Equipment Technical Specifications

LOT 1

*All requirements are minimum and obligatory, no EOS or EOL components/equipment allowed.

** All switches must have physical and virtual stacking capability.

*** All features and functionalities of switches below must come with hardware purchase without any additional costs related to licenses and/or subscriptions

		Technical Specifications		Q-ty
Network Switch	**IO and Performance**	Ports	RJ45 PoE+ GbE – **24** / SFP+ 10 GbE - **4**	10
		Throughput	Up to 95 Mpps	
		Switching capacity	Up to 128 Gbps	
	Switching Capabilities	IEEE: 802.1p QoS, 802.1ab LLDP-MED, 802.1s and/or 802.1w, 802.1d; IGMP multicast snooping; LACP; MAC table 32k; PIM		
	L3 routing	Static IP routing, OSPF, RIPv1, v2, ng, policy-based routing		
	Security	IEEE 802.1x, ACLs, DHCP snooping, detection and blocking; RADIUS and TACACS+ support; STP Enhancements: BPDU guard, Root guard, Loop guard; MAC protection		
	Power/Environment	Power supply	Internal	
		Power consumption	Up to 450 W	
		PoE	370 W PoE+	
		Operating temp.	0 to 45 (Celsius)	
		Operating humid.	15-95% non-condensing	
	Warranty and Support	- 5 years worldwide, evidence of authorized/official service center in Republic of Moldova - hardware and/or components shipment and replacement including labor up to 30 business days.		

	Technical Specifications			Q-ty
Network Switch	**IO and Performance**	*Ports*	*RJ45 PoE+ GbE – 48 / SFP+ 10 GbE - 4*	2
		Throughput	*Up to 77 Mpps*	
		Switching capacity	*Up to 104 Gbps*	
	Switching Capabilities	*IEEE: 802.1p QoS, 802.1ab LLDP-MED, 802.1s and/or 802.1w, 802.1d; IGMP multicast snooping; LACP; MAC table 32k; PIM*		
	L3 routing	*Static IP routing, OSPF, RIPv1, v2, ng, policy-based routing*		
	Security	*IEEE 802.1x, ACLs, DHCP snooping, detection and blocking; RADIUS and TACACS+ support; STP Enhancements: BPDU guard, Root guard, Loop guard; MAC protection*		
	Power/Environment	*Power supply*	*Internal*	
		Power consumption	*Up to 950W*	
		PoE	*740 W PoE+*	
		Operating temp.	*0 to 45 (Celsius)*	
		Operating humid.	*15-95% non-condensing*	
	Warranty and Support	- *5 years worldwide, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement including labor up to 30 business days.*		

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		Technical Specifications		Q-ty
Network Switch	**IO and Performance**	*Ports*	*10 GbE SFP+ - **24** / 1/10/25 GbE SFP+ - **4***	1
		Throughput	*Up to 700 Mpps*	
		Switching capacity	*Up to 900 Gbps*	
	Switching Capabilities	*IEEE: 802.1p QoS, 802.1ab LLDP-MED, 802.1s and/or 802.1w, 802.1d; IGMP multicast snooping; LACP; MAC table 32k; PIM*		
	L3 routing	*BGP, EVPN, VXLAN, VRF, Static IP routing, OSPF, RIPv1, v2, ng, policy-based routing*		
	Security	*IEEE 802.1x, ACLs, DHCP snooping, detection and blocking; RADIUS and TACACS+ support; STP Enhancements: BPDU guard, Root guard, Loop guard; MAC protection*		
	Power/Environment	*Power supply*	*Internal*	
		Power consumption	*Up to 950W*	
		PoE	*740 W PoE+*	
		Operating temp.	*0 to 45 (Celsius)*	
		Operating humid.	*15-95% non-condensing*	
	Warranty and Support	- *5 years worldwide, evidence of authorized/official service center in Republic of Moldova,* - *hardware and/or components shipment and replacement including labor up to 30 business days.*		

Technical Specifications	Q-ty
SFP Optical Module	*Options:* - *1Gb SFP SFM Transceiver,* - *LC LX 10km* - *Warranty – 5 years*	26

LOT 2

All requirements are minimum and obligatory, no EOS or EOL components/equipment allowed.

