
PRECISION IN EVERY MOTION
FOR PROTECTION
gürbağ
DEFENCE | TECHNOLOGY

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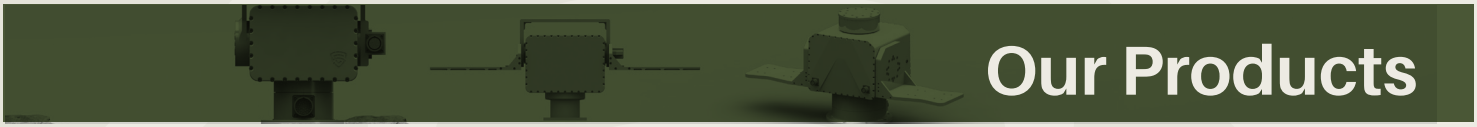

Our Products

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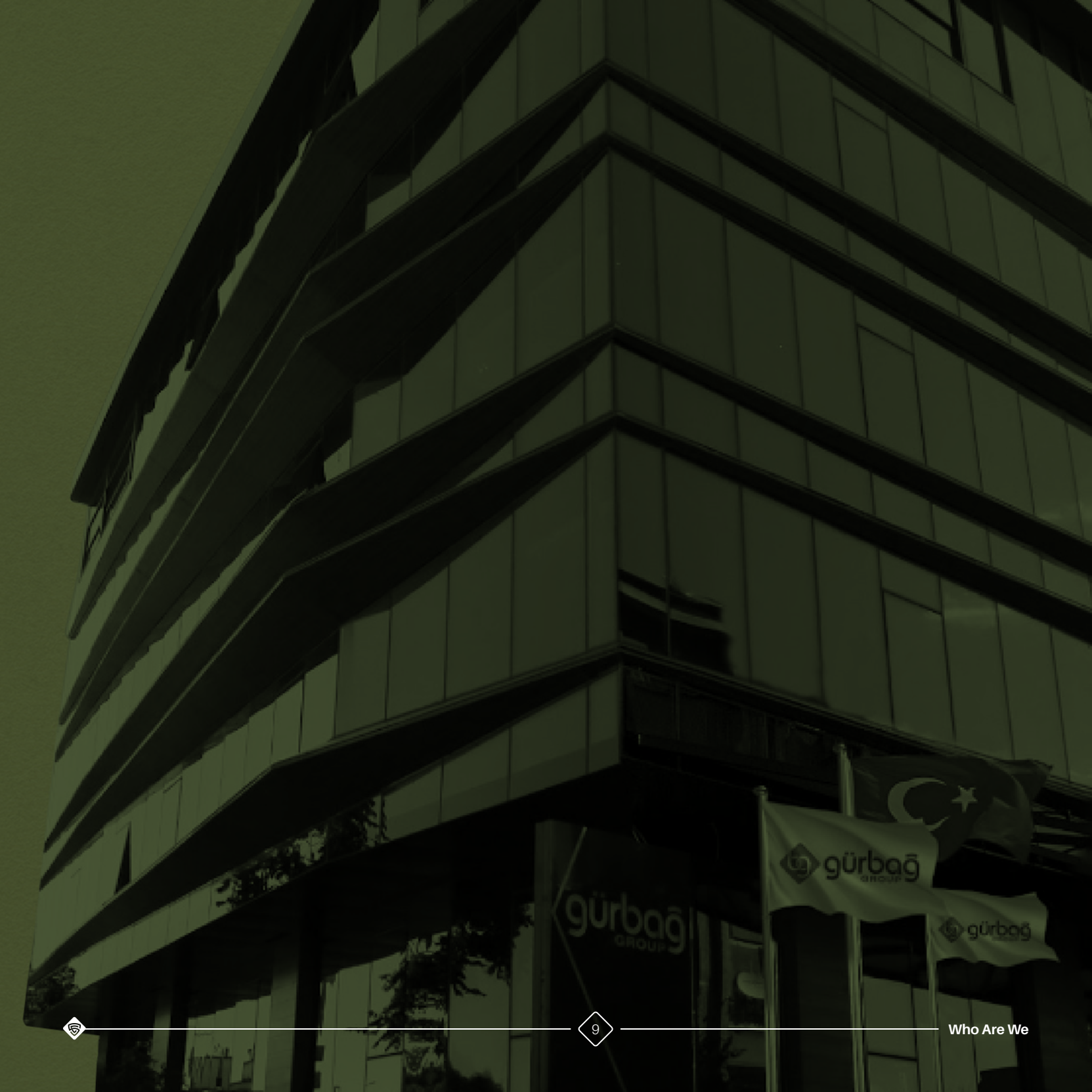
A SOLUTION PARTNER ACROSS BORDERS

About Gürbağ Group

Gürbağ Group's parent company, Gürbağ Construction Corp. It was established in 1992. Ready-mixed concrete production facilities in Şanlıurfa/Türkiye in 1996 and Gürbağ Prefabricated industrial structures in 1997 became operational. Gürbağ Group, which strengthened in the construction sector with the companies established later, has undersigned important projects in the country and abroad.

Gürbağ Group; As one of Türkiye's leading, solidly built, rapidly developing and growing companies with a strong financial structure, it has accomplished many big projects in Türkiye and abroad with its experienced technical staff, machinery and equipment, since 1992. Gürbağ Group still continues the construction of various prestige projects in Türkiye and abroad.

In today's world where knowledge is dominant, technological innovations chase each other and intense competition is experienced, Gürbağ Group also works with its corporate identity. Gürbağ Group, with the awareness that it is always its employees who will implement the determined strategies and the decisions taken, has determined among its priority targets to develop systems that will make the most effective manpower and to increase the capacity.


gürbağ
GROUP
gürbağ
GROUP
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About Gürbağ Defense and Technology

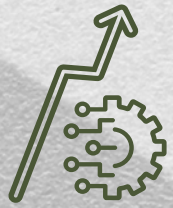
As Gürbağ Defense and Technology; We established our activities in Ankara in 2020 under the umbrella of Gürbağ Group in order to be a pioneer in innovations and to produce solutions for the engineering needs of the sector in the field of defense industry and technology.

Since our establishment, providing solutions to the design and engineering needs of the defense industry at international standards; have high software, electronic and mechanical design skills; capable of performing the simulation and analysis of the original designs he has made; As an R&D-oriented integrator organization that works with an innovative approach in all completed and planned projects, we carry out national and global collaborations.

