

PROIECT TEHNIC

**DOTAREA SI PUNEREA IN FUNCTIUNE A
CENTRULUI DE MONITORIZARE IN TIMP REAL A
SITUATIEI DIN COMUNA BLAJENI SI A SISTEMULUI
DE SUPRAVEGHERE A DOMENIULUI PUBLIC, CU
FUNCTII AVANSATE, ACHIZITIONAREA UNOR
DRONE DE SUPRAVEGHERE, ACHIZITIONAREA SI
PUNEREA IN FUNCTIUNE A UNOR ELEMENTE DE
MOBILIER URBAN, JUDETUL HUNEDOARA**

COD PROIECT: AMT2026

Beneficiar: Comuna BLAJENI, Județul HUNEDOARA
Elaborator: SC AMT CRISANA TRAVEL SRL SRL

Intocmit: ing. LEUCE LAVINIU

Verificat: administrator Ana Maria Tiro



DATE GENERALE

CAPITOLUL 1 SISTEM DE SUPRAVEGHERE A DOMENIULUI PUBLIC

CAPITOLUL 2 DRONE

CAPITOLUL 3 ELEMENTE DE MOBILIER URBAN

DATE GENERALE

1. Date generale și localizarea investiției

1.1. Denumirea investiției:

DOTAREA SI PUNEREA IN FUNCTIUNE A CENTRULUI DE MONITORIZARE IN TIMP REAL A SITUATIEI DIN COMUNA BLAJENI SI A SISTEMULUI DE SUPRAVEGHERE A DOMENIULUI PUBLIC, CU FUNCTII AVANSATE, ACHIZITIONAREA UNOR DRONE DE SUPRAVEGHERE, ACHIZITIONAREA SI PUNEREA IN FUNCTIUNE A UNOR ELEMENTE DE MOBILIER URBAN, JUDETUL HUNEDOARA.

1.2. Amplasamentul proiectului, inclusiv vecinătățile și adresa obiectivului:

Comuna BLAJENI

Toate lucrarile se afla pe domeniul public, pe urmatoarele numere cadastrale: 62102; 62075; 61832; 62060; 62100;

1.3. Date de identificare a titularului/beneficiarului proiectului/modificării:

a) Denumirea titularului: Comuna Blajeni

b) Adresa titularului, telefon, fax, adresa de e-mail:

Adresa: Comuna Blajeni, sat Blajeni, str. Principala, Nr. 85, județul Hunedoara Cod de identificare fiscală: 4374130

1.4. Elaboratorul proiectului:

SC AMT CRISANA TRAVEL SRL

Adresa sediu : sat Gepis, nr.7B, loc. Lazareni, judetul Bihor
CIF RO39791920

Adresa e-mail: amtcrisanatravel@gmail.com

1.5. Autoritatea contractanta:

U.A.T. Comunei Blajeni, Județul Hunedoara

1.6. Ordonator principal de credite/investitor:

U.A.T. Comunei Blajeni, Județul Hunedoara

1.7. Ordonator de credite (secundar/terțiar)

Nu e cazul

1.8. Beneficiarul investiției

Comuna Blajeni

MEMORIU TEHNIC

CAP. 1 SISTEM DE SUPRAVEGHERE A DOMENIULUI PUBLIC

1.9. Tema, cu fundamentarea necesității și oportunității investiției:

Tinând cont de creșterea ratei de criminalitate în județul Hunedoara și din dorința de a menține un climat social optim precum și pentru protecția investițiilor realizate de către primăria Blajeni se impune realizarea unui sistem TVCI stradal pe fibra optică în comuna Blajeni.

În acest moment NU există în comuna Blajeni un sistem TVCI.

De asemenea se impune pe lângă camere video de ansamblu și camere specializate pentru numerele de înmatriculare, camere denumite LPR (licence plate recognition) și înregistratoare dedicate pentru numerele de înmatriculare (NVR cu soft LPR inclus)

Acest proiect are la bază următoarele legi: Legea 333/2003 – privind paza obiectivelor, bunurilor, valorilor și protecția persoanelor; HG 301/2012 – normele metodologice de aplicare a legii 333/2003; HG 1002/2015 – actualizarea HG 301/2012, Regulamentul european GDPR 679/2016 privind datele cu caracter personal și Legea 230/2006 – privind dreptul primăriilor de a monta camerele de supraveghere pe stalpii Electrica.

2. Descrierea generală a investiției

Obiectivul prezentei investiții este de a instala 4 camere video cu soft de recunoaștere și creare de bază de date cu numerele de înmatriculare precum și a 36 de camere video de ansamblu și realizarea unui circuit de fibra optică de la camere amplasate pe stalpii Electrica, la înregistratoarele lor.

Pe stalpii electrici unde se montează camere se pun cutii de conexiune iar camerele vin montate pe aceste cutii de conexiune. Cutiile de conexiune vor fi montate astfel încât să nu producă pagube stalpilor electrici (stalpii Electrica nu vor fi găuriți pentru prinderea cutiilor pe aceștia). Cutiile de conexiune vor fi prinse de stalpii Electrica cu platbande metalice astfel se păstrează integritatea stalpilor Electrica.

Camerele video vor fi alimentate de la stalpul de care sunt instalate. Alimentarea camerelor se face prin surse de alimentare de 12V 1A.

Alimentarea de curent electric cu 220 V se va face doar de personal autorizat. Alimentarea cu curent electric de 220 V este necesară doar în poziția unde va exista montată pe stalp o cutie de conexiune ce este asigurată cu o siguranță automată.

Camerele video cu recunoasterea numerelor auto (LPR) au urmatoarele caracteristici sau caracteristici asemnatoare:

HIKVISION

IDS-2CD7A26G0/P-IZHS(Y)

2 MP ANPR IR Varifocal Bullet Network Camera

DarkFighter



• DeepinView^{series}

- High quality imaging with 2 MP resolution
- Excellent low-light performance via DarkFighter technology
- Clear imaging against strong back light due to 140 dB WDR technology
- License Plate Recognition
- Efficient H.265+ compression technology to save bandwidth and storage
- 5 streams to meet a wide variety of applications
- Water and dust resistant (IP67) and vandal proof (IK10)