		Technical Specifications		Q-ty
Network Firewall	**Form Factor**	*rack-mounted/desktop and/or chassis included*		1
	Technology	*NGFW + SD-WAN with enterprise security*		
	Interfaces	*LAN Ge RJ 45 – **8**, WAN Ge RJ45/SFP shared – **2;** USB and/or console - **1***		
	Performance	*Throughput*	*IPv4 – up to 10 Gbps; PPS – up to 10 Mpps; IPsec VPN – up to 6.5 Gbps; SSL VPN – up to 950 Mbps; IPS – up to 1.4 Gbps; NGFW – up to 1 Gbps; SSL Inspection – up to 750 Mbps; Concurrent sessions (TCP) – up to 1.5 million*	
		VPN	*GtG IPsec tunnels – up to 200; CtG IPsec tunnels – up to 2500; Concurrent SSL-VPN users – 200;*	
	Integrated services	*Enterprise-level security services that enable detection and prevention of known and zero-day threats, vulnerabilities and attacks in real-time.*		
	Power/Environment	*Power supply*	*Internal/External*	
		Operating temp.	*0 to 40 (Celsius)*	
		Operating humid.	*15-90% non-condensing*	
	Licensing/Software	- *3 years full bundle, including but not limited to – Cloud and IoT security, Threat protection, Application control, Web filtering, Malware protection, Mobile security, Intrusion Prevention, Antispam, Viral outbreak protection, etc.*		
	Warranty and Support	- *3 years worldwide, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement including labor up to 30 business days.* - *NBD Support services including hardware and software interventions*		

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Technical Specifications				Q-ty
Type		Outdoor AP		
Technology		NGFW + SD-WAN with enterprise security		
Interfaces		LAN Ge RJ 45 – **8**, WAN Ge RJ45/SFP shared – **2;** USB and/or console - **1**		
Performance		Throughput	IPv4 – up to 10 Gbps; PPS – up to 10 Mpps; IPsec VPN – up to 6.5 Gbps; SSL VPN – up to 950 Mbps; IPS – up to 1.4 Gbps; NGFW – up to 1 Gbps; SSL Inspection – up to 750 Mbps; Concurrent sessions (TCP) – up to 1.5 million	
		VPN	GtG IPsec tunnels – up to 200; CtG IPsec tunnels – up to 2500; Concurrent SSL-VPN users – 200;	
Integrated services		Enterprise-level security services that enable detection and prevention of known and zero-day threats, vulnerabilities and attacks in real-time.		8
Power/Environment		Power supply	Internal/External	
		Operating temp.	0 to 40 (Celsius)	
		Operating humid.	15-90% non-condensing	
Licensing/Software		- 3 years full bundle, including but not limited to – Cloud and IoT security, Threat protection, Application control, Web filtering, Malware protection, Mobile security, Intrusion Prevention, Antispam, Viral outbreak protection, etc.		
Warranty and Support		- 3 years worldwide, evidence of authorized/official service center in Republic of Moldova - hardware and/or components shipment and replacement including labor up to 30 business days. - NBD Support services including hardware and software interventions		

(Row label spanning left column: **Wireless Access Point**)

LOT 3

*All requirements are minimum and obligatory, no EOS or EOL components/equipment allowed.

		Technical Specifications	Q-ty
UPS	**Power Out**	*VA/Watts – 1500/1100*	8
	Form Factor	*Rackmount 1/2U*	
	IO	*IC – C14, OC – 6 x IEC C13*	
	Interface	*LCD, front panel*	
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement for up to 30 business days.*	
UPS	**Power Out**	*VA/Watts – 3000/2700*	2
	Form Factor	*Rackmount 1/2U*	
	IO	*IC – IEC C-20, OC – 8 x IEC C13, 1x IEC C-19*	
	Interface	*LCD, front panel*	
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement including labor up to 30 business days.*	

LOT 4

*All requirements are minimum and obligatory, no EOS or EOL components/equipment allowed.

*** All features and functionalities of equipment below must come with hardware purchase without any additional costs related to licenses and/or subscriptions

Technical Specifications			Q-ty
Network Video Recorder	**Form Factor**	*19" rack-mounted or chassis included*	5
	Display/Cameras	*Channels*	*32*	
		Network Bandwidth	*Up to 1024 Mbps recording*	
		Resolution	*Up to 32 MP@30fps*	
		Multi-screen Display, 1---36, max 32 IP cameras,		
	Decoding capabilities	*From 160-channel D1@30fps to 2-channel 32 MP@30fps*		
	Video Compression	*Smart H.265+, H.265; Smart H.264+, H.264; MPEG, MJPEG*		
	Storage	*RAID 0/1/5/6/10; 8 x SATA interfaces (max. 16TB x 8)*		
	Interface	*Audio IO*	*RCA*	
		Network	*RJ-45, up to 2500 Mbps*	
		IO	*eSATA, RS-232, RS-485, USB 2.0, USB 3.0, HDMI x 4, VGA x 2*	
		Power Supply	*Redundant*	
	Interoperability	*ONVIF ready – app and/or browser through iOS and/or Android, PC (Win)*		
	Environment	*Operating temperature*	*-10 to +55 (Celsius)*	
		Operating humidity	*10 to 93 % (RH)*	
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement up to 30 business days.*		