Putting excellence and efficiency at the center of our business model, we adopt a production approach that will respond to the demands and expectations of our customers; we work hard to provide the most suitable and quality products and services to our business partners; Thanks to our continuous improvement of our technological infrastructure and our valuable employees who are competent in their fields, we are a solution partner that transcends borders.


gürbağ
SAVUNMA
TEKNOLOJİ
gürbağ

Our Vision



To be a pioneering and respected brand that shapes the defense and technology sectors with our innovative mindset and strong R&D capabilities. We aim to set industry standards by offering integrated, high value-added solutions that are recognized in both local and global markets. With a commitment to quality, ethics, and sustainability, we work to build a secure and forward-looking future for our stakeholders and society.

Our Mission

To contribute to the development of the defense and technology ecosystem by delivering innovative, reliable, and sustainable solutions in line with Gürbağ Group's core values. We prioritize excellence through investments in R&D, digital transformation, and human capital—striving to exceed expectations while upholding our principles of trust, quality, and responsibility.

Our Values

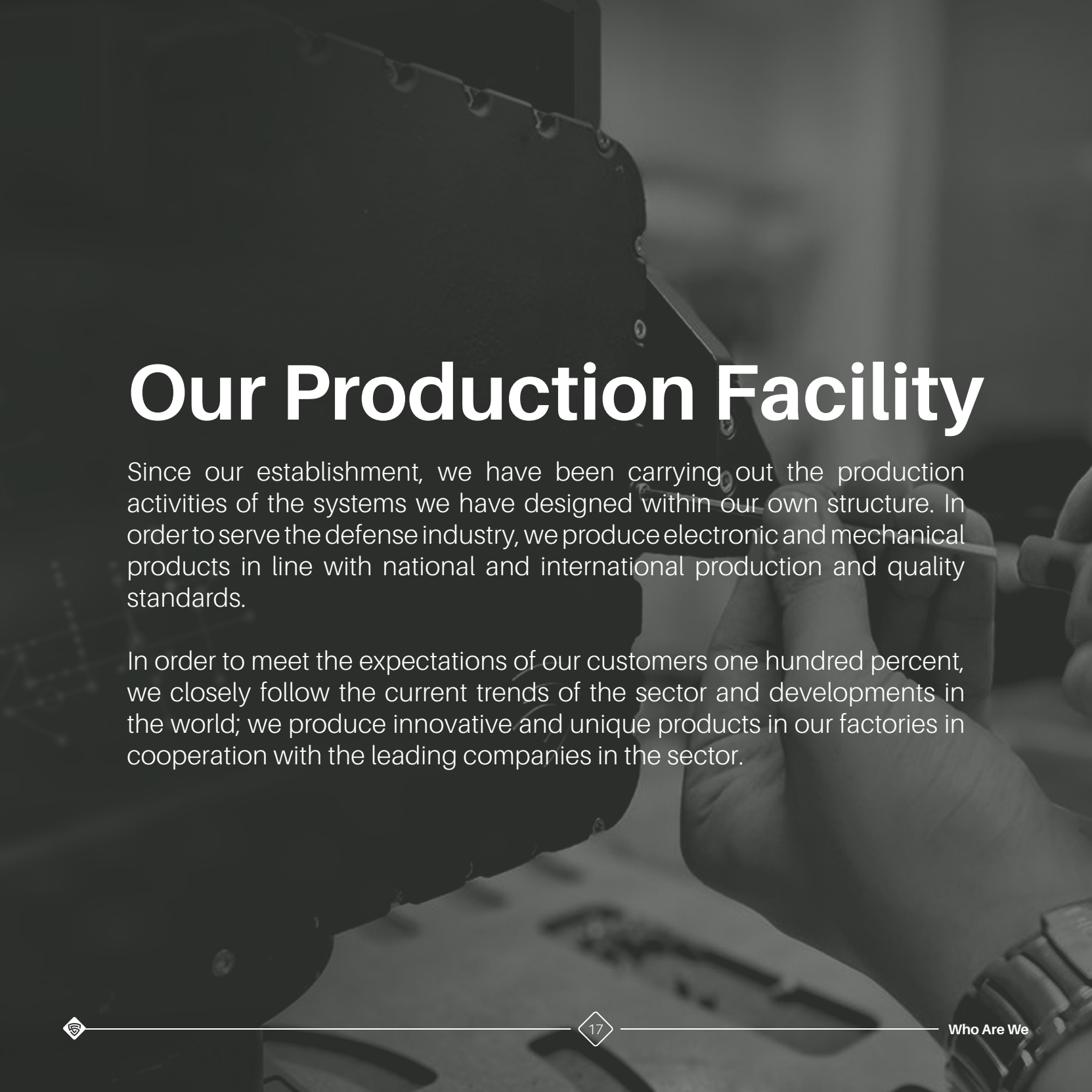
At Gürbağ Defence, our values guide us in developing reliable, innovative, and high-quality technologies. We act with integrity and responsibility, prioritizing sustainability, collaboration, and continuous improvement. With a strong commitment to excellence, we strive to create lasting value for our stakeholders while contributing to the future of defense and technology.

- To make continuous development a principle together with all our stakeholders
- To use all our resources effectively and efficiently
- Confidence and trust in cooperation
- To act honestly and in accordance with the principles of virtue in all our initiatives
- To abide by universal ethical rules at all times and under all circumstances
- To manage all our activities with the understanding of sustainability

Our R&D Activities

As Gürbağ Defense and Technology, we work with all our strength to carry out projects to be proud of, and we allocate a significant portion of our earnings to our R&D activities in the light of our vision of always achieving better, developing original products and pioneering innovations.

While designing our new processes, systems and applications during our R&D activities, we combine our creative work, which we carry out on a systematic basis, with our valuable human resources and knowledge from our corporate culture.



Our Production Facility

Since our establishment, we have been carrying out the production activities of the systems we have designed within our own structure. In order to serve the defense industry, we produce electronic and mechanical products in line with national and international production and quality standards.

In order to meet the expectations of our customers one hundred percent, we closely follow the current trends of the sector and developments in the world; we produce innovative and unique products in our factories in cooperation with the leading companies in the sector.

