

Specificații tehnice

[Acest tabel va fi completat de către ofertant în coloanele 2, 3, 4, 6, 7, iar de către autoritatea contractantă – în coloanele 1, 5,]						
Numărul procedurii de achiziție ocde-b3wdp1-MD-1655727510186 din 20/06/2022						
Obiectul achiziției: IP Telefonie pentru anul 2022						
Denumirea bunurilor/serviciilor	Denumirea modelului bunului/serviciului	Țara de origine	Produceătorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Standarde de referință
Bunuri						
Lot nr.1: Echipament Telecomunicații						
Lot nr.1.1: Telefon IP	Telefon IP – UC902SP	China	Nanjing Hanlong Technology Co LTD	Telefon IP tip 1 Taste Funcționale: 1 cont SIP, 2 taste de linie cu LED-uri bicolore, 3 taste soft programabile sensibile la context. Afișaj grafic: display LCD de 132 x 48 (2,95 inchi). Interfețe de rețea: porturi Ethernet duale 10/100 Mbps, suport Poe Suport protocoale și standarde: SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP/RARP, ICMP, DNS (A record, SRV, NAPTR), DHCP, PPPoE, SSH, TFTP, NTP, STUN, SIMPLU, LLDPME, LDAP, TR-069, 802.1x, TLS, SRTP, CDP/SNMP/RTCP-XR Suport codecuri vocale pentru: G.711μ/a, G.722 (bandă largă), G.723, G.726-32, G.729 A/B, iLBC, DTMF în bandă și în afara benzii (În audio, RFC2833, SIP INFO), VAD, CNG, AEC, PLC, AJS, AGC Conținutul pachetului: telefon,	Phone Features 2 SIP accounts Call hold, mute, DND One-touch speed dial, hotline Call forward, call waiting, call transfer Redial, call return, auto answer, direct IP call 5-way conferencing Group listening, SMS, emergency call Ring tone selection/provisioning Set date time automatically or manually Dial plan per account RTCP-XR (RFC3611), VQ-RTCPXR (RFC6035) Action URL/URI Voice Codecs Features	

receptor cu cablu, suport de bază,
alimentare universală, cablu de rețea.

HD voice, HD handset, HD
speaker
Codecs: iLBC, G.722,
G.711(A/μ), Opus
G.723, G.729AB, G.726-32
DTMF: In-band, RFC 2833, SIP
INFO
Full-duplex hands-free
speakerphone with AEC
VAD, AGC, CNG, AEC, PLC,
AJB

Directory
Local phonebook up to 1000
entries
XML/LDAP remote phonebook
Intelligent search method
Phonebook search/import/export
Call history:
dialed/received/missed/forwarded
Black list

IP-PBX Features
Busy Lamp Field (BLF), bridged
Line Appearance (BLA)
Anonymous call, anonymous call
rejection
Message Waiting Indicator (MWI)
, voice mail
Call park, call pickup
Intercom, paging
Music on hold
Hot-desking

Display and Indicator
132x48 pixel graphical LCD with
backlight

					LED for call and message waiting indication Illuminated LEDs for line status information Intuitive user interface with icons and soft keys National language selection Caller ID with name, number Feature keys 2 line keys with LED 6 features keys: mute, headset, message, transfer, redial, speaker 4 context-sensitive “soft” keys 5 navigation keys Volume control keys Interface Dual-port 10/100M Ethernet Power over Ethernet (IEEE 802.3af), class 2 1xRJ9 (4P4C) handset port 1xRJ9 (4P4C) headset port Physical Features Stand with one angle at 40° Wall mountable External universal AC adapter: AC 100~240V input and DC 5V/1.2A output Power consumption (PSU): 1.6~2.6W Power consumption (PoE): 2.0~3.2W Operating humidity: 10~95% Operating temperature: -10~50°C	
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					Management Configuration: browser/LCD-Menu/auto-provision Auto provision via HTTP/HTTPS FTP/TFTP Auto-provision with PnP Reset to factory, reboot Local tracing log export, system log Phone lock for personal privacy protection Network and Security SIP v1 (RFC2543), v2 (RFC3261) SIP server/proxy redundancy NAT Traversal: STUN mode DHCP/static/IEEE802.1X/open VPN HTTP/HTTPS web server Time and date synchronization by SNTP DNS-NAPTR/DNS-SRV (RFC 3263) QoS: 802.1p/Q tagging (VLAN), Layer 3 ToS DSCP TLS (Transport Layer Security), SRTP HTTPS certificate manager AES encryption for configuration file Digest authentication using MD5/MD5-sess IPv6 supported	
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Lot nr.1.2: Telefon IP