• Specification

Camera

Image Sensor	1/1.6" Progressive Scan CMOS
Max. Resolution	1920 × 1080
Min. Illumination	Color: 0.0005 Lux @ (F1.2, AGC ON) B/W: 0.0001 Lux @ (F1.2, AGC ON), 0 Lux with IR
Shutter Time	1 s to 1/100,000 s
Day & Night	IR cut filter Blue glass module to reduce ghost phenomenon
Lens	2.8 to 12 mm, horizontal FOV: 114.5° to 41.8°, vertical FOV: 59.3° to 23.6°, diagonal FOV: 141.1° to 48° 8 to 32 mm, horizontal FOV: 42.5° to 15.1°, vertical FOV: 23.3° to 8.64°, diagonal FOV: 49.6° to 17.3°
Focal Length & FOV	
Focus	Auto, semi-auto, manual
Iris Type	P-Iris
Aperture	2.8 to 12 mm: F1.2 to F2.5 8 to 32 mm: F1.7 to F1.75
DOF	Wide: 2.8 to 12 mm: D: 45 m, O: 17.9 m, R: 9 m, I: 4.5 m 8 to 32 mm: D: 112.7 m, O: 44.8 m, R: 22.6 m, I: 11.3 m Tele: 2.8 to 12 mm: D: 111.8 m, O: 44.3 m, R: 22.4 m, I: 11.2 m 8 to 32 mm: D: 300 m, O: 119.0 m, R: 60 m, I: 30 m
Illuminator	
Supplement Light Type	IR
Supplement Light Range	2.8 to 12 mm: 50 m 8 to 32 mm: 100 m
Smart Supplement Light	Yes
IR Wavelength	850 nm
Video	
Main Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720) 60 Hz: 30 fps (1920 × 1080, 1280 × 720)
Sub-Stream	50 Hz: 25 fps (704 × 576, 640 × 480) 60 Hz: 30 fps (704 × 480, 640 × 480)
Third Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60 Hz: 30 fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Fourth Stream	50 Hz: 25 fps (1920 × 1080, 1280 × 720, 704 × 576, 640 × 480) 60 Hz: 30 fps (1920 × 1080, 1280 × 720, 704 × 480, 640 × 480)
Fifth Stream	50 Hz: 25 fps (704 × 576, 640 × 480) 60 Hz: 30 fps (704 × 480, 640 × 480)

Image Enhancement	5LC, HLC, Defog, 3D DNR
Picture Overlay	LOGO picture can be overlaid on video with 128 × 128 24bit bmp format
Image Stabilization	EIS
Interface	
Video Output	1 Vp-p Composite Output (75 Ω/CRS) (Only for debugging)
Ethernet Interface	1 RJ45 10 M/100 M/1000 M self-adaptive Ethernet port
On-Board Storage	Built-in memory card slot, support microSD/microSDHC/microSDXC card, up to 1 Tb
Audio	With -Y: 1 Input (line in), 1 output (line out), 3.5 mm connector
Alarm	2 Input, 2 outputs (max. 24 VDC, 1 A)
RS-485	With -Y: 1 RS-485 (half duplex, HikVISION, Pelco-P, Pelco-D, self-adaptive)
Reset Key	Yes
Power Output	With -Y: 12 VDC, max. 100 mA
Wiegand	-Y: 1 Wiegand (CardID 26bit, SIA-1 26bit, Hik 34bit, NEWG 72bit)
Event	
Basic Event	Motion detection, video tampering alarm, exception (network disconnected, IP address conflict, illegal login, abnormal reboot, HDD full, HDD error), video quality diagnosis, vibration detection
Smart Event	Line crossing detection, intrusion detection, region entrance detection, region exiting detection, audio exception detection, scene change detection, defocus detection
Linkage	Upload to FTP/NAS/memory card, notify surveillance center, send email, trigger alarm output, trigger recording, trigger capture, audible warning
Deep Learning Function	
Perimeter Protection	Line crossing, intrusion, region entrance, region exiting Support alarm triggering by specified target types Blocklist and allowlist: up to 10,000 records
Road Traffic and Vehicle Detection	Support license plate recognition of motorcycles (only in checkpoint scenario) Support vehicle attribute detection, including vehicle type, color, brand, etc. (City Street mode is recommended.) License plate recognition rate ≥98%
Metadata	Intrusion detection, line crossing detection, region entrance detection, region exiting detection, road traffic
General	
Power	12 VDC ± 20%, 1.19 A, max. 14.28 W, three-core terminal block PoE: 802.3at, Type 2, Class 4, 42.5 V to 57 V, 0.395 A to 0.295 A, max. 16.9 W
Material	Aluminum alloy body
Dimension	Without -Y: Ø144 × 347 mm (Ø5.7" × 13.7") With -Y: Ø140 × 351 mm (Ø5.5" × 13.8")
Package Dimension	405 × 190 × 180 mm (15.9" × 7.5" × 7.1")
Weight	Approx. 1950 g (4.2 lb.)
With Package Weight	Approx. 3070 g (6.7 lb.)
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F), Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-40 °C to 60 °C (-40 °F to 140 °F), Humidity 95% or less (non-condensing)

Camerele video de ansamblu trebuie sa aiba caracteristici asemanatoare cu cele de mai jos:

HIKVISION

DS-2CD2T83G2-2I/4I

8 MP AcuSense Fixed Bullet Network Camera

AcuSense



Empowered by deep learning algorithms, Hikvision AcuSense technology brings human and vehicle targets classification alarms to front- and back-end devices. The system focuses on human and vehicle targets, vastly improving alarm efficiency and effectiveness.

- High quality imaging with 8 MP resolution
- Efficient H.265+ compression technology
- Clear imaging against strong backlight due to 120 dB WDR technology
- Focusing on human and vehicle classification based on deep learning
- Water and dust resistant (IP67)

• Specification

Camera

Image Sensor	1/2.8" Progressive Scan CMOS
Min. Illumination	Color: 0.005 Lux @ (F1.6, AGC ON), B/W: 0 Lux with IR
Shutter Speed	1/3 s to 1/100,000 s
Slow Shutter	Yes
P/N	P/N
Wide Dynamic Range	120 dB
Day & Night	IR cut filter
Angle Adjustment	Pan: 0° to 360°, tilt: 0° to 90°, rotate: 0° to 360°
Lens	
Lens Type	Fixed focal lens, 2.8, 4, and 6 mm optional
Focal Length & FOV	2.8 mm, horizontal FOV 107°, vertical FOV 57°, diagonal FOV 128° 4 mm, horizontal FOV 87°, vertical FOV 46°, diagonal FOV 105° 6 mm, horizontal FOV 54°, vertical FOV 29°, diagonal FOV 63°
Lens Mount	M12
Iris Type	Fixed
Aperture	F1.6
DORI	
	2.8 mm: D: 88 m, O: 35 m, R: 17 m, I: 9 m
DORI	4 mm: D: 108 m, O: 43 m, R: 22 m, I: 11 m
	6 mm: D: 177 m, O: 70 m, R: 35 m, I: 18 m
Illuminator	
Supplement Light Type	IR
Smart Supplement Light	Yes
IR Wavelength	850 nm
IR Range	-2I: up to 60 m -4I: up to 80 m
Video	
Max. Resolution	3840 × 2160 50 Hz: 20 fps (3840 × 2160)
Main Stream	25 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720) 60 Hz: 20 fps (3840 × 2160)
	30 fps (3200 × 1800, 2688 × 1520, 1920 × 1080, 1280 × 720)
Sub Stream	50 Hz: 25 fps (640 × 480, 640 × 360) 60 Hz: 30 fps (640 × 480, 640 × 360)
Third Stream	50 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360) 60 Hz: 10 fps (1920 × 1080, 1280 × 720, 640 × 480, 640 × 360)
	*Third stream is supported under certain settings.
Video Compression	Main stream: H.265/H.264/H.264+/H.265+ Sub-stream: H.265/H.264/MJPEG Third stream: H.265/H.264
	*Third stream is supported under certain settings.
Video Bit Rate	32 Kbps to 16 Mbps

