

CAIET DE SARCINI Anexa nr. 1
Achiziționarea: Rutere de rețea

Caracteristici tehnici

Environmental Parameters

Min Operating Temperature	0°C
Max Operating Temperature	40 °C
Humidity Range Operating	5 - 95% (non-condensing)

General

Device Type	Router - 8-port switch (integrated)
Enclosure Type	Desktop
Connectivity Technology	Wired
Data Link Protocol	Ethernet, Fast Ethernet, Gigabit Ethernet
Performance	Encryption throughput: 200 Mbps
Network / Transport Protocol	IPSec, PPPoE, DHCP, DNS, L2TPv3
Routing Protocol	OSPF, IS-IS, RIP-1, RIP-2, BGP, HSRP, DVMRP, VRRP, PIM-SM, static IP routing, IGMPv3, GRE, PIM-SSM, policy-based routing (PBR), MPLS, Bidirectional Forwarding Detection (BFD), RSVP
Remote Management Protocol	SNMP, RMON, CLI, TR-069
Encryption Algorithm	DES, Triple DES, SHA, MD5, IKE, ECDSA, 128-bit AES, 256-bit AES, 1024-bit RSA, 2048-bit RSA, 256-bit SHA, 512-bit SHA, 748-bit RSA, 384-bit SHA
Authentication Method	RADIUS
Features	Power over Ethernet (PoE), Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Access Control List (ACL) support, Quality of Service (QoS), Dynamic Multipoint VPN (DMVPN sau echivalentul), 2T2R MIMO technology, NetFlow, Maximum Ratio Combining (MRC), IPFIX, cyclic shift diversity (CSD), Location ID Separation Protocol (LISP), packet aggregation A-MPDU, packet aggregation A-MSDU, Management Information Base (MIB) II, Application Visibility and Control (AVC), Authentication, Authorization and Accounting (AAA), Dynamic Frequency Selection (DFS), Encapsulated Remote SPAN (ERSPAN), Embedded Event Manager (EEM)
Compliant Standards	IEEE 802.3af, IEEE 802.11i, IEEE 802.3ah, IEEE 802.1ag, IEEE 802.3at, IEEE 802.11r, CISPR 24, EN55022, ICES-003, EN55024, CISPR 22, CB, EN 61000-6-1, EN 61000-4-4, EN 61000-4-2, EN 61000-4-3, EN 61000-4-6, EN 61000-4-5, EN

	61000-4-11, FCC CFR47 Part 15, EN300-386, UL 60950-1 Second Edition, EN 301.511, VCCI V-3, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, AS/NZS CISPR 22, CNS 13438, EN61000-3-2, EN61000-3-3, EN 301.489-7, EN 301.489-24, EN 301 489-1, EN 301.908-1, EN 301.908-2, EN 301.908-13, FCC CFR47 Part 22, FCC CFR47 Part 24, CAN/CSA C22.2 No. 60950-1 Second Edition
RAM	>=4 GB
Flash Memory	>=4 GB

Expansion / Connectivity

Interfaces	WAN/LAN: 1 x 1000Base-T/1000Base-X - RJ-45/SFP WAN: 1 x 1000Base-T - RJ-45 LAN: 2 x 1000Base-T - RJ-45 LAN: 2 x 1000Base-T (PoE+) - RJ-45 LAN: 4 x 1000Base-T (PoE) - RJ-45 USB 3.0: 1 x console
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Power

Voltage	AC 120/230 V (50 - 60 Hz)
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1. Valoarea estimată a achiziției , fără TVA, - 1 BUC : 68 112,00 MDL

Environmental Parameters
Caracteristici tehnici

Anexa nr. 2 la Caietul de sarcini

Min Operating Temperature	0 °C
Max Operating Temperature	40 °C
Humidity Range Operating	10- 85% (non-condensing)
Type	Wireless cellular modem
Cellular Protocol	UMTS, HSPA+, DC-HSPA+, LTE Advanced, FDD LTE, TDD LTE, TD-SCDMA 39
Protocols & Specifications	ITU G.992.5, ITU G.992.3 Annex A, ITU G.993.2, ITU-T G.992.1