Telefon IP —
Htek UC926U

China

Nanjing
Hanlong
Technology Co
LTD

Telefon IP tip 2
Taste caracteristici: 5 conturi SIP, 10 taste de linie.
Display grafic: LCD color TFT de 4,3 inchi (480x272).
Interfață: interfață Wi-Fi dual-band integrată 802.11 a/b/g/n/ac (2,4GHz și 5GHz) și Bluetooth integrat.
Interfețe de rețea: porturi dual Gigabit Ethernet, suport Poe
Suport protocoale și standarde: SIP RFC3261, TCP/IP/UDP, RTP/RTCP, HTTP/HTTPS, ARP, ICMP, DNS(A record, SRV, NAPTR), DHCP, PPPoE, TELNET, TFTP, NTP, STUN, SIMPLE, LLDP, LDAP, TR-069, 802.1x, TLS, SRTP, IPV6
Suport codecuri vocale pentru: G.711μ/a, G.722 (bandă largă), G.723, G.726-32, G.729 A/B, iLBC, DTMF în bandă și în afara benzii (În audio, RFC2833, SIP INFO), VAD, CNG, AEC, PLC, AJB, AGC
Modul de extensie suport
Alimentare: Adaptor universal de alimentare inclus: Intrare: 100 - 240V; Power-over-Ethernet integrat (802.3af)
Conținutul pachetului: telefon, receptor cu cablu, suport de bază, alimentare universală, cablu de rețea.

Phone Features

16 SIP accounts
Call hold, mute, DND
One-touch speed dial, hotline
Call forward, call waiting, call transfer
Redial, call return, auto answer, direct IP call,
5-way conference
Group listening, SMS, emergency call
Ring tone selection/provisioning
Set date time automatically or manually
Dial plan per account
RTCP-XR (RFC3611), VQ-RTCPXR (RFC6035)
Action URL/URI
USB port (2.0 compliant) for: USB call recording through USB flash drive; USB storage (screen saver, wallpaper); USB headset

Audio Features

HD voice, HD handset, HD speaker
Codecs: iLBC, G.722, G.711(A/μ), Opus, G.723.1, G.729AB, G.726-32, G.722.1
DTMF: In-band, RFC 2833, SIP INFO
Full-duplex hands-free speakerphone with AEC
AEC, VAD, AGC,

CNG, PLC, AJB, JIB

Directory

Local phonebook up to 10,000 entries

XML/LDAP remote phonebook

Intelligent search method

Phonebook search/import/export

Call history:

dialed/received/missed/forwarded

Black list

IP-PBX Features

Busy Lamp Field (BLF), bridged

Line Appearance (BLA)

Anonymous call, anonymous call rejection

Hot-desking, voice mail

Call park, call pickup

Intercom, paging

Music on hold

Flexible seating

Call recording

Display and Indicator

4.3" 480 x 272-pixel color display with backlight

24 bit depth color

LED for call and message waiting indication

Dual-color (red or green) illuminated

LEDs for line status information

Wallpaper, national language selection

Intuitive user interface with icons and soft keys

Caller ID with name, number and photo

Feature keys

10 line keys with LED

10 line keys can be programmed up to 36 Paperless DSS keys (4-page view)

8 feature keys: voice mail, headset, mute, speaker, conference, hold, transfer, redial

4 context-sensitive “soft” keys

6 navigation keys (include cancel key) and volume control key

Interface

Dual-port Gigabit Ethernet

Power over Ethernet (IEEE 802.3af), class 3

1xRJ9 (4P4C) handset port

1xRJ9 (4P4C) headset port

Support up to 6 Expansion Modules

1xUSB Port (2.0 compliant)

1xRJ12 (6P6C) EXT port

Support EHS

Physical Features

Stand with 2 adjustable angles

Wall mountable

External universal AC adapter

AC 100~240V input and DC

5V/1.2A output

Power consumption (PSU):

2.0~4.6W

Power consumption (PoE):

2.5~5.5W

Operating humidity: 10~95%
Operating temperature: -10~50°C

Management
Configuration: browser/LCD-
Menu/auto-provision
Auto provision via HTTP/HTTPS
FTP/TFTP
Auto-provision with PnP
Reset to factory, reboot
Local tracing log export, system
log
Phone lock for personal privacy
protection