WE ADVANCED AS THE PIONEER OF INNOVATIONS IN DEFENSE INDUSTRY AND TECHNOLOGY

R&D

COOPERATION

SPECIAL SOLUTIONS

INNOVATIVE PRODUCTS

ORIGINAL DESIGN

ENGINEERING

INNOVATION

P&D

Our products

Mechanical Products

Tactical Load-Bearing and Support Systems

- KATA™
- Sİ-TA™

Tripod (Military-Grade)

Light-Duty Products

- GST-50™

Medium-Duty Products

- GST 100™

Heavy Duty Products

- GST 150™

Electromechanical Products

Command & Control Systems

Command Control Stations

- GSKK-1™
- GSKK-2™
- GSKK-3™
- GSKK-4™
- GSKK-5™

I/O and Interface Systems

I/O Modules

- GIO-1™
- GIO-2™

Pan-Tilt (Pan-Tilt Positioners)

MONO (1-AXIS) Pan-Tilt

MONO O Series

- GSPT-MONO-O-1000™
- GSPT-MONO-O-2000™

DUO (2-AXIS) Pan-Tilt

DUO A Series

- GSPT-DUO-A-1000™
- GSPT-DUO-A-2000™
- GSPT-DUO-A-2100™
- GSPT-DUO-A-2200™
- GSPT-DUO-A-3000™
- GSPT-DUO-A-4000™

DUO U Series

- GSPT-DUO-U-1000™
- GSPT-DUO-U-2000™
- GSPT-DUO-U-3000™
- GSPT-DUO-U-5000™

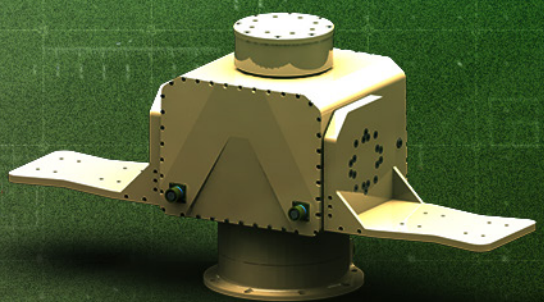
DUO T Series

- GSPT-DUO-T-1000™
- GSPT-DUO-T-2000™
- GSPT-DUO-T-3000™
- GSPT-DUO-T-4000™
- GSPT-DUO-T-5000™
- GSPT-DUO-T-5100™

PENTA (5-AXIS) Pan-Tilt

- GSPT-PENTA-T-4000™

MEMORABLE TECHNOLOGY, SUSTAINABLE TRACE-MAKING COLLABORATION



Products
Mechanical Products

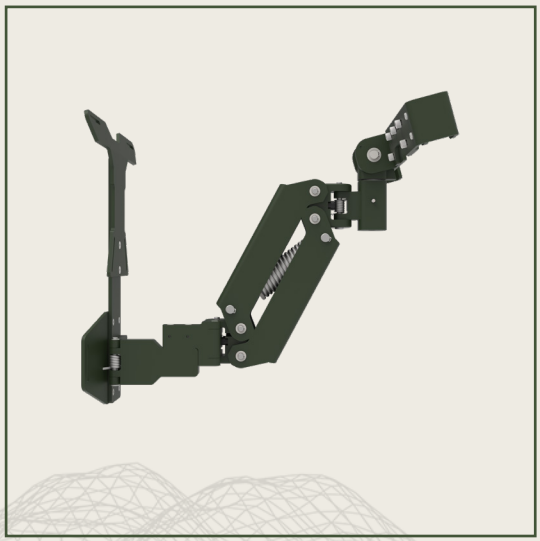
KA-TA™

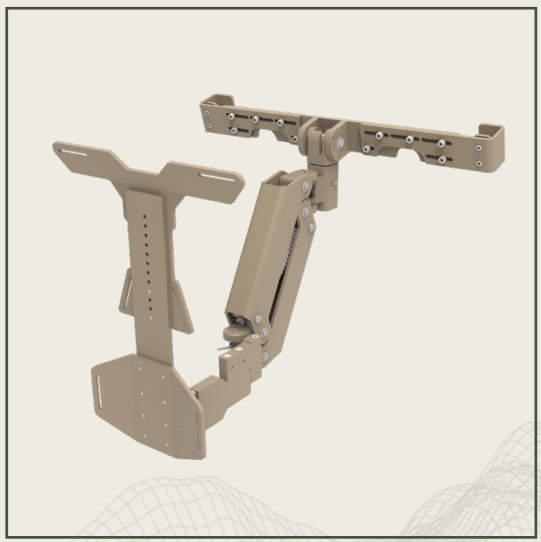
The KA-TA™ Shield Carrying Apparatus is an innovative load-bearing system designed to enhance the operational efficiency of security forces by allowing hands-free use of ballistic and tactical shields without sacrificing mobility or comfort. Purpose-built exclusively for shield carriage, it is not intended for weapon integration.

The system consists of a durable carrier vest, an advanced load transfer mechanism, and a universal shield mount compatible with various tactical shield models. With a total weight of only 2.5 kg, KA-TA™ offers extended usability without adding significant burden.

Despite its lightweight form, it supports shields up to 30 kg, utilizing mechanical force arms and C-segment military-grade spring amplifiers to distribute the load evenly across the body. This reduces fatigue and improves movement during long operations.

Built for harsh field conditions, KA-TA™ ensures high reliability and allows operators to keep their hands free for weapon or equipment use, while maintaining shield readiness at all times.





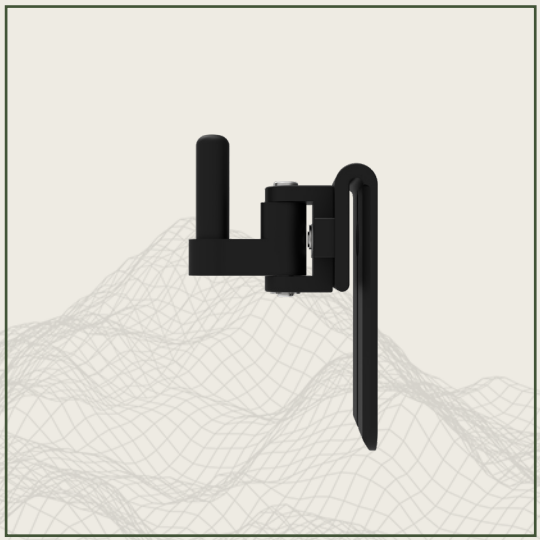
SI-TA™

SI-TA™ is an innovative weapon support system designed to be compatible with steel ballistic vests, assault vests, military backpacks, and all NATO-standard MOLLE platforms. It enables security forces to carry long-barreled and heavy weapons with minimal physical strain, enhancing endurance and operational readiness in the field.

,Weighing only 180 grams, SI-TA™ is engineered by Gürbağ Defense using high-strength Delrin® material, known for its exceptional durability, low friction, and lightweight characteristics. Despite its compact form, the apparatus can safely support weapons up to 15 kg, maintaining stability during movement or extended periods of static deployment.

Thanks to its advanced load transfer architecture, SI-TA™ not only supports but also balances the weight and distributes the load evenly across the user's body. This significantly reduces fatigue during prolonged operations and allows for hands-free weapon readiness when needed.

Its plug-in / plug-out mechanism ensures quick and practical attachment or detachment, while its universal compatibility makes it suitable for integration with a wide variety of weapon systems.