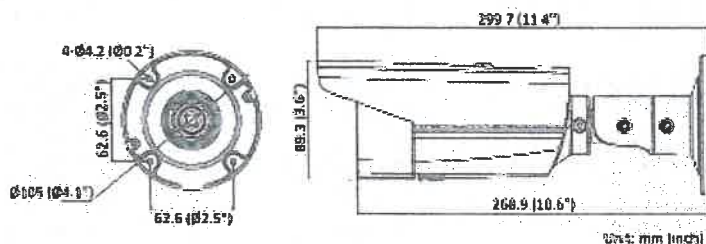
H.264 Type	Baseline Profile/Main Profile/High Profile
H.265 Type	Main Profile
H.264+	Main stream supports
H.265+	Main stream supports
Bit Rate Control	CBR/VBR
Scalable Video Coding (SVC)	H.264 and H.265 encoding
Region of Interest (ROI)	1 fixed region for main stream and sub-stream
Network	
Protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, NTP, UPnP, SMTP, IGMP, 802.1X, QoS, IPv4, IPv6, UDP, Bonjour, SSL/TLS, PPPoE, SNMP
Simultaneous Live View	Up to 6 channels
API	Open Network Video Interface (Profile S, Profile G), ISAPI, SDK
User/Host	Up to 32 users, 3 user levels: administrator, operator and user
Security	Password protection, complicated password, HTTPS encryption, IP address filter, Security Audit Log, basic and digest authentication for HTTP/HTTPS, TLS 1.1/1.2, WSSE and digest authentication for Open Network Video Interface
Network Storage	NAS (NFS, SMB/CIFS), auto network replenishment (ANR)
Client	NMS-4200, Hik-Connect, Hik-Central
Web Browser	Plug-in required live view: IE 10, IE 11 Plug-in free live view: Chrome 57.0+, Firefox 52.0+ Local service: Chrome 57.0+, Firefox 52.0+
Image	
Image Parameters Switch	Yes
Image Settings	Rotate, mirror, privacy mask, saturation, brightness, contrast, sharpness, gain, white balance adjustable by client software or web browser
Day/Night Switch	Day, Night, Auto, Schedule
Image Enhancement	BLC, HLC, 3D DNR
SNR	≥ 52 dB
Interface	
Ethernet Interface	1 RJ45 10 M/100 M self-adaptive Ethernet port
On-board Storage	Built-in memory card slot, support micro SD card, up to 256 GB
Hardware Reset	Yes
Event	
Basic Event	Motion detection (human and vehicle targets classification), video tampering alarm, exception
Smart Event	Line crossing detection, intrusion detection, human and vehicle targets classification
Face Detection	Yes
General	
Linkage Method	Upload to FTP/memory card/NAS, notify surveillance center, trigger recording, trigger capture, send email
Camera Material	Aluminum alloy body Sun shield, IR cover: plastic
Camera Dimension	8105 mm = 293 mm (24.13" × 11.53")
Package Dimension	396 mm = 156 mm × 155 mm (15.2" × 6.2" × 6.2")
Camera Weight	Approx. 2090 g (2.4 lb.)

With Package Weight	Approx. 1590 g (3.5 lb.)
Storage Conditions	-30 °C to 60 °C (-22 °F to 140 °F), Humidity 95% or less (non-condensing)
Startup and Operating Conditions	-30 °C to 60 °C (-22 °F to 140 °F), Humidity 95% or less (non-condensing)
Web Client Language	33 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil), Ukrainian
General Function	Anti-flicker, heartbeat, password reset via email, pinball counter
Firmware Version	V5.5.113
Software Reset	Yes
Power Consumption and Current	-20: 12 VDC, 0.67 A, max. 8.0 W PoE (802.3af, 35 V to 57 V), 0.25 A to 0.16 A, max. 9.0 W -40: 12 VDC, 2.92 A, max. 31.0 W PoE (802.3af, 35 V to 57 V), 0.35 A to 0.22 A, max. 12.5 W
Power Supply	12 VDC $\pm$ 25%, reverse polarity protection PoE: 802.3af, Class 3
Power Interface	25.5 mm coaxial power plug
Approval	FCC (47 CFR Part 15, Subpart B); CE-EMC (EN 55022: 2015, EN 61000-3-2: 2014, EN 61000-3-3: 2013, EN 50130-4: 2011 +A1: 2014); RCM (AS/NZS CISPR 32: 2013); IC (ICES-003: Issue 6, 2016); KC (K132: 2015, K135: 2015)
EMC	UL (UL 60950-1); CB (IEC 60950-1:2005 + Am 1:2009 + Am 2:2013); CE-LVD (EN 60950-1:2005 + Am 1:2009 + Am 2:2013)
Safety	CE-ROHS (2002/95/EC); WEEE (2012/19/EC); RoHS (Regulation (EC) No 1907/2006)
Environment	IP67 (IEC 60529:2013)
Protection	

• Available Model

- DS-2CD2783G2-2I (2.8/4/6 mm)
- DS-2CD2783G2-4I (2.8/4/6 mm)

• Dimension



**Camerele video vor trebui fi instalate in urmatoarele locatii:
Punctul R stalp Electrica fara numar, 2 camere de ansamblu**



Punctul A stalp Electrica fara numar, 2 camere de ansablu si 1 camera LPR



Punctul E stalp electrica nr. 48, 2 camere de ansamblu



Punctul F stalp electrica numarul 25, 2 camere de ansamblu



Punctul G stalp electrica numarul 13, 2 camere de ansamblu



Punctul H stalp electrica nr. 1, 2 camere de ansamblu



Punctul I stalp Electrica nr. 22, 2 camere de ansamblu



Punctul J Stalp electrica fara numar, langa caminul cultural Blajeni, 2 camere de ansamblu



Punctul K, stalp Electrica fara numar langa magazin, 2 camere de ansamblu



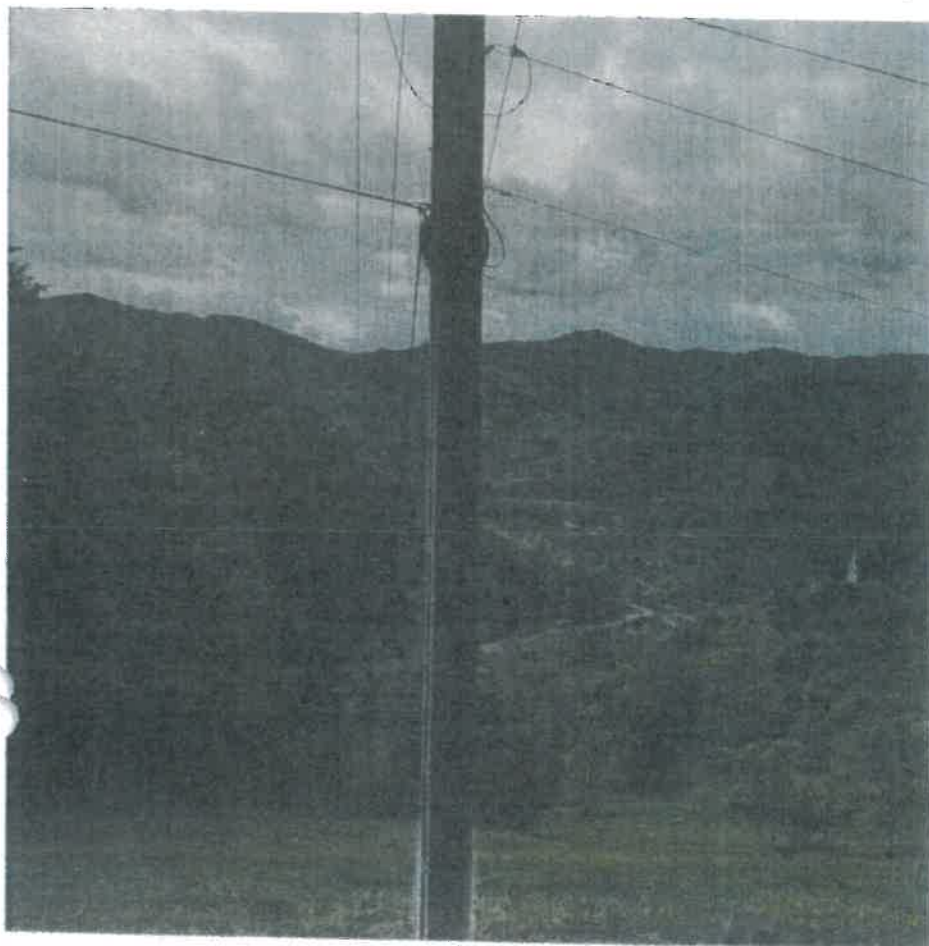
Punctul B, stalp electrica fara numar, langa statia de autobuz, 1 camera LPR si 2 camere ansamblu