Wi-Fi/Bluetooth
Network Standard:
IEEE802.11b/g/n/ac
Transmission Rate: 433 Mbps
Frequency Range: 2.4GHz/5Hz
Bluetooth specification:
V4.0+HSsystem
Enhanced Data Rate (EDR)
compliant for both 2Mbps and
3Mbps supported
Bluetooth frequency range:
2.402GHz-2.480GHz
Compatible with Bluetooth
specification V4.0, backward
compatible with Bluetooth1.1 1.2
2.0 and 3.0 for wide-ranging use

Network and Security
SIP v1 (RFC2543), v2
(RFC3261)
SIP server/proxy redundancy
NAT Traversal: STUN mode

					DHCP/static/IEEE802.1X/open VPN HTTP/HTTPS web server Time and date synchronization by SNTP DNS-NAPTR/DNS-SRV(RFC 3263) QoS: 802.1p/Q tagging (VLAN), Layer 3 ToS DSCP TLS(Transport Layer Security), SRTP, ZRTP HTTPS certificate manager AES encryption for configuration file Digest authentication using MD5/MD5-sess IEEE802.1X/Open VPN IPv4/IPv6, LLDP/CDP/DHCP VLAN	
Lot 1.3: Statie IP PBX	Statie IP PBX -- Carusto	Marea Britanie	Carusto LP	Capacitate de apel: Utilizatori: 1000 Apeluri simultane (G.711): 150 Apeluri SRTP simultane maxime (G.711): 100 Interfețe de rețea Trei porturi Gigabit Porturi FXS pentru telefon analogic: 2 rj11 Linie PSTN porturi FXO: 2 rj11 Numărul maxim de participanți la podurile de conferință: 6 săli de conferințe video și până la 30 de petreceri cu 1080p, presupunând 4 fluxuri video + 1 partajare a ecranului (H.264 și Opus) Conferință vocală: până la 150 de persoane (G.711) Codecuri video: H.264, H.263, H263+, H.265, VP8 Codecuri de voce și fax Opus, G.711	Capacitate de apel: Sistemul la nivel de nucleu permite fara limite mentinerea peste 2000 abonati; Apeluri simultane: 355, 1:1 cu numarul de abonati; Numărul maxim de participanți la podurile de conferință – 355; Numarul de trunk-uri — 355, Codecuri video: H.264, H.263, H263+, H.265, VP8 — DA; Codecuri de voce și fax Opus, G.711 A-law/U-law, G.722, G722.1 G722.1C, G.723.1 5.3K/6.3K, G.726-32, G.729A/B, iLBC , GSM; T.38 – DA; Conferință vocală – 355 participanti; QoS Layer 2 QoS (802.1Q, 802.1p) și Layer 3 (ToS, DiffServ) QoS Protocoale de rețea: SIP, TCP/UDP/IP,	

A-law/U-law, G.722, G722.1
 G722.1C, G.723.1 5.3K/6.3K, G.726-32, G.729A/B, iLBC , GSM; T.38
 Display LCD 320x240 LCD color cu ecran tactil
 QoS Layer 2 QoS (802.1Q, 802.1p) și Layer 3 (ToS, DiffServ, MPLS) QoS
 Protocoale de rețea: SIP, TCP/UDP/IP, RTP/RTCP, IAX, ICMP, ARP, DNS, DDNS, DHCP, NTP, TFTP, SSH, HTTP/HTTPS, PPPoE, STUN, SRTP, TLS, LDAP, HDLC, HDLC -ETH, PPP, Frame Relay (în așteptare), IPv6, OpenVPN®
 Metode de deconectare: Ton de ocupat/aglomerație/Tonul urlet, inversarea polarității, sincronizarea blițului cu cârlig, deconectarea curentului în buclă
 Criptare media: SRTP, TLS, HTTPS, SSH, 802.1X
 Intrare sursă de alimentare universală: 100 ~ 240VAC, 50/60Hz;

RTP/RTCP, ICMP, ARP, DNS, DHCP, NTP, TFTP, SSH, HTTP/HTTPS, PPPoE, STUN, SRTP, TLS, OpenVPN®

Criptare media: SRTP, TLS, HTTPS, SSH,

5 GRADE PHONE SERVICES
Call Record
Call Parking
Call Forward
Call Hold
Call Pickup
Call Pickup Group
Call Waiting
Call Group
Attendant/Blind/Conference transfer
Intrusion (hidden / talk with client / talk with agent/ conference)
Intercom
Conference
Presence status
Caller ID
SMPP // SMS
Notification by e-mail about missed calls, messages and faxes
Mobility
Intelligent routing of outgoing calls for IP-PBX by:
-the minimum tariff
-time of day and day of week
-operators (routing code Operator)
Intelligent routing of incoming calls on the IP-PBX by:

-define the phone number
-the status of an employee (Manager)
-the competence of the staff (manager, operator, manager)
-longest idle time employee
-the work schedule of the company
Routing scenarios any complication
Dial to Group
Dial to Queue
Voicemail & Voicemail to Email
Secured Tunnel (OpenVPN, encryption algorithm AES-256-CBC, hash algorithm SHA512, key size 1024. Terminal must support protocol and all requested parameters for encryption, hash and key size)
-company departments and employees sections

Music on Transfer
Music on Hold
FAX
FAX to Mail
Feature Codes
Many terminal on same extension
Notification for problem situation
System status
Firewall with Black & White IP list
System backup
Remote Support
SIP Register with UDP/TCP/TLS

Alte informatii in

					documentatia atasata.	
Lot nr. 1.4: Ansamblu cablu	OP-MDAC8P+- P+1SD-1	China	Shenzhen Optostar Optoelectronics Co., LTD	Ansamblu cablu Twinax SFP + la SFP + DAC, pasiv, 1 metru, AWG30. Lungime DAC = cu 2 conectori SFP +. Compatibil pe scara larga cu Cisco, Meraki, Ubiquiti, Netgear, D-Link, TP-Link, QNAP, Supermicro, Mikrotik, Zyxel, Linksys, Broadcom, NetScout, ZTE etc. Cablul SFP + poate conecta diverse dispozitive, cum ar fi comutator de fibra, stocare, router, server, firewall, adaptor de retea, convertor media, centru de date si alte echipamente cu fibra optica cu porturi SFP + etc.	Ansamblu cablu Twinax SFP + la SFP + DAC, pasiv, 1 metru, AWG30. Lungime DAC = cu 2 conectori SFP +. Compatibil pe scara larga cu Cisco, Meraki, Ubiquiti, Netgear, D-Link, TP-Link, QNAP, Supermicro, Mikrotik, Zyxel, Linksys, Broadcom, NetScout, ZTE etc. Cablul SFP + poate conecta diverse dispozitive, cum ar fi comutator de fibra, stocare, router, server, firewall, adaptor de retea, convertor media, centru de date si alte echipamente cu fibra optica cu porturi SFP + etc.	
Lot nr. 1.5: Piese	NC6642	China	Ningbo Latitude International Trade Co., LTD	19" 42U Standard Floor Rack, 600x600	19" 42U Standard Floor Rack, 600x600	
Lot nr. 1.6: Piese	JB01	China	Ningbo Latitude International Trade Co., LTD	Cable Management	Cable Management 1U, metal	
Lot nr. 1.7: Patch Panel optic	ODF 24LC full	China	Shenzhen Optostar Optoelectronics Co., LTD	LC Patch panel optic 24 port, including adaptors and pigtail	LC Patch panel optic 24 port, including adaptors and pigtail	

Lot nr. 1.8: Patch Panel optic	ODF 48LC full	China	Shenzhen Optostar Optoelectronics Co., LTD	LC Patch panel optic 48 port, including adaptors and pigtail	LC Patch panel optic 48 port, including adaptors and pigtail	
Lot nr. 1.9: Patch cord optic	LC/UPC-LC/UPC SM D 1m PVC	China	Shenzhen Optostar Optoelectronics Co., LTD	Patch cord optic 1 metru	Patch-cord LC-LC SM 1m duplex	
Lot nr. 1.10 Patch cord optic	LC/UPC-LC/UPC SM D 2m PVC	China	Shenzhen Optostar Optoelectronics Co., LTD	Patch cord optic 2 metri	Patch-cord LC-LC SM 2m duplex	
Lot nr. 1.11 cablu optic 8 fire	GYXC8H-12B6a1	China	YOFC	cablu optic 8 fire, Tensiune intindere minim 2 kN	Optical Self-support Drop Cable GYXC8H-12B6a1, 12 core, G657A1, LSZH, 1.4mm messenger -- short-term 1,5kn	
Lot nr. 1.12: Cablu optic 24fire	GYAXTC8Y-J-24	China	YOFC	Cablu optic 24fire, Tensiune intindere minim 2 kN	Optical Aerial Cable GYAXTC8Y-J-24B1.3, 24 core, HDPE, 7*0.8mm messenger -- short-term 1,5 kn	
Lot nr. 1.13: Lucrari instalare echipamente, pozare cablu, sudare, configurare. (implementare proiect la cheie)				Materiale suplimentare pentru instalarea echipamentului	Materiale suplimentare pentru instalarea echipamentului	
Lot nr. 2: Echipament informatic						
Lot nr. 2.1: Switch 24 port optic	DLINK — DXS-1210-28S (24 10GBase-X SFP+ ports + 4 10GBase-T ports)	D-Link Corporation	Taiwan	Comutator de retea tip1 Tip: Manageabil Stacking Switch 24 ports SFP+ Descriere generală: Min. 24 interfețe SFP+ 10 Gbps Min. 4 interfețe 10 Gigabit combo	General features Interfaces • 24 10GBase-X SFP+ ports • 4 10GBase-T ports • RJ-45 console port	