Products
Mechanical Products

Tripod (Military-Grade)

Safe, Durable, and Flexible Solutions for Every Mission
Gürbağ Defense enhances field effectiveness with ergonomic, high-strength tripods tailored to diverse operational needs. Offered in light to heavy-duty options, our tripods ensure stability, safety, and flexibility for integrating weapons, sensors, cameras, and other equipment.

Light-Duty Products

GST-50™

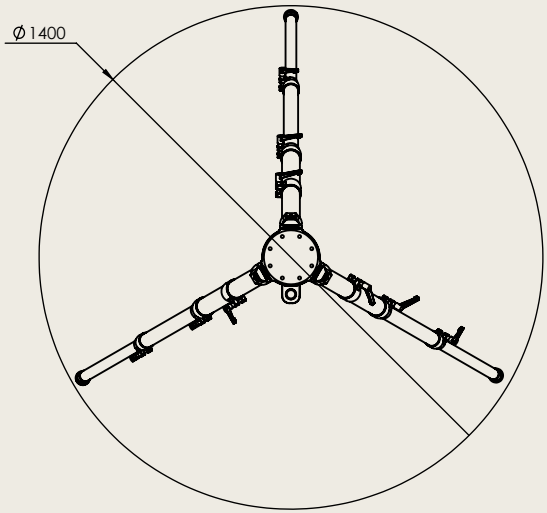
Medium-Duty Products

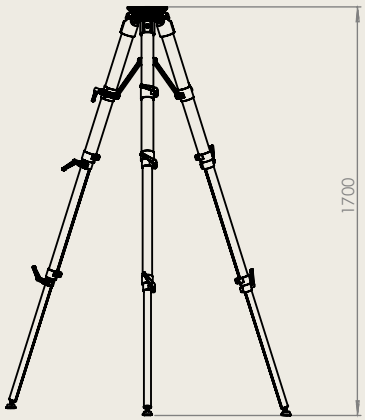
GST-100™

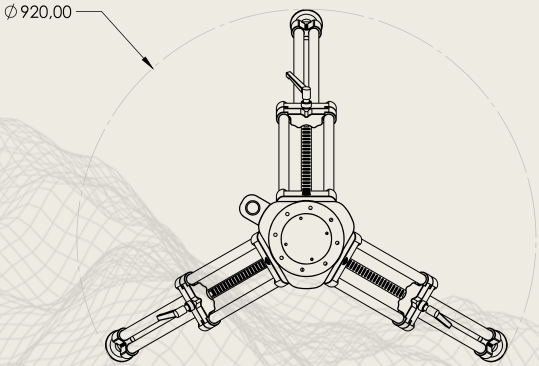
Heavy-Duty Products

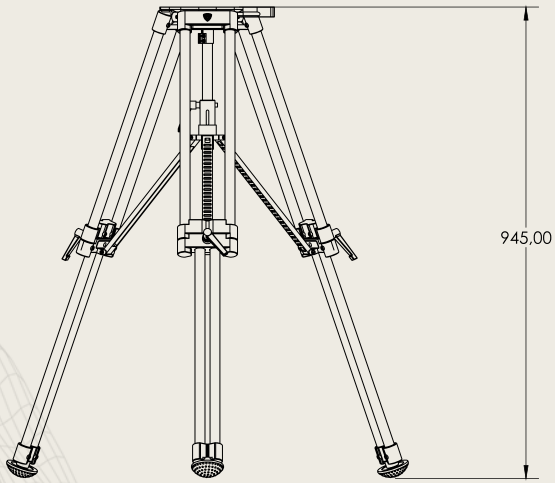
GST-150™

Specification	GST-50™	GST-100™	GST-150™
Max Height	980 mm	1700 mm	1215 mm
Min. Height	590 mm	770 mm	720 mm
Weight	<10kg	<10kg	<10kg
Carrying Capacity	50 kg	75 kg	100 kg
Folded Dimensions	Ø290 mm, 645 mm	Ø360 mm, 830 mm	Ø285 mm, 800 mm
Interface	M8x8 - Ø125 mm // M6x4 - Ø85 mm	M8x8 - Ø125 mm // M6x4 - Ø85 mm	M8x8 - Ø125 mm // M6x4 - Ø85 mm
Title	Straight	Straight	Straight









Products
Electromechanical Products

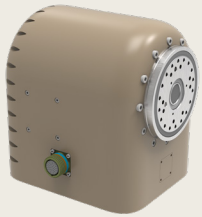
Pan-Tilt Positioners

Gürbağ Defence develops high-precision control and guidance systems for land, naval, and aerial platforms. Designed for tactical superiority, our systems provide stabilized target tracking, fire control support, and mission-critical payload management. With MIL-STD compliant architecture, they ensure reliable performance in combat environments.