Punctul C stalp Electrica fara numar, langa magazin, 1 LPR si 2 camere de ansamblu



Punctul L pe drumul catre Blajeni Vulcan, stalp electrica nr. 84 , 2 camere de ansamblu



L 2ansamblu se84

luni, 12 mai 2025 la 13:02

✓ IMG_4549

Ajustați

Apple iPhone 14



Camera principală — 26 mm $f1.5$

12 MP • 3024 × 4032 • 2,9 MB

ISO 50

26 mm

0 ev

$f1.5$

1/3968 s



Punctul M, stalp Electrica nr. 13, 2 camere de ansamblu



M 2a Se13

luni, 12 mai 2025 la 13:09

✓ IMG_4550

Ajustați

Apple iPhone 14

HEIF



Camera principală — 26 mm $f1.5$

12 MP • 3024 × 4032 • 2,1 MB

ISO 50

26 mm

0 ev

$f1.5$

1/5319 s



Punctul N, stalp Electrica nr. 23 , 2 camere de ansamblu



Data prelucrare imaginii: mai 2024 © 2025 Google România

Punctul D, stalp Electrica nr. 103 , 1 camera LPR si 2 camere ansamblu



Punctul O stalp electrica fara numar, langa scoala Cris, 2 camere de ansamblu



Punctul Q , stalp Electrica nr. 14 , 2 camere de ansamblu



Punctul P , stalp electrica nr. 175 , 2 camere de ansamblu



NR. CRT.	PCT. DE INSTALARE	TIP DE ECHIPAMENT	CONSUM ELECTRIC/LOCATIE
1	PRIMARIA BLAJENI	INREGISTRATOR VIDEO 64 CANALE CU SOFT LPR	INREGISTRAT DE CONTORUL ELECTRIC DE LA PRIMARIA BLAJENI
2	SCOALA CRIS	INREGISTRATOR VIDEO 32 CANALE CU SOFT LPR	INREGISTRAT DE CONTORUL ELECTRIC DE LA SCOALA CRIS
3	R, STALP ELECTRICA FARA NUMAR	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
4	A, STALP ELECTRICA FARA NUMAR	1 LPR + 2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$17W + 2 \times 11W + 1W + 3W = 43W$
5	E, STALP ELECTRICA NR. 48	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
6	F, STALP ELECTRICA NR. 25	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
7	G, STALP ELECTRICA NUMAR 13	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
8	H, STALP ELECTRICA NUMAR 1	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
9	I, STALP ELECTRICA FARA NUMAR, LANGA IMOBIL NUMAR 99	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
10	J, STALP ELECTRICA FARA NUMAR LANGA CAMIN	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$
11	K, STALP ELECTRICA FARA NUMAR LANGA MAGAZIN	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	$2 \times 11W + 1W + 3W = 26W$

12	B, STALP ELECTRICA FARA NUMAR LANGA STATIA DE AUTOBUZ	1 LPR + 2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	17W + 2x11W + 1 W +
13	C, STALP ELECTRICA FARA NUMAR LANGA MAGAZIN	1 LPR + 2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	17W + 2x11W + 1 W +
14	L, STALP ELECTRIC NR 48 PE DRUMUL SPRE BLAJENI VULCANI	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
15	M, STALP ELECTRICA NUMARUL 13, LANGA BISERICA	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
16	N, STALP ELECTRICA NUMARUL 23	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
17	D, STALP ELECTRICA NUMARUL 103	1 LPR + 2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	17W + 2x11W + 1 W +
18	O, STALP ELECTRICA FARA NUMAR LANGA SCOALA CRIS	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
19	Q, STALP ELECTRICA NUMARUL 14	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
21	P, STALP ELECTRICA NUMARUL 175	2 ANSAMBLU + MEDIA CONVERTOR + SWITCH	2x11W + 1 W + 3W
22	TOTAL CONSUM ELECTRIC		536 W
23	TOTAL CAMERE DE ANSAMBLU		36 BUC
24	TOTAL CAMERE LPR		4 BUC
25	NVR 32 CH CU SOFT LPR		1 BUC
26	NVR 64 CH CU SOFT LPR		1 BUC
27	TOTAL CUTII DE CONEXIUNE PE STALPI ELECTRICA		18 BUC

Realizarea
comunicarii datelor
dintre camerele video

si inregistratorul video se face prin fibra optica ce are urmatoarele caracteristici:

28	TOTAL MEDIA CONVERTOARE	18 PERECHI (36
29	TOTAL SWITCHURI	18 STALPI + 2 LA INRE
30	TOTAL HDD-URI	4 BUC, 10 TB/B
31	FIBRA OPTICA MASURATA + 15% PIERDERI + REZERVA PE TRASEU	11250 ml + 15% pierdere 12937.5 ml

SST-Drop™ Dielectric Cables, 1-12 Fibers

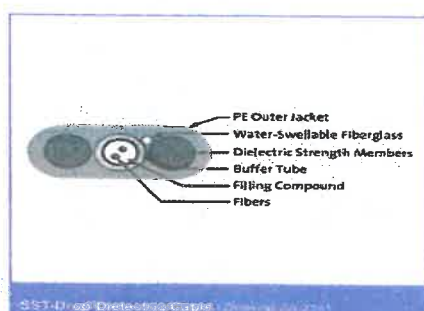
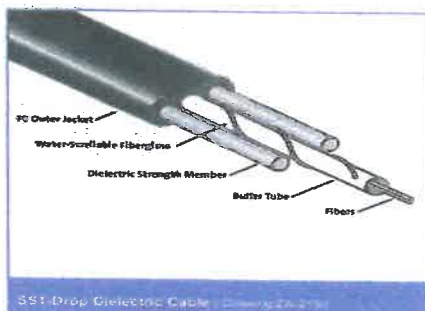
features and benefits |

Standard ALTOS® Cables buffer tube in single- tube design	Standard practices and hardware compatibility
Crush resistance	Fiber protection and signal integrity
RDUP listed (formerly RUS)	Material acceptability
Dielectric	Eliminates bonding and grounding requirements

A LANscape®
Solutions Product

Coming Cable Systems SST-Drop™ Dielectric Cables offer the ease of installation of standard ALTOS® Cables in an easy-access, single-tube design. The dielectric version eliminates any bonding and grounding requirements. The cables are RDUP listed (formerly RUS) and offer exceptional crush resistance. Dielectric cables are also available in preconnectorized assemblies.