General

Device Type	Router - 4-port switch (integrated)
Enclosure Type	Desktop
Connectivity Technology	Wired
Data Link Protocol	Ethernet, Fast Ethernet, Gigabit Ethernet, HDLC, Frame Relay, PPP, MLPPP, MLFR
Performance	Crypto performance: 50 Mbps
Network / Transport Protocol	IPSec, PPPoE, DNS, L2TPv3
Routing Protocol	OSPF, RIP, IS-IS, RIP-1, BGP, DVMRP, PIM-SM, IGMPv3, PIM-SSM, IPv4-to-IPv6 Multicast, RSVP
Remote Management Protocol	SNMP, RMON
Encryption Algorithm	Triple DES, SHA, MD5, AES, WPA2, 128-bit AES, 256-bit AES, 1024-bit RSA, 2048-bit RSA, 384-bit SHA-2, 256-bit SHA, 512-bit SHA, 768-bit AES, ECDSA 256-bit, ECDSA 384-bit
Authentication Method	RADIUS
Features	DHCP support, power over Ethernet (PoE), load balancing, MPLS support, VLAN support, Syslog support, IPv6 support, Dying Gasp support, Class-Based Weighted Fair Queuing (CBWFQ), Weighted Random Early Detection (WRED), Virtual Route Redundancy Protocol (VRRP) support, Access Control List (ACL) support, Quality of Service (QoS), Dynamic Multipoint VPN (DMVPN sau echivalentul), SMS alert, Bidirectional Forwarding Detection (BFD), IPv4 support, NetFlow, Maximum Ratio Combining (MRC), Hot Standby Router Protocol (HSRP) support, Call Home function support, IPFIX, Generic

	Routing Encapsulation (GRE), automatic Internet Key Exchange, cyclic shift diversity (CSD), Location ID Separation Protocol (LISP), packet aggregation A-MPDU, packet aggregation A-MSDU, Application Visibility and Control (AVC), 3G MIB, failover protection, Field Programmable Gate Array, AES encryption, policy based routing, Authentication, Authorization and Accounting (AAA), Dynamic Frequency Selection (DFS), Hierarchical Quality of Service (HQoS), Layer 3 VPN (L3VPN) support, Embedded Event Manager (EEM), Multigroup HSRP (MHSRP), Ethernet Virtual Connections (EVC), Service-Level Agreements (IPSLA), Network-Based Application Recognition (NBAR), Multichannel-Interface-Processor (MIP), dual SIM support
Compliant Standards	IEEE 802.11i, IEEE 802.3ah, IEEE 802.1ag, IEEE 802.11r, EN55022, ICES-003, CISPR 22, FCC CFR47 Part 15, EN300-386, UL 60950-1, IEC 60950-1, EN 60950-1, EN 301.511, CAN/CSA C22.2 No. 60950-1, VCCI V-3, EN 60950-1 Second Edition, IEC 60950-1 Second Edition, AS/NZS CISPR 22, CNS 13438, EN61000-3-2, EN61000-3-3, EN 301.489-7, EN 301.489-24, EN 301 489-1, EN 301.908-1, EN 301.908-2, EN 301.908-13, FCC CFR47 Part 22, IEEE 802.3at, CB 60950-1, IEEE 802.1Q
RAM	>=4 GB
Flash Memory	>=4 GB

Expansion / Connectivity

Interfaces	LAN: 2 x 10Base-T/100Base-TX/1000Base-T - RJ-45 LAN: 2 x 10Base-T/100Base-TX/1000Base-T (PoE) - RJ-45 LAN: 1 x 10Base-T/100Base-TX/1000Base-T (PoE+) - RJ-45 USB 3.0: 1 x console WAN: 1 x 1000Base-T - SFP (mini-GBIC) WAN: 1 x 1000Base-T - RJ-45 WAN: 1 x RJ-45 Antenna: 1 x GPS connector
Expansion Slots	1 (total) / 1 (free) x SIM

Power

Voltage Required	AC 120/230 V (50 - 60 Hz)
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Bunurile vor fi livrate în termen de 31 zile după încheierea contractului.
Bunurile livrate vor fi noi, corespunzătoare echipamentului solicitat.

1. Termenul de livrare/prestare solicitat și locul destinației finale:

Livrarea produselor se va face în termenii de executare a contractului. Transportul și instalarea produselor se va asigura de către furnizor pe cheltuiala sa, cu mijloacele proprii până la sediul beneficiarului, respectiv Chișinău, str. Toma Ciorbă, 32, et. 3

Documentele/cerințele de calificare pentru operatorii economici includ următoarele:

Nr.	Denumirea documentului/cerinței	Cerințe suplimentare față de document
1	Oferta comercială	original
2	Certificat de înregistrare a întreprinderii sau din Registrul de Stat	Copie, confirmată prin aplicarea semnăturii și ștampilei Participantului
3	Declarație/certificat de la Serviciul Fiscal de privind lipsa datoriilor la buget	Copie, confirmată prin aplicarea semnăturii și ștampilei Participantului
4	Certificat de atribuire a contului bancar, copie eliberată de la banca deținătoare de cont	Copie, confirmată prin aplicarea semnăturii și ștampilei Participantului
5	Licență/ document ce atestă dreptul de a livra	Copie, confirmată prin aplicarea semnăturii și ștampilei Participantului
6	Certificat de conformitate	original
7	Garanție	12 luni.

2. Valoarea estimată a achiziției, fără TVA, lei – 3 buc. : 146 404,00 MDL

Total: valoarea achiziției F/TVA a Ruterelor de rețea constituie 214 516,00 lei MD.

Conducătorul grupului de lucru:



Constantin GORINCIOI