MONO (1-AXIS) Pan-Tilt
O Series

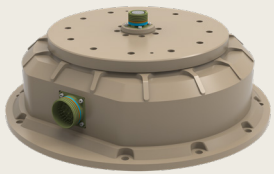
GSPT-

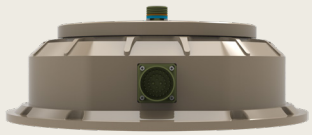
MONO-O-1000™



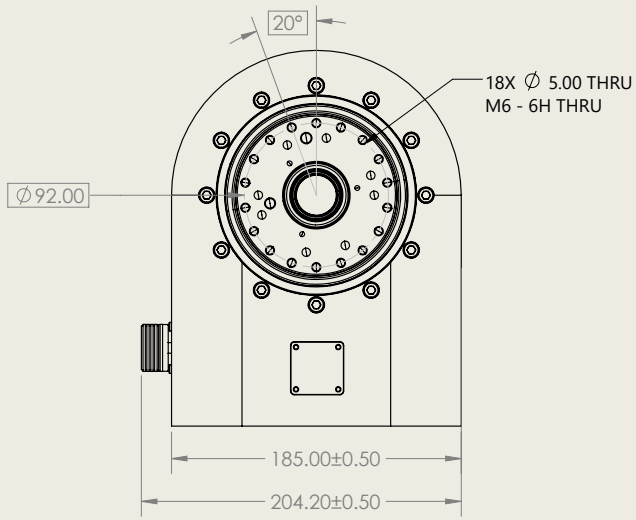
GSPT-

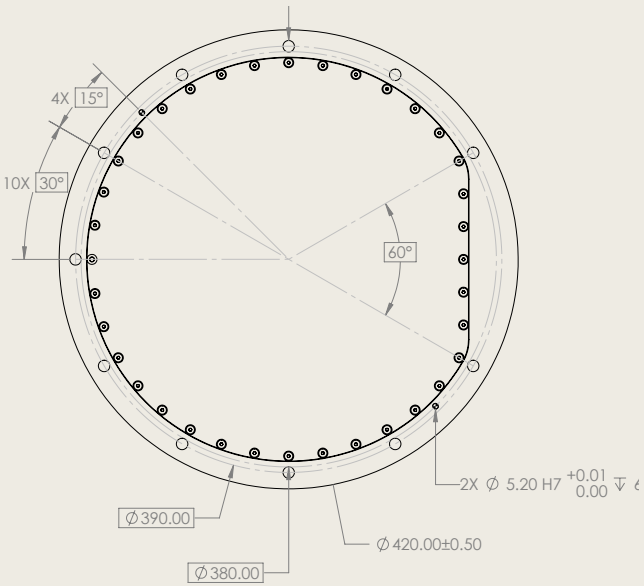
MONO-O-2000™





Specification	GSPT-MONO-O-1000™	GSPT-MONO-O-2000™
Max. Payload Capacity	60 kg	100 kg
Nominal Torque (Tilt/Pan)	140 Nm	104Nm
Maximum Power Consumption	425W	430W
Operating Voltage Range	48 VDC	48 VDC
Pan Movement Capability	N/A	±175°
Maximum Pan Speed	N/A	48°/s
Tilt Movement Capability	(90°/-135°)	N/A
Maximum Tilt Speed	96°/s	N/A
Position Accuracy	0.09°	0.09°
Position Repeatability	0.09°	0.09°
Minimum Motion Sensitivity	0.03°	0.02°
Backlash / System Slack Ratio	1 Arcmin	6-30 Arcmin
Mechanical Limits	Optional	Optional
Encoder Type	Absolute encoder	Absolute encoder
Pan Encoder Resolution	± 0.00017°	± 0.00017°
Tilt Encoder Resolution	± 0.00017°	± 0.00017°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	BLDC Motor	BLDC Motor
Drive System (Tilt)	BLDC Motor	BLDC Motor
Brake (Electromechanical)	Optional	Optional
Body Material	Aluminum	Aluminum
Product Weight	20 kg	25 kg
Dimensions (HxWxD)	240 x 250 x 205 mm	157 x 420 x 420 mm
Protection / IP Rating	IP66	IP66
Humidity Resistance	95%	95%
Protocol	GSPT Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999





Products
Electromechanical Products

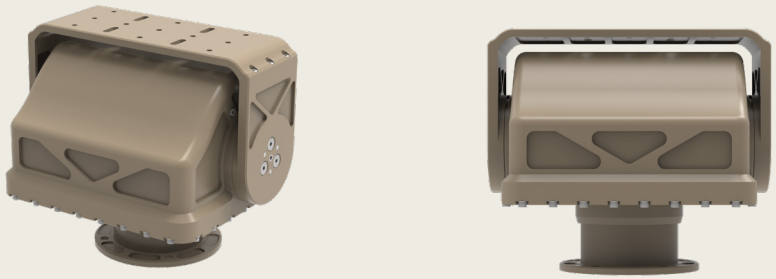
Pan-Tilt Positioners

Gürbağ Defence develops high-precision control and guidance systems for land, naval, and aerial platforms. Designed for tactical superiority, our systems provide stabilized target tracking, fire control support, and mission-critical payload management. With MIL-STD compliant architecture, they ensure reliable performance in combat environments.

DUO (2-AXIS) Pan-Tilt
A Series

GSPT-

DUO-A-1000™



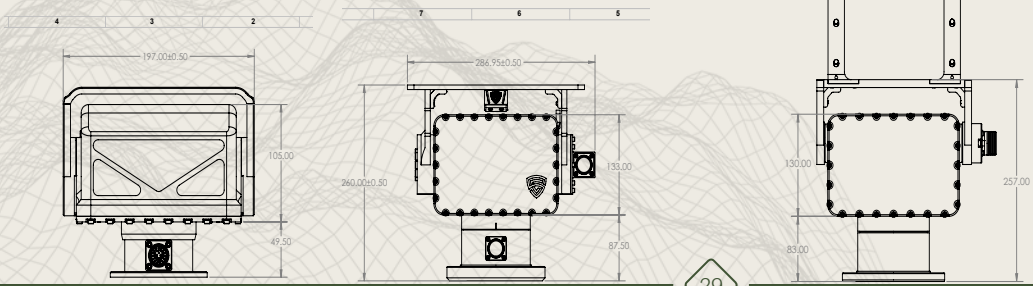
GSPT-

DUO-A-2000™

GSPT-

DUO-A-2100™

Specification	GSPT-DUO-A-1000 ™	GSPT-DUO-A-2000™	GSPT-DUO-A-2100™
Max. Payload Capacity	6 kg	15 kg	25 kg
Nominal Torque (Tilt)	8 Nm	25 Nm	50 Nm
Maximum Power Consumption	100 W	100 W	125 W
Operating Voltage Range	24-36 VDC	24-48 VDC	24-36 VDC
Pan Movement Capability	0- 360°	n × 360°	n × 360°
Maximum Pan Speed	18°/s	18°/s	180°/s
Tilt Movement Capability	(90°/-45°)	±20°	±35
Maximum Tilt Speed	9°/s	18°/s	18°/s
Position Accuracy	0.05°	0.05°	0.01°
Position Repeatability	0.05°	0.05°	0.01°
Minimum Motion Sensitivity	0.1°	0.1°	0.02°
Backlash / System Slack Ratio	6-30 Arcmin	Pan 6-30 Arcmin-Tilt 1 Arcmin	6-30 Arcmin
Mechanical Limits	optional	available	optional
Encoder Type	Absolute encoder	Absolute encoder	incremental/Absolute encoder
Pan Encoder Resolution	0.00017°	0.00017°	0.00017°
Tilt Encoder Resolution	0.00017°	0.00034°	0.00034°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	Hybrid Step Motor	Hybrid Step Motor	BLDC motor
Drive System (Tilt)	Hybrid Step Motor	Hybrid Step Motor	BLDC motor
Body Material	Aluminum	Aluminum	Aluminum
Product Weight	5 kg	10 kg	9 kg
Dimensions (HxWxD)	170 x 197 x 140 mm	260 x 273 x 197 mm	257 x 242 x 150 mm
Protection / IP Rating	IP66	IP66	IP66
Humidity Resistance	95%	95%	95%
Protocol	GSPT Protocol	GSPT Protocol	FAR-AD
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999	D38999
Brake (Electromechanical)	Oprional	Oprional	Oprional



Products
Electromechanical Products

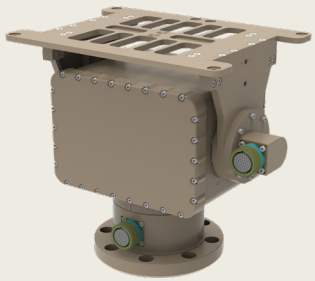
Pan-Tilt Positioners

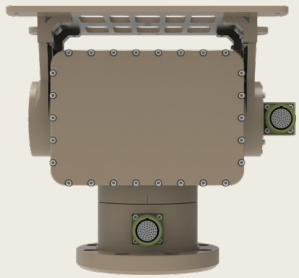
Gürbağ Defence develops high-precision control and guidance systems for land, naval, and aerial platforms. Designed for tactical superiority, our systems provide stabilized target tracking, fire control support, and mission-critical payload management. With MIL-STD compliant architecture, they ensure reliable performance in combat environments.