ROHS
COMPLIANT



SST-Drop™ Dielectric Cables, 1-12 Fibers

A LANscape®
Solutions Product

specifications |

Duct/Direct Buried Installation Maximum Tensile Loads	Short-Term: 1350 N (300 lbf) Long-Term: 400 N (90 lbf)
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Aerial Installation Maximum Tensile Load	1350 N (300 lbf)
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Temperatures	Storage: -40° to +70°C (-40° to +158°F) Installation: -30° to +70°C (-22° to +158°F) Operation: -40° to +70°C (-40° to +158°F)
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Packaging Options

Convenient Contractor-Sized Packaging	609.6 m (2000 ft); gross weight 65 lbs; no specialized equipment needed
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Traditional Bulk Packaging	Up to 12,100 m (40,000 ft); typically require reel payoff equipment
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NESC Environmental Loading Condition for Subscriber Drop Application	1% Installation Sag Maximum Span Distance m (ft)	Sag at Environmental Loading (%)	3% Installation Sag Maximum Span Distance m (ft)	Sag at Environmental Loading (%)
Heavy	45.7 (150)	4.5	56.1 (184)	6.6
Medium	77.7 (255)	4.1	97.5 (320)	5.9
Light	100.6 (330)	3.8	134.1 (440)	5.2

Note: Longer spans are possible if maximum applied load is not exceeded during environmental loading. Span calculations require known initial loading (force or percent sag), cable weight and anticipated environmental loads. Corning Cable Systems Engineering Services will assist with span calculations for unique circumstances. Contact 800-743-2874, or +1-628-901-5000 internationally, for more information. Information given is for aerial self-supporting.

Fiber Count	Buffer Tube Outside Diameter mm (in)	Nominal Weight kg/km (lb/1000 ft)	Nominal Dimensions mm (in)	Minimum Bend Radius Installed cm (in)
1-12	3.0 (0.12)	30 (20)	8.1 x 4.5 (0.32 x 0.17)	8.0 (3.15)

Fibra optica ce va fi instalata trebuie sa fie instalata la minim 6.5 metrii deasupra punctului cel mai inalt al oricarui drum.

Media convertorul trebuie sa aiba caracteristicile de mai jos sau echivalente:

Technical Parameters for 10/100M Adaptive Fast Ethernet Optical Media Converter						
Number of Network Ports	1 channel					
Number of Optical Ports	1 channel					
NIC Transmission Rate	10/100 Mbit/s					
NIC Transmission Mode	10/100M adaptive with support for automatic inversion of MDI/MDIX					
Optical Port Transmission Rate	100Mbit/s					
Operating Voltage	AC 220V or DC +5V					
Overall Power	<1W					
Network Ports	RJ45 port					
Optical Specifications	Optical Port: SC Multi-Mode: 50/125, 62.5/125um Single-Mode: 8.3/125, 8.7/125um, 8/125,10/125um					
Data Channel	IEEE802.3x and collision base backpressure supported Working Mode: Full/half duplex supported Transmission Rate: 100Mbit/s with error rate of zero					
Some Product Modes and port Technical Parameters of Optical Port						
Desk Type Dual-Optical Single-Mode/Multi-Mode Media Converter						
P/N	Wavelength (nm)	Optical Port	Electric Port	Optical Power (dBm)	Receiving Sensitivity (dBm)	Transmission Range (km)
8110MA-05V-8S	850	SC	RJ-45	-8~ -3	≤-19	0.55
8110MA-2F-3S	1,310	SC	RJ-45	-20~ -15	≤-34	2
8110SA-10F-5S	1,550	SC	RJ-45	-15~ -8	≤-34	10
8110SA-20F-3S	1,310	SC	RJ-45	-15~ -3	≤-34	20

Switchul trebuie sa aiba urmatoarele caracteristici sau caracteristici asemanatoare:

| TL-SG105 V6

HARDWARE FEATURES

Standards and Protocols	IEEE 802.3i/802.3u/ 802.3ab/802.3x, IEEE 802.1p
Interface	5x 10/100/1000 Mbps, Auto-Negotiation, Auto-MDI/MDIX Ports
Fan Quantity	Fanless
External Power Supply	External Power Adapter (Output: 5 V DC / 0.6A)
LED Indicator	System Power Link/Act indicators per port built into each RJ-45 port
Dimensions (W x D x H)	3.9 x 3.9 x 1.0 in (100 x 98 x 25 mm)
Max Power Consumption	2.3 W (220 V/ 50 Hz)
Max Heat Dissipation	7.83 BTU/h

Condiții privind conformitatea cu standardele relevante:

- Declarație de conformitate a produselor cu cerințele esențiale prevăzute de directivele Uniunii Europene (marca CE);

Garanție echipamente video – minim 24 luni.

Instalarea echipamentelor:

Persoana juridica ce va castiga contractul de executie si proiectare trebuie obligatoriu sa indeplineasca urmatoarele criterii:

1. Sa aiba personal tehnic si de specialitate angajat (proiectant sisteme de securitate si tehnician sisteme de securitate)
2. Sa aiba autorizatie IGPR atat pentru proiectare cat si pentru executie
3. Sa aiba urmatoarele standarde :
 - ISO 9001 – sistem de management al calitatii pentru lucrari de instalatii electrice, activitati de servicii privind sistemele de securitate; activitati de inginerie si consultanta tehnica legate de acestea ;
 - ISO 14001 - sistem de management de mediu pentru lucrari de instalatii electrice, activitati de servicii privind sistemele de securitate; activitati de inginerie si consultanta tehnica legate de acestea ;
 - ISO 27001 - sistem de management al securitatii informatiei pentru lucrari de instalatii electrice, activitati de servicii privind sistemele de securitate; activitati de inginerie si consultanta tehnica legate de acestea ;
 - ISO 45001 - sistem de management al sanatatii si securitatii ocupationale pentru lucrari de instalatii electrice, activitati de servicii privind sistemele de securitate; activitati de inginerie si consultanta tehnica legate de acestea ;

Mentenanța echipamentelor:

- Mentenanța echipamentelor se va efectua doar de personal avizat si calificat de IPJ.

3. Modul de asigurare a utilităților

3.1. Alimentarea cu apă, dacă este cazul

Nu este cazul

3.2. Evacuarea apelor uzate, dacă este cazul

Nu este cazul

3.3. Asigurarea apei tehnologice, dacă este cazul

Nu este cazul

3.4. Asigurarea agentului termic, dacă este cazul

Nu este cazul

3.5. Asigurarea alimentării cu gaz, dacă este cazul

Nu este cazul

3.6. Asigurarea alimentării cu energie electrică

Titularul investiției va solicita avizul tehnic de racordare la rețeaua de alimentare cu energie electrică, câte unul pentru fiecare locație.