			(Gigabit cupru/SFP+ combo ports) 1 interfata management Rackabil 19", 1U Performanțe: Rata de forwarding: min. 240 Mpps cu pachete de 64B Switching bandwidth: min. 480 Gbps Min. 16k adrese MAC MTU configurabil pana la 9KB MTBF minim 1 300 000 ore Memorie și procesor: Min. 800 MHz CPU Min. 512 MB DRAM Min. 256 MB FLASH Memoria instalata va trebui sa asigure simultan toate funcționalitate solicitate Caracteristici minimale incluse: RSTP, MSTP Automatic QoS Autonegociere pe toate porturile Port Security LACP, IGMP, NTP SNMPv3 Min. 4094 VLAN-uri active Voice VLAN Broadcast, multicast, unicast storm control per port Auto-MDIX Standarde: IEEE 802.1 D Spanning Tree Protocol IEEE 802.1p CoS Prioritization IEEE 802.1Q VLAN IEEE 802.1 sMultiple VLAN Instances of Spanning Tree IEEE 802.1 w Rapid Reconfiguration of Spanning Tree	Port Standard & Functions • IEEE 802.3u 100Base-TX • IEEE 802.3ab 1000Base-T • IEEE 802.3an 10GBase-T • IEEE 802.3z 1000Base-X • IEEE 802.3ae 10GBase-X • IEEE 802.3az Energy Efficiency Ethernet (EEE) • Auto MDI/MDIX support for 1000/10GBase-T Diagnostic LEDs • Power • Fan Error • Console • Link/Activity/Speed (Per 10GBase-T port and per 10GBase-X SFP+ port) Network Cables for 10GBase-T • Cat. 6 (30 m max) • Cat. 6A or Cat. 7 (100 m max) Switching Capacity • 560 Gbps Maximum Packet Forwarding Rate • 416.64 Mpps Transmission Method • Store-and-forward MAC Address Table • Up to 32,000 entries per device Packet Buffer • 4 Mbytes	
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			IEEE 802.1x User Authentication IEEE 802.1ab LLDP IEEE 802.3ad LACP IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports IEEE 802.3 10BASE-T specification IEEE 802.3u 100BASE-TX specification IEEE 802.3ab 1000BASE-T specification IEEE 802.3z 1000BASE-X specification IEEE 802.3az Energy Efficient Ethernet IEEE 802.3ae 10 Gbit/s Ethernet over fiber IEEE 802.3an 10GBase-T 10 Gbit/s Ethernet over copper Management: Configurare CLI consolă, web Alimentare cu energie electrică: Min. 1 Sursă de alimentare internă cu suport pentru standardele RM: 220-240V/50 Hz Consum de putere: Max. 55.5 W Temperatura de operare: Interval min. : 0° la 45°C Garanție: Se acordă garanție minim 2 ani Update software gratuit: 2 ani Acces la suportul tehnic al fabricantului: 2 ani Garanția se acordă la sediul clientului Accesorii incluse în set:	Flash Memory • 64 Mbytes Software Features L2 Features • MAC Address Table: Up to 32K entries • Static MAC Addresses: 256 • IGMP Snooping: IGMP v1/v2/v3 Snooping Supports 512 groups (shared between dynamic and static, with a max of 128 static) Per VLAN IGMP Snooping Support port-based fast leave Report Suppression • MLD Snooping: MLD v1/v2 Snooping Supports 256 groups (shared between dynamic and static, with a max of 128 static) Support port-based fast leave • LLDP • LLDP-MED • Spanning Tree Protocol: 802.1D STP 802.1w RSTP 802.1s MSTP • Flow Control: 802.3x Flow Control HOL Blocking Prevention • Port Mirroring: One-to-One Many-to-One Supports Mirroring for Tx/Rx/Both • 802.3ad Link Aggregation: Maximum of 8 groups/8 ports per group • Jumbo Frame: Up to 12,288 Bytes	
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1x cablu de alimentare energie electrică cu conector conform standardelor RM
1x kit de instalare 19" cu toate cablurile de protecție (împământare), șuruburile, cât și alte accesorii necesare instalării și punerii în funcțiune incluse.