DUO (2-AXIS) Pan-Tilt
A Series

GSPT-

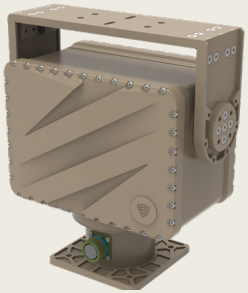
DUO-A-2200™

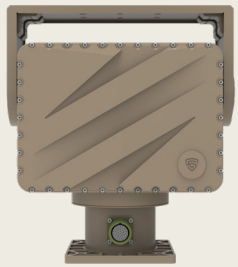




GSPT-

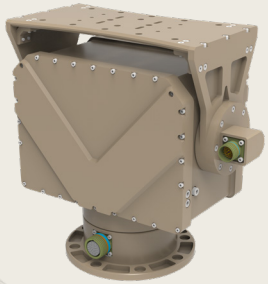
DUO-A-3000™

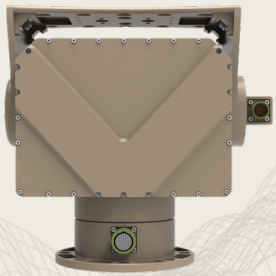




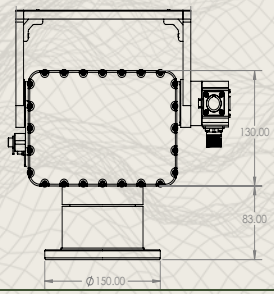
GSPT-

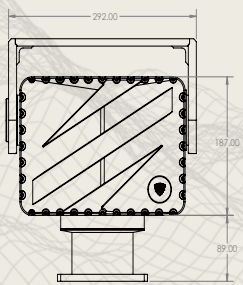
DUO-A-4000™

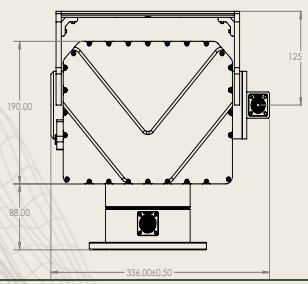




Specification	GSPT-DUO-A-2200 ™	GSPT-DUO-A-3000™	GSPT-DUO-A-4000™
Max. Payload Capacity	15 kg	25 kg	40 kg
Nominal Torque (Tilt)	50 Nm	40 Nm	90 Nm
Maximum Power Consumption	125 W	280 W	150 W
Operating Voltage Range	24-36 VDC	24-36 VDC	24-36 VDC
Pan Movement Capability	n × 360°	n × 360°	n × 360°
Maximum Pan Speed	18°/s	18°/s	21°/s
Tilt Movement Capability	±90	±45°	±45°
Maximum Tilt Speed	9°/s	9°/s	18°/s
Position Accuracy	0.01°	0.05°	0.05°
Position Repeatability	0.01°	0.05°	0.05°
Minimum Motion Sensitivity	0.02°	0.1°	0.1°
Backlash / System Slack Ratio	6-30 Arcmin	6-30 Arcmin	"Pan: 6-30 Arcmin Tilt: 1 Arcmin"
Mechanical Limits	Optional	Optional	Optional
Encoder Type	Absolute encoder	Absolute encoder	incremental/Absolute encoder
Pan Encoder Resolution	0.00017°	0.00017°	0.00017°
Tilt Encoder Resolution	0.00017°	0.00034°	0.00034°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	BLDC motor	Hybrid Step Motor	Hybrid Step Motor
Drive System (Tilt)	BLDC motor	Hybrid Step Motor	Hybrid Step Motor
Brake (Electromechanical)	Oprional	Oprional	Oprional
Body Material	Aluminum	Aluminum	Aluminum
Product Weight	10 kg	12 kg	12 kg
Dimensions (HxWxD)	281 x 288 x 150 mm	328 x 296 x 160 mm	318 x 336 x 180 mm
Protection / IP Rating	IP66	IP66	IP 65
Humidity Resistance	95%	95%	95%
Protocol	GSPT Protocol	GSPT Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999	D38999







Products
Electromechanical Products

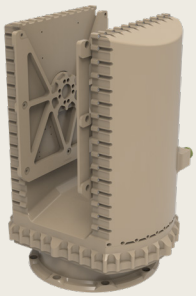
Pan-Tilt Positioners

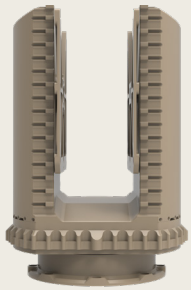
Gürbağ Defence develops high-precision control and guidance systems for land, naval, and aerial platforms. Designed for tactical superiority, our systems provide stabilized target tracking and mission-critical payload management. With MIL-STD compliant architecture, they ensure reliable performance in combat environments. The system offers a wider range of motion on the tilt axis, enhancing operational flexibility in dynamic engagement scenarios.