3.7. Asigurarea sistemului de telecomunicații, dacă este cazul

Nu este cazul

3.8. Alimentare cu combustibil

Nu este cazul.

4. Resurse naturale folosite în instalare și în funcționare

În faza de instalare – nu este cazul.

În faza de operare – nu este cazul.

Surse tehnologice cu impact potențial asupra mediului

În etapa de instalare – se folosesc autoturisme necesare transportului de echipamente. Autoturismele folosite trebuie să fie într-o stare de funcționare foarte bună astfel încât ele să nu polueze cu uleiuri sau combustibil solul. Deseurile rezultate în urma instalării echipamentelor trebuie adunate și apoi aruncate în locuri special amenajate. Exemplu de deseuri rezultat este: rest de plastic rezultat din tăierea mantalei de plastic a fibrei optice, resturi de material izolator de la conductorii electrici, ambalaje de la echipamentele video, resturi de metal (span) rezultat din gaurirea în zonele de fixare a cutiei metalice.

În etapa de operare – nu este cazul.

5. Relația cu alte proiecte existente sau planificate

Nu este cazul.

6. Alternative luate în considerare

Nu este cazul.

7. Localizarea proiectului

Pe raza satului Balc.

8. Descrierea lucrărilor de bază

Pentru realizarea investiției, se vor executa următoarele lucrări de bază:

- Montarea cutiilor de conexiuni pe stalpii Electrica cu siguranțe automate montate în interiorul acestora;
- Realizarea alimentării cu curent;
- Montarea camerelor pe cutiile de conexiune
- Realizarea traseului de fibra optica
- Realizarea sudurilor de fibra optica;
- Verificarea traseului de fibra optica.
- Adăugarea camerelor video în înregistrator
- Configurarea tuturor echipamentelor
- Testare, verificare și punere în funcțiune;
- Recepție lucrări.

9. Concluziile evaluării impactului asupra mediului

În urma lucrărilor de execuție a traseelor de cabluri și de amplasare a camerelor video, nu este afectat aerul, solul și subsolul. Se va reface terenul și alte elemente care vor fi afectate la starea inițială - dacă este cazul.

Lucrările de refacere sunt cuprinse în bugetul proiectului și vor fi suportate de beneficiar. Lucrările prevăzute în prezenta documentație nu afectează mediul înconjurător.

SURSE DE POLUANȚI ȘI PROTECȚIA FACTORILOR DE MEDIU

Protecția calității apelor

Executarea lucrării nu produce surse de poluanți pentru apele din zonă.

Protecția aerului

Nu este cazul.

Protecția împotriva zgomotului și vibrațiilor

Nu este cazul

Protecția împotriva radiațiilor

Nu este cazul

Protecția solului

Nu este cazul

Protecția ecosistemelor terestre și acvatice

Nu este cazul.

Gospodărirea deșeurilor – Firmei instalatoare de echipamente de securitate îi revine obligația de a îndepărta deșeurile și surplusurile de materiale în vederea redării la starea inițială a terenurilor folosite temporar.

Gospodărirea substanțelor toxice și periculoase.

Nu este cazul.

Prevederi pentru monitorizarea mediului

Nu este cazul.

CAP 2. DRONE

Tinand cont de legislatia in vigoare cat si pentru simplitatea in utilizare propunem drone sub 249 de grame. Drona propusa trebuie sa fie aceasta sau un model cu caracteristici asemanatoare:

Takeoff Weight	< 249 g Standard aircraft weight (including the Intelligent Flight Battery, propellers, and a microSD card). The actual product weight may vary due to differences in batch materials and external factors. Training or examination is not required for flying this product in most countries and regions. Always check local laws and regulations before use. With the Intelligent Flight Battery Plus*, the aircraft will weigh more than 249 g. Always check and strictly abide by local laws and regulations before flying.
Dimensions	Folded (without propellers): 148×94×64 mm (L×W×H) Unfolded (with propellers): 298×373×101 mm (L×W×H)
Max Ascent Speed	5 m/s (S Mode) 5 m/s (N Mode) 3 m/s (C Mode)
Max Descent Speed	5 m/s (S Mode) 5 m/s (N Mode) 3 m/s (C Mode)
Max Horizontal Speed (at sea level, no wind)	16 m/s (S Mode) 12 m/s (N Mode) 12 m/s (C Mode) The max horizontal speed is subject to dynamic local restrictions. Always abide by local laws and regulations when flying.
Max Takeoff Altitude	With DJI Mini 4 Pro Intelligent Flight Battery: 4000 m With DJI Mini 3 Series Intelligent Flight Battery Plus*: 3000 m Increase in aircraft weight can affect flight propulsion. When the aircraft is using the Intelligent Flight Battery Plus, do not mount additional payloads like a propeller guard or third-party accessories to avoid diminished propulsion. * The Intelligent Flight Battery Plus is not sold in Europe.
Max Flight Time	34 minutes (with Intelligent Flight Battery) 45 minutes (with Intelligent Flight Battery Plus)* Measured in a controlled test environment. Specific test conditions are as follows: flying forward at a constant speed of 21.6 kph in a windless laboratory environment at 20 meters above sea level, in photo mode (without photo taking operation during flight), with Obstacle Avoidance Action set to Off, and from 100% battery level until 0%. Results may vary depending on the environment, actual use, and firmware version. * The Intelligent Flight Battery Plus is not sold in Europe.

Max Hovering Time	30 minutes (with Intelligent Flight Battery) 39 minutes (with Intelligent Flight Battery Plus)* Measured in a controlled test environment. Specific test conditions are as follows: hovering in a windless laboratory environment at 20 meters above sea level, in photo mode (without photo taking operation during flight), with Obstacle Avoidance Action set to Off, and from 100% battery level until 0%. Results may vary depending on the environment, actual use, and firmware version. * The Intelligent Flight Battery Plus is not sold in Europe.
Max Flight Distance	18 km (with Intelligent Flight Battery and measured while flying at 40.7 kph in a windless environment at 20 meters above sea level) 25 km (with Intelligent Flight Battery Plus* and measured while flying at 44.3 kph in a windless environment at 20 meters above sea level) * The Intelligent Flight Battery Plus is not sold in Europe.
Max Wind Speed Resistance	10.7 m/s
Max Pitch Angle	35°
Operating Temperature	-10° to 40° C (14° to 104° F)
Global Navigation Satellite System	GPS + Galileo + BeiDou
Hovering Accuracy Range (windless or breezy)	Vertical: ±0.1 m (with vision positioning) ±0.5 m (with GNSS positioning) Horizontal: ±0.1 m (with vision positioning) ±0.5 m (with GNSS positioning)
Internal Storage	2 GB
Class	C0 (EU), with the option to apply for C1 (EU) in the DJI Fly app.