Technical Specifications			Q-ty
ANPR Camera	**Sensor**	*1/1.8 Progressive Scan CMOS*		14
	Resolution	*Up to 2688 x 1520*	*4Mp – 25/30 fps, 2Mp – 50/60 fps*	
	Lens	*2.8mm, FoV up to 110°, Supplement light range up to 60m; WDR – 140 DB,*		
	Video Compression	*H.265/H.264/H.264H/H264B; MJPEG*		
	Storage	*microSD (up to 256 GB); FTP/SFTP/NAS via network;*		
	Interface	*Audio IO*	*line-in, line-out;*	
		Network	*RJ-45 10/100 Mbps;*	
		Power Supply	*12 to 24 V DC / POE (802.3af)*	
	Smart functions	*Entrance/exit perimeter/line, Motion detection, Alarm, Video-Tamper, Unauthorized access, etc.*		
	Environment	*Protection*	*IP 67, IK 10*	
		Operating temperature	*-40 to +60 (Celsius)*	
		Operating humidity	*up to 95% (non-condensing)*	
	Accessories	*Mounting bracket and/or box included*		
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement up to 30 business days.*		

Technical Specifications			Q-ty
Surveillance Camera	**Sensor**	*1/2.9 Progressive Scan CMOS*		66
	Resolution	*Up to 2688 x 1520*	*4Mp – 25/30 fps, 2Mp – 50/60 fps*	
	Lens	*Varifocal 2.8mm-9mm, FoV up to 110°, Supplement light range up to 60m; WDR – 140 DB,*		
	Video Compression	*H.265/H.264/H.264H/H264B; MJPEG*		
	Storage	*microSD (up to 256 GB); FTP/SFTP, NAS via network;*		
	Interface	*Audio IO*	*line-in, line-out;*	
		Network	*RJ-45 10/100 Mbps;*	
		Power Supply	*12 to 24 V DC / POE (802.3af)*	
	Smart functions	*Entrance/exit perimeter/line, Motion detection, Alarm, Video-Tamper, Unauthorized access, etc.*		
	Environment	*Ingress Protection*	*IP 67*	
		Operating temperature	*-40 to +60 (Celsius)*	
		Operating humidity	*up to 95% (non-condensing)*	
	Accessories	*Mounting racket and/or box included*		
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement up to 30 business days.*		

Technical Specifications			Q-ty
Surveillance Camera (DOME)	**Sensor**	*1/2.8 Progressive Scan CMOS*	4
	Resolution	*Up to 2560 x 1440* — *4Mp – 25/30 fps, 2Mp – 50/60 fps*	
	Lens/Camera/PTZ	- *Speed Dome, 4.8 mm-120 mm, Zoom: 25x optical, 16 x digital; Aperture range F1.6 to F3.5* - *Day and night, WDR – 120 DB, IR – up to 100m, min illumination: color – 0.005 Lux @F1.6, b/w – 0.001Lux@F1.6* - *PTZ – 360⁰, patrol scan with up to 8 patrols and 32 presets, up to 4 pattern scans, 3D and PTZ positioning, scheduled tasks*	
	Video Compression	*H.265+/H.265/H.264+/H.264; MJPEG*	
	Storage	*microSD (up to 256 GB); FTP/SFTP/NFS/SMB/CIFS via network;*	
	Interface	*Audio IO* — *line-in, line-out;* *Network* — *RJ-45 10/100 Mbps;* *Power Supply* — *12 V DC / POE+ (802.3at)*	
	Smart functions	- *Basic: Motion detection, Video-Tamper, Intrusion, Line-Crossing, Region entrance-exit, Object removal, Unattended baggage, Audio exception* - *Advanced: deep learning – classification, face captures in motion, alarm-triggering support by specified target types (human, vehicle, etc.)*	
	Environment	*Protection* — *IP 66, surge and voltage protection* *Operating temperature* — *-30 to +60 (Celsius)* *Operating humidity* — *up to 90% (non-condensing)*	
	Warranty and Support	- *3 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement up to 30 business days.*	

	Technical Specifications		Q-ty
HDD	**Features**	*Designed for operation in video solutions (surveillance, etc.), compatibility with storage systems (NAS, etc.)*	40
	Form Factor/Interface/Storage	*3.5", SATA, 10 TB*	
	Speed/TR/Cache/Recording	*7200 RPM, up to 256MB/s, 256 MB, CMR*	
	Environment	*Operating temp: 0 to 65 (Celsius)*	
	Warranty and Support	- *5 years, evidence of authorized/official service center in Republic of Moldova* - *hardware and/or components shipment and replacement for up to 30 business days.*	

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