DUO (2-AXIS) Pan-Tilt
U Series

GSPT-

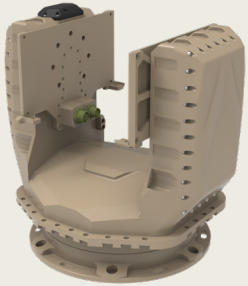
DUO-U-1000™

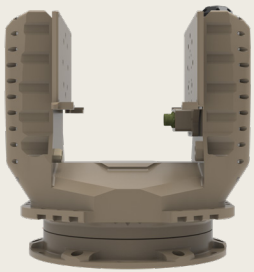




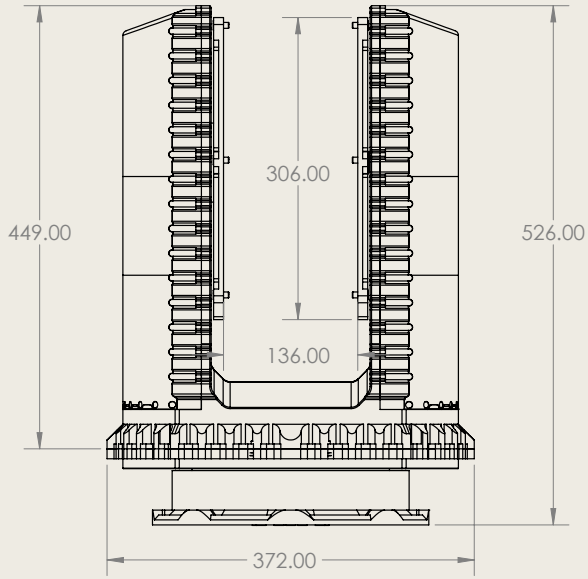
GSPT-

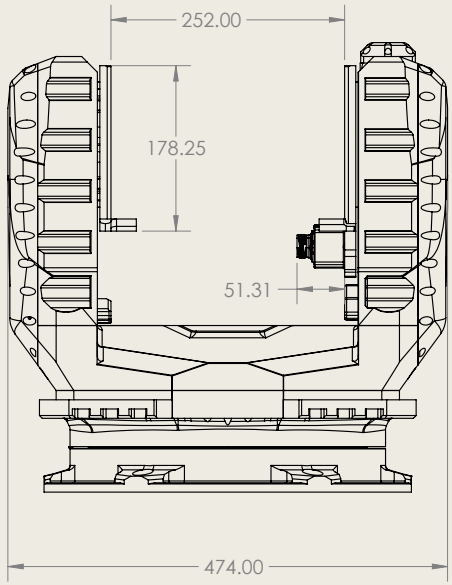
DUO-U-2000™





Specification	GSPT-DUO-U-1000™	GSPT-DUO-U-2000™
Max. Payload Capacity	25 kg	15 kg
Nominal Torque (Tilt)	16 Nm	17 Nm
Maximum Power Consumption	200 W	300 w
Operating Voltage Range	18-36 VDC	18-36 VDC
Pan Movement Capability	n × 360°	n × 360°
Maximum Pan Speed	120°/s	30°/s
Tilt Movement Capability	±60	-30/ +40
Maximum Tilt Speed	120°/sn	24°/s
Position Accuracy	0.02°	0.02°
Position Repeatability	0.02°	0.02°
Minimum Motion Sensitivity	0.05°	0.05°
Backlash / System Slack Ratio	1 Arcmin	1 Arcmin
Mechanical Limits	Optional	Optional
Encoder Type	Incremental/Absolute encoder	Absolute encoder
Pan Encoder Resolution	≤± 0.02°	± 0.00001°
Tilt Encoder Resolution	≤± 0.02°	± 0.00001°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	BLDC motor	Direct Drive
Drive System (Tilt)	BLDC motor	Direct Drive
Brake (Electromechanical)	Optional	Optional
Body Material	Aluminum	Aluminum
Product Weight	65 kg	75 kg
Dimensions (HxWxD)	525 x 372 x 354 mm	495 x 480 x 400 mm
Protection / IP Rating	IP66	IP66
Humidity Resistance	95%	95%
Protocol	GSPT Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999





Products
Electromechanical Products

Pan-Tilt Positioners

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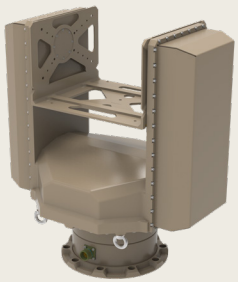
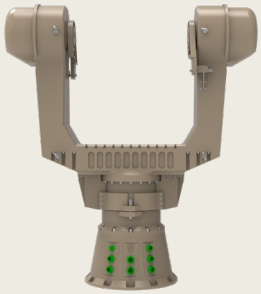
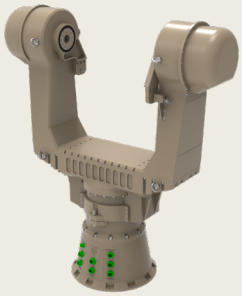
DUO (2-AXIS) Pan-Tilt
U Series