Camera

Image Sensor	1/1.3-inch CMOS, Effective Pixels: 48 MP
Lens	FOV: 82.1° Format Equivalent: 24 mm Aperture: f/1.7 Focus: 1 m to ∞
ISO Range	Video Normal and Slow Motion: 100-6400 (Normal) 100-1600 (D-Log M) 100-1600 (HLG) Night: 100-12800 (Normal) Photo 12 MP: 100-6400 48 MP: 100-3200
Shutter Speed	12MP Photo: 1/16000-2 s (2.5-8 s for simulated long exposure) 48MP Photo: 1/8000-2 s
Max Image Size	8064×6048

Still Photography Modes

Single Shot: 12 MP and 48 MP
Burst Shooting:
12 MP, 3/5/7 frames
48 MP, 3/5 frames
Automatic Exposure Bracketing (AEB):
12 MP, 3/5/7 frames at 0.7 EV step
48 MP, 3/5 frames at 0.7 EV step
Timed:
12 MP, 2/3/5/7/10/15/20/30/60 s
48 MP, 5/7/10/15/20/30/60 s

Photo Format

JPEG/DNG (RAW)

Video Resolution

H.264/H.265
4K: 3840×2160@24/25/30/48/50/60/100*fps
FHD: 1920×1080@24/25/30/48/50/60/100*/200*fps
* Recording frame rates. The corresponding video plays as slow-motion video. 4K/100fps and HLG/D-Log M only support H.265 coding.

Video Format

MP4 (MPEG-4 AVC/H.264, HEVC/H.265)

Max Video Bitrate

H.264/H.265: 150 Mbps

Supported File System

exFAT

Color Mode and Sampling Method

Normal:
8-bit 4:2:0 (H.264/H.265)
HLG/D-Log M:
10-bit 4:2:0 (H.265)

Digital Zoom

12MP Photo: 1-3x
4K: 1-3x
FHD: 1-4x

Gimbal

Stabilization

3-axis mechanical gimbal (tilt, roll, pan)

Mechanical Range

Tilt: -135° to 80°
Roll: -135° to 45°
Pan: -30° to 30°

Controllable Range

Tilt: -90° to 60°
Roll: -90° or 0°

Max Control Speed (tilt)

100°/s

Angular Vibration Range

±0.01°

Sensing

Sensing Type	Omnidirectional binocular vision system, supplemented with a 3D infrared sensor at the bottom of the aircraft
Forward	Measurement Range: 0.5-18 m Detection Range: 0.5-200 m Effective Sensing Speed: Flight Speed $\leq$ 12 m/s FOV: Horizontal 90°, Vertical 72°
Backward	Measurement Range: 0.5-15 m Effective Sensing Speed: Flight Speed $\leq$ 12 m/s FOV: Horizontal 90°, Vertical 72°
Lateral	Measurement Range: 0.5-12 m Effective Sensing Speed: Flight Speed $\leq$ 12 m/s FOV: Horizontal 90°, Vertical 72°
Upward	Measurement Range: 0.5-15 m Effective Sensing Speed: Flight Speed $\leq$ 5 m/s FOV: Front and Back 72°, Left and Right 90°
Downward	Measurement Range: 0.3-12 m Effective Sensing Speed: Flight Speed $\leq$ 5 m/s FOV: Front and Back 106°, Left and Right 90°
Operating Environment	Forward, Backward, Left, Right, and Upward: Surfaces with discernible patterns and adequate lighting (lux > 15) Downward: Surfaces with discernible patterns, diffuse reflectivity > 20% (e.g. walls, trees, people), and adequate lighting (lux > 15)
3D Infrared Sensor	Measurement Range: 0.1-8 m (reflectivity > 10%) FOV: Front and Back 60°, Left and Right 60°

Video Transmission

Video Transmission System	O4
Live View Quality	Remote Controller: Up to 1080p/60fps (available when the aircraft is flying in Photo or Video mode) Up to 1080p/30fps (available when the aircraft is flying in Video mode) Up to 1080p/24fps (available when the aircraft is in standby mode on the ground)
Operating Frequency	2.4000-2.4835 GHz 5.170-5.250 GHz 5.725-5.850 GHz 5.170-5.250 GHz can be used only in countries and regions where permitted by local laws and regulations.
Transmitter Power (EIRP)	2.4 GHz: < 33 dBm (FCC) < 20 dBm (CE/SRRC/MIC) 5.1 GHz: < 23 dBm (CE) 5.8 GHz: < 33 dBm (FCC) < 30 dBm (SRRC) < 14 dBm (CE)
Max Transmission Distance (unobstructed, free of interference)	FCC: 20 km CE: 10 km SRRC: 10 km MIC: 10 km Measured in an unobstructed outdoor environment free of interference. The above data shows the farthest communication range for one-way, non-return flights under each standard. Always pay attention to RTH reminders in the DJI Fly app during your flight.

Max Transmission Distance
(unobstructed, with interference)

Strong Interference: urban landscape, approx. 1.5-4 km
Medium Interference: suburban landscape, approx. 4-10 km
Low Interference: suburb/seaside, approx. 10-20 km

Data tested under FCC standard in unobstructed environments with typical interference. Used for reference purposes only and provides no guarantee for actual transmission distance.

Max Transmission Distance
(obstructed, with interference)

Low Interference and Obstructed by Buildings: approx. 0-0.5 km
Low Interference and Obstructed by Trees: approx. 0.5-3 km

Data tested under FCC standard in obstructed environments with typical low interference. Used for reference purposes only and provides no guarantee for actual transmission distance.

Max Download Speed

O4:

10 MB/s (with DJI RC-N2)

10 MB/s (with DJI RC 2)

Wi-Fi 5: 30 MB/s*

* Measured in a laboratory environment with little interference in countries/regions that support both 2.4 GHz and 5.8 GHz, with footage saved to the internal storage. Download speeds may vary depending on the actual conditions.

Lowest Latency

Aircraft + Remote Controller: approx. 120 ms

Depending on the actual environment and mobile device.

Antenna

4 antennas, 2T4R

Una din dronele ce respecta aceste caracteristici este DJI MINI 4 PRO.

CAP. 3 ELEMENTE DE MOBILIER URBAN

Refugiul statiilor de autobuz trebuiesc montate conform indicatiilor conducerii UAT Blajeni. Refugiul statiilor de autobuz noi prevazute vor inlocui fostele refugii de statii de autobuz care sunt din bare metalice si plexiglass.

Refugiul statiilor de autobuz vor fi amplasate pe fundatii deja existente.

Prin proiect sunt prevazute 4 astfel de statii de autobuz.

Deasemenea vor fi amplasate in proximitatea statiilor de autobuz inteligente si cate un cos de gunoi cu design modern. Astfel sunt prevazute 4 cosuri de gunoi cu design modern aflat in corelatie cu statia de autobuz.

Proiectul include si 8 banci de exterior ce vor fi montate astfel: 3 banci la scoala Blajeni si 3 banci la scoala Cris si 2 banci la caminul cultural Blajeni.

Deasemenea se vor inslata si 2 rasteluri de biciclete cate una pentru scoala Blajeni si scoala Cris.