- Loopback Detection

VLAN

- 802.1Q VLAN
- Port-based VLAN
- Configurable VID: 1~4094
- Voice VLAN
- Auto Surveillance VLAN
- Asymmetric VLAN
- 4K VLAN Groups

Quality of Service (QoS)

- CoS based on:

Switch port

802.1p Priority Queues

Outer 802.1p priority

DSCP

ToS

IPv6 Traffic Class

TCP/UDP port

MAC Address

Ether Type

IP Address

Protocol Type

IPv6 Flow Label/ Traffic Class

- 802.1p Priority Queue

- 8 queues per port

- Queue Handling:

Strict Priority Que (SPQ)

Weighted Round Robin (WRR)

- Bandwidth Control:

Port-based (Ingress/Egress, min. granularity 64 Kbps)

Queue-based (Egress, min. granularity 64 Kbps)

L3 Features

					• IP Interface: Supports 4 IPv4/v6 interfaces • ARP: 384 Static ARP • Default Route • IPv6 Neighbor Discovery (ND) • Static Route: Max. 128 IPv4 entries Max. 64 IPv6 entries Access Control List (ACL) • ACL based on: IPv4 address: Source/destination IP Address mask, IP preference/ ToS mask, DSCP mask, Protocol MAC address: 802.1p priority mask, VID mask, Source/destination MAC address mask, Ether type mask IPv6 address: Source/destination IP Address mask, DSCP mask, Protocol type mask, TCP/UDP port number mask, IPv6 traffic class mask, IPv6 flow label mask • Max. 1536 ingress ACL entries • Max. 1024 egress ACL entries • Max. 1024 Access List Numbers Security • Broadcast/Multicast/Unicast Storm Control • D-Link Safeguard Engine • DHCP Server Screening • IP-MAC-Port Binding: DHCP Snooping DHCPv6 Guard IPv4/v6 Source Guard Dynamic ARP Inspection IPv6 ND Inspection IPv6 Route Advertisement (RA) Guard	
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- Duplicate Address Detection (DAD)
- Traffic Segmentation
- SSH:
 - Support v2
 - Support IPv4/IPv6
- SSL:
 - Support TLS 1.0/1.1/1.2
 - Support IPv4/IPv6
- DoS Attack Prevention
- Port Security: Supports up to 64 MAC addresses per port
- Duplicate Address Detection

Operations, Administration, and Management (OAM)

- Cable Diagnostics

Authentication, Authorization, and Accounting (AAA)

- 802.1X Authentication
 - Supports Dynamic VLAN Assignment
 - Supports local/RADIUS database
 - Supports Port-based access control
 - Supports Host-based access control
 - Supports EAP, TLS, TTLS, PEAP
- Support IPv4/IPv6 RADIUS Server
- Guest VLAN
- Trusted Host
 - Support IPv4/v6 host
 - Trusted host for Telnet, HTTP, HTTPS, SSH, Ping

