sync through NTP Server
- * Device status and performance management

Interface Configuration

Name	Spec.	Description
ON/OFF		Power On / Off
Power Jack DC 5V2A		The input terminal that a power adaptor is connected
LAN 1/2/3/4	RJ-45	Connected through a LAN port UTP cable.
TEL 1/2	RJ-11	Connected through a FXS port RJ-11 cable.
Wifi	802.11b/g/n	Wi-Fi Interface with WPS button (Optional)
Line	SC/APC	GE-PON port (need to be kept clean)



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