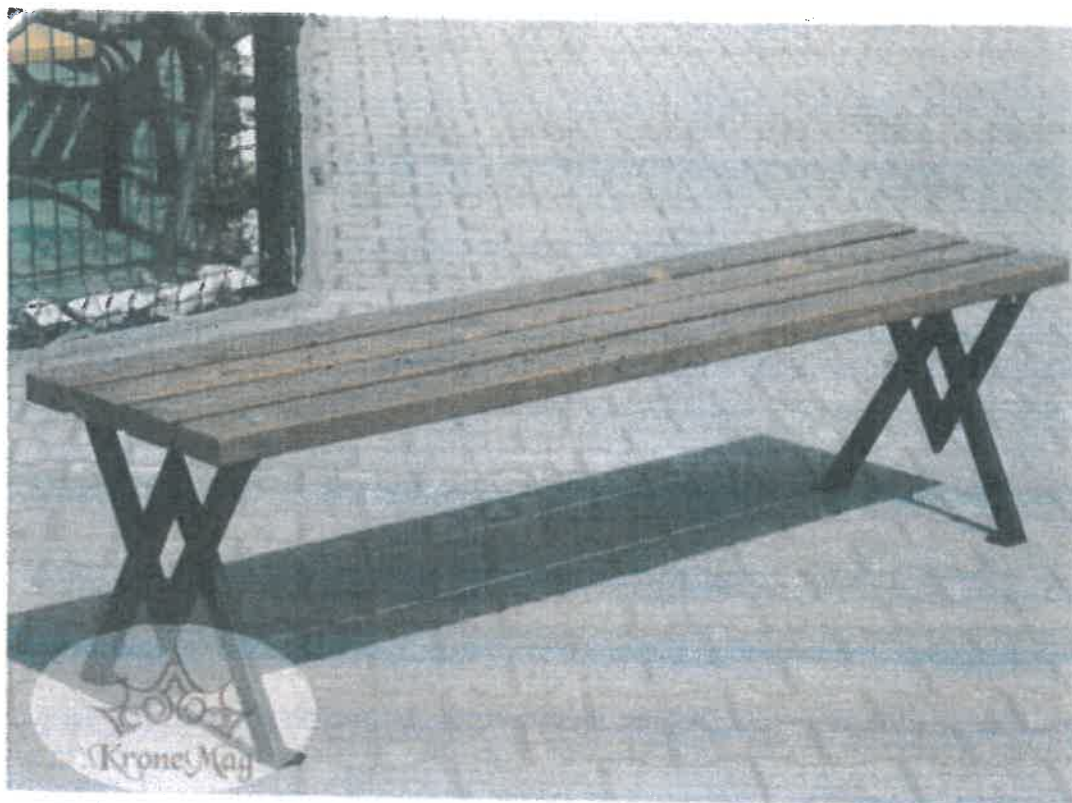
Caracteristici tehnice refugiu statie de autobuz (imagine cu titlu informativ) :

- Lungime 3000 mm
- Latime 1200 mm
- Banca pentru odihna



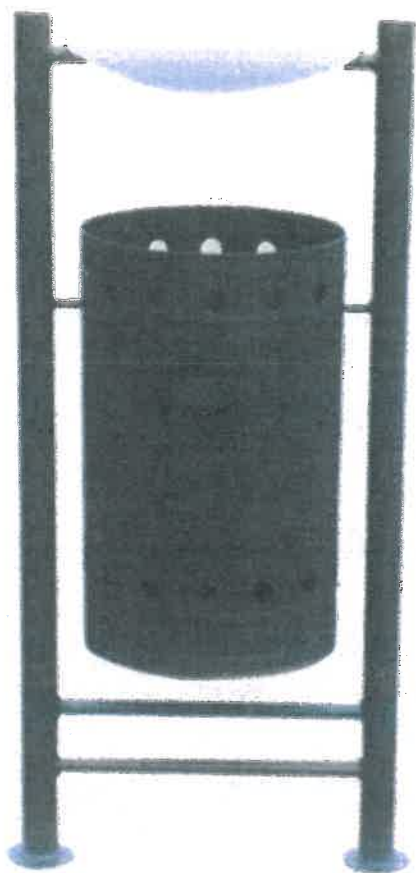
Caracteristici tehnice banca odihna (imagine cu titlu informativ):

- Lungime minim 1500 mm
- Latime minim 600 mm



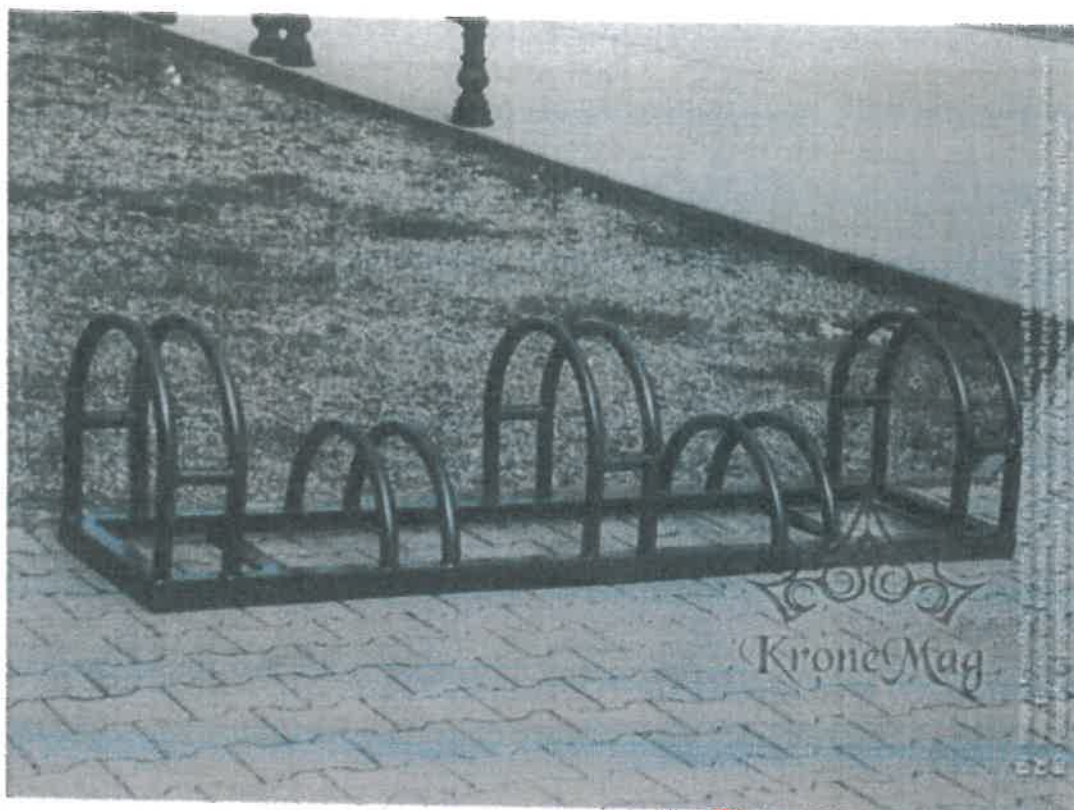
Caracteristici tehnice cos de gunoi (imagine cu titlu informativ):

- Cu scrumiera
- Cu capac



Caracteristici tehnice rastel de biciclete (imagine cu titlu informativ):

- Lungime minim 1500 mm



PRESEDINTE DE SEDINTA
BLICUR MARCEL



CONTRASEMNEAZA
SECRETAR GENERAL
POLVEREA DANIELA-AURELIA