Management

- Web-based GUI
- D-Link Network Assistant Utility
- Full CLI
- Telnet Server

					• TFTP Client • Configurable MDI/MDIX • SNMP: Supports v1/v2c/v3 • SNMP Trap • Smart Wizard • LLDP • LLDP-MED • ICMP v4 • DHCP Relay • DHCP Auto-image • System Log • BootP/DHCP Client • Sntp • ICMP v6 • IPv4/v6 Dual Stack • DHCP Auto Configuration • RMON v1/v2 • Dual Images • Dual Configurations • DNS Client Green V3.0 Technology • Power Saving by: LED Shutoff System Hibernation Port Shutoff MIB/RFC Standards • RFC 783/1350 TFTP Client • RFC 951/1542/2131 BootP/DHCP Client • RFC 1213 MIB II • RFC 1215 MIB Traps Convention • RFC 3612 Power-Ethernet MIB • RFC 3418 SNMPv2-MIB • RFC 2863 Interface Group MIB • RFC 3635 Ethernet-Like MIB • RFC 4293 IP-MIB	
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					• RFC 2819 RMON v1 • RFC 4502 RMON2-MIB • RFC 4188 Bridge MIB • RFC 4363(6) P-Bridge-MIB • RFC 4363(7) Q-Bridge-MIB • RFC 4668 RADIUS Authentication Client MIB • RFC 4292 IP Forward MIB • RFC 4836 MAU MIB • RFC 4133 Entity MIB • RFC 4560(80) PING-MIB • RFC 4560(81) Traceroute-MIB • RFC 3411 SNMP-Framework-MIB • RFC 3414 SNMP-User-Based-MIB • RFC 3412 SNMP-MPD-MIB • RFC 3413(12) SNMP-Target-MIB • RFC 3413(13) SNMP-Notification-MIB • RFC 3415 SNMP-View-Based-ACM-MIB • RFC 3584 SNMP-Community-MIB • D-Link Private MIBs • LLDP MIB • Zone Defense MIB Physical Parameters Power Input • 100 to 240 V AC Maximum Power Consumption • 100 V / 60 Hz: 87.7 W • 240 V / 60 Hz: 85.7 W Standby Power Consumption • 100 V / 60 Hz: 27.6 W • 240 V / 60 Hz: 27.7 W Acoustic • Fan at high speed: 52.3 dB(A) • Fan at low speed: 40.2 dB(A)	
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					Heat Dissipation • 298.4 BTU/hr (100 V) • 290.9 BTU/hr (240 V) MTBF • 574,720 hours Fans • 2 Smart Fans Weight • 3.27 kg Dimensions • 441 x 209.5 x 44 mm Temperature • Operating: -5° to 50°C • Storage: -20° to 70°C Humidity • Operating: 0% to 95% non-condensing • Storage: 0% to 95% non-condensing Certifications • CE Class A • FCC Class A • VCCI Class A • IC • BSMI Safety • UL • CB • BSMI					
Lot nr. 2.2: Switch 48 port	LS 7700G-48P4F-L2M — 48*10/100/1000M RJ45 POE ports + 4*1000M SFP fiber	Shenzhen Acorid Communication Technology Co LTD	China	Comutator de retea tip2 Tip: Manageabil Switch 48+ -ports cu PoE+ Descriere generală: Min. 48 interfețe 10/100/1000 Gigabit Ethernet Min. 4 interfețe Gigabit SFP	<table><tr><td>Model</td><td>LS7700G-48P4F-L2M</td></tr><tr><td>Downlink ports</td><td>48*10/100/1000M Adaptive RJ45 ports</td></tr></table>	Model	LS7700G-48P4F-L2M	Downlink ports	48*10/100/1000M Adaptive RJ45 ports	
Model	LS7700G-48P4F-L2M									
Downlink ports	48*10/100/1000M Adaptive RJ45 ports									

Rackabil 19", 1U
 Performanțe:
 Rata de forwarding: min. 77 Mpps cu pachete de 64B
 Switching bandwidth: min. 104 Gbps
 Min. 8k adrese MAC
 MTU configurabil pana la 9KB
 MTBF minim 800 000 ore
 Memorie și procesor:
 Min. 800 MHz CPU
 Min. 512 MB DRAM
 Min. 256 MB FLASH
 Memoria instalata va trebui sa asigure simultan toate funcționalitate solicitate
 Caracteristici minimale incluse:
 RSTP, MSTP
 Automatic QoS
 Autonegociere pe toate porturile
 Port Security
 LACP, IGMP, NTP
 SNMPv3
 Min. 255 VLAN-uri active
 Voice VLAN
 Switch port autorecovery
 Broadcast, multicast, unicast storm control per port
 Auto-MDIX
 Standarde:
 IEEE 802.1 D Spanning Tree Protocol
 IEEE 802.1p CoS Prioritization
 IEEE 802.1Q VLAN
 IEEE 802.1 sMultiple VLAN
 Instances of Spanning Tree
 IEEE 802.1 w Rapid Reconfiguration of Spanning Tree
 IEEE 802.1x User Authentication

Uplink ports	4*1000M SFP fiber
PoE standard power supply	IEEE 802.3at、IEEE 802.3af
Maximum output power	450W
LED indicator	PWR, Link / Act
transmission mode	IEEE802.3 full duplex flow control and backpressure half duplex flow control
Bandwidth	104Gbps
Packet Forwarding Rate	77.38Mpps
MAC address table	32K
CPU	1GHZ
RAM	4Gb
ROM	32MB
Standard protocol	IEEE802.3i 10 BASE-TX IEEE802.3u 100 BASE-TX IEEE802.3ab 1000 BASE-

IEEE 802.1ab LLDP
 IEEE 802.3ad LACP
 IEEE 802.3x full duplex on 10BASE-T, 100BASE-TX, and 1000BASE-T ports
 IEEE 802.3 10BASE-T specification
 IEEE 802.3u 100BASE-TX specification
 IEEE 802.3ab 1000BASE-T specification
 IEEE 802.3z 1000BASE-X specification
 IEEE 802.3az Energy Efficient Ethernet
 IEEE 802.3af
 IEEE 802.3at

Management:
 Configurare CLI consolă, web
 Alimentare PoE:
 Putere minimă alocată pentru PoE: 370W
 Min. 48 port cu PoE
 Standart PoE suportat:
 IEEE 802.3af PoE
 IEEE 802.3at PoE+
 Alimentare cu energie electrică:
 Min. 1 Sursă de alimentare internă cu suport pentru standardele RM: 220-240V/50 Hz
 Consum de putere:
 Max. 500 W
 Temperatura de operare:
 Interval min. : 0° la 50°C
 Garanție:
 Se acordă garanție minim 2 ani
 Update software gratuit: 2 ani

	T IEEE802.3z 1000 BASE-LX IEEE802.3x Flow Control IEEE802.1p IEEE802.1x IEEE802.1d IEEE802.1s IEEE802.3az EEE
Power supply	AC 100~240V 50/60HZ
Size	440mm × 360mm × 44mm
working temperature	Working Temperature: 0°C~45°C, Humidity: 10% ~ 90% Storage Temperature: -20%~70%, Humidity: 5% ~ 95%
Software specifications	
Hardware watchdog	stand by
PoE management	Support PoE total power settings Support single port PoE power settings Support port PoE power supply priority design Support custom PoE power supply time

Acces la suportul tehnic al
fabricantului: 2 ani Garanția se acordă
la sediul clientului
Accesorii incluse în set:
1x cablu de alimentare energie
electrică cu conector conform
standardelor RM
1x kit de instalare 19" cu toate
cablurile de protecție (împământare),
șuruburile, cât și alte accesorii
necesare instalării și punerii în
funcțiune incluse.

Loop protection	Support ERPS ring protection Support 50MS loop since healing Support BPDU protection, root protection and loopback protection
Link aggregation	Support link aggregation (LACP) Support static polymerization, dynamic aggregation Support for maximum support for 8 aggregation groups Support for source port, source MAC, destination MAC, source IP, destination IP, source IP port, destination IP port
Summing tree (STP)	Support STP (IEEE 802.1D), Support RSTP (IEEE 802.1W) Support edge port Support spanning tree BPDU packet statistics Support root bridge protection, TC protection, BPDU

	protection, BPDU filtering
DHCP	Support DHCP server Support DHCP Snooping Support Option82;
VLAN	Support 802.1q VLAN Maximum support 4094 Support QinQ Support Mac VLAN Support GVRP protocol Support GMRP protocol Support 1: 1 and N: 1 VLAN mapping function Support three port modes: Access, Trunk, and Hybrid, Translation, QinQ Including the foundation in Qinq and flexible in QinQ

Security feature	Based on user grading management and password protection Support for port numbers, IP addresses, MAC addresses limit users access Support HTTPS, SSH V1 / V2, SSL V1 / V2 Support IP-Mac-Port-VLAN binding Support ARP protection, IP source protection, DOS protection Support DHCP Snooping, DHCP Attack Protection Support 802.1x certification, Support port security, port isolation Support port alarm
Access Control (ACL)	Supports L2 (Layer 2) ~ L4 (Layer 4) package filter function Support port mirror, port redirection, flow rate, QoS heavy mark Support Mac ACL Support IP ACL

Service quality (QoS)	Support 8 port queues Support port priority, 802.1p priority, DSCP priority Support SP, WRR, WFQ priority scheduling algorithm
Multicast	Support fast leaving mechanism Support static multicast group, dynamic multicast group Support IGMP Soonping Support multicast filtering, packet statistics, unknown multicast discard
Management and maintenance	Support Web network management (HTTP, HTTPS, SSL V3, TLS V1) Support CLI (Telnet, SSH V1 / V2, local serial port) Support SNMP V1 / V2 / V3, compatible public MIBS Support LLDP, RMON Support Sntp Support CPU monitoring, memory

						monitoring Support system log, hierarchical warning, support remote log server Support port alarm Support HTTP software upgrade, configuring backup import Support TFTP upgrade	
Lot nr. 2.3: Modul optic	OP-MP+813L1SD-10	China	Shenzhen Optostar Optoelectronics Co., LTD	SFP+ 10G Transceiver, SFP-10G-LR, 10 KM, Compatibile cu Echipament din lot 2	SFP+ 10G Transceiver, SFP-10G-LR, 10 KM, Compatibile cu Echipament din lot 2		

Semnat:_____

Numele, Prenumele: Calinin Alexandr

În calitate de: Director comercial

Ofertantul: SRL Lanitron

Adresa: Chisinau, str. Cetatea Alba 43