GSPT-
DUO-U-3000™

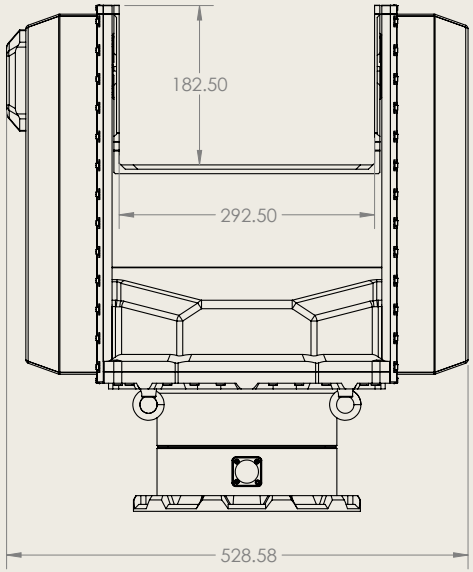


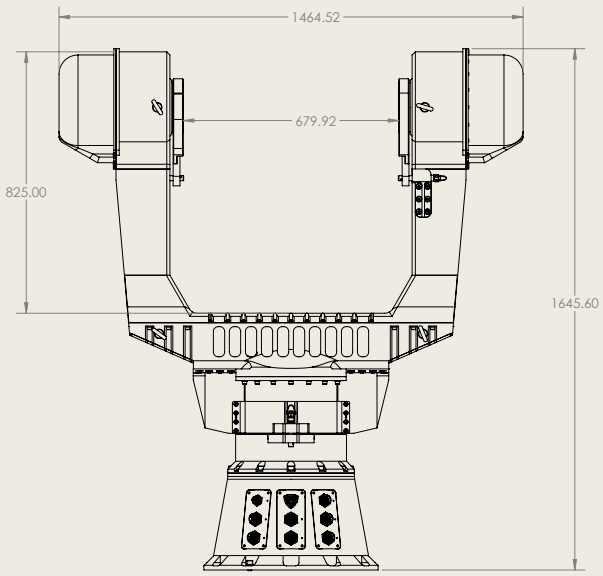
GSPT-
DUO-U-5000™





Specification	GSPT-DUO-U-3000™	GSPT-DUO-U-5000™
Max. Payload Capacity	25 kg	200 kg
Nominal Torque (Tilt)	20 Nm	230 Nm
Maximum Power Consumption	525 W	2000 W
Operating Voltage Range	18-36 V	220 VAC
Pan Movement Capability	n × 360°	n × 360°
Maximum Pan Speed	180°/s	120°/s
Tilt Movement Capability	±90	(-5° to +185°)
Maximum Tilt Speed	180°/s	120°/s
Position Accuracy	0.01°	0.001°
Position Repeatability	0.01°	0.001°
Minimum Motion Sensitivity	0.002°	0.002°
Backlash / System Slack Ratio	3 Arcmin	3 Arcmin
Mechanical Limits	Optional	Optional
Encoder Type	Absolute encoder	Absolute encoder
Pan Encoder Resolution	0.00001°	± 0.00001°
Tilt Encoder Resolution	0.00001°	± 0.00001°
Operating Temperature	(-32° C/ + 55° C)	(-10°C / +40°C)
Storage Temperature	(-40° C / +60° C)	(-20°C / +60° C)
Drive System (Pan)	BLDC Motor	BLDC Motor
Drive System (Tilt)	BLDC Motor	BLDC Motor
Brake (Electromechanical)	Optional	Optional
Body Material	Aluminum	Aluminum
Product Weight	38 kg	350 kg
Dimensions (HxWxD)	590 x 529 x363 mm	1646 x 1465 x 550 mm
Protection / IP Rating	IP66	IP66
Humidity Resistance	95%	95%
Protocol	GSPT Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999
Stabilization	Available	Mechanical





Products
Electromechanical Products

Pan-Tilt Positioners

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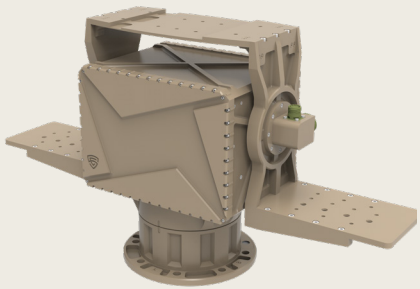
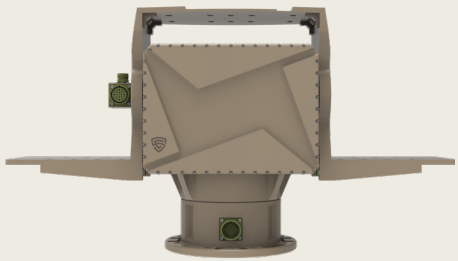
DUO (2-AXIS) Pan-Tilt
T Series

GSPT-

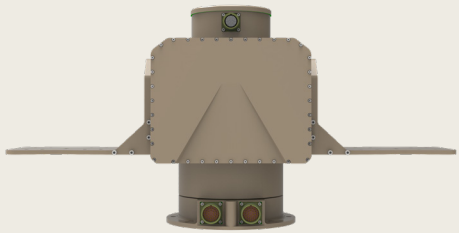
DUO-T-1000™

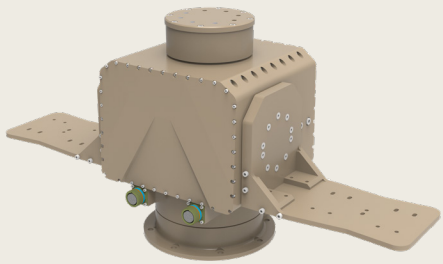




GSPT-

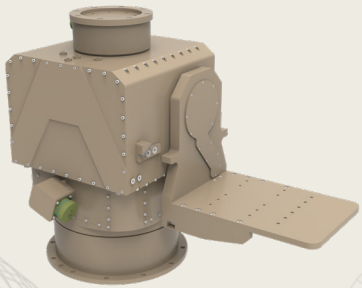
DUO-T-2000™

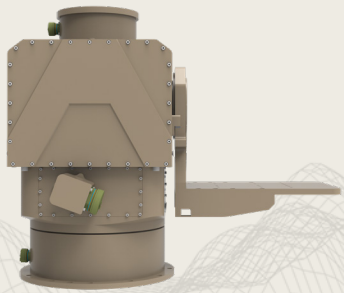




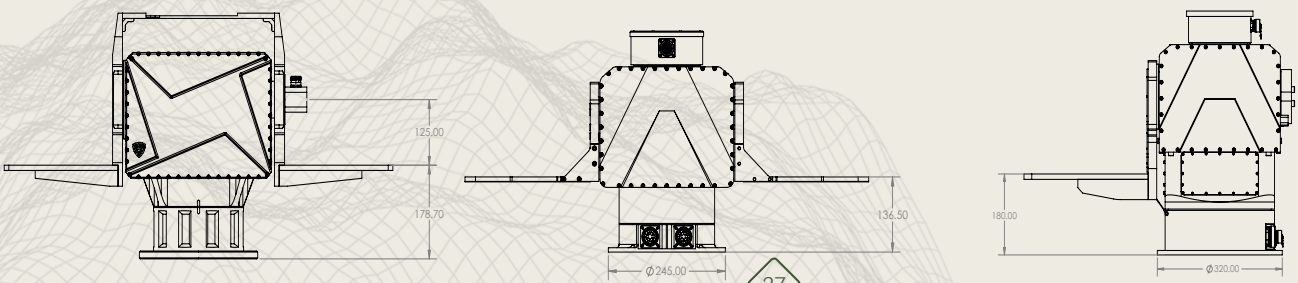
GSPT-

DUO-T-3000™





Specification	GSPT-DUO-T-1000 ™	GSPT-DUO-T-2000 ™	GSPT-DUO-T-3000 ™
Max. Payload Capacity	25 kg	105 kg	65 kg
Nominal Torque (Tilt)	120 Nm	80 Nm	80Nm
Maximum Power Consumption	850W	160 W	300 W
Operating Voltage Range	24-36 VDC	24-36 VDC	24-36 VDC
Pan Movement Capability	n × 360°	n × 360°	n × 360°
Maximum Pan Speed	90°/s	6°/s	24°/s
Tilt Movement Capability	±60°	±90°	±90°
Maximum Tilt Speed	70°/s	6°/s	24°/s
Position Accuracy	0.05°	0.05°	Pan:0.01°, Tilt: 0.02 °
Position Repeatability	0.02°	0.05°	Pan:0.01°, Tilt: 0.02 °
Minimum Motion Sensitivity	0.02°	0.2°	0.1°
Backlash / System Slack Ratio	"Tilt 1 Arcmin Pan 3 Arcmin "	"Pan: 3 Arcmin Tilt: 1 Arcmin"	6-30 Arcmin
Mechanical Limits	Optional	Optional	Optional
Encoder Type	Absolute Encoder	Absolute Encoder	Absolute Encoder
Pan Encoder Resolution	0.00001°	± 0.00017°	± 0.00017°
Tilt Encoder Resolution	0.00017°	± 0.00017°	± 0.00017°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	BLDC motor	Hybrid Step Motor	Hybrid Step Motor
Drive System (Tilt)	BLDC motor	Hybrid Step Motor	Hybrid Step Motor
Brake (Electromechanical)	Optional	Optional	Optional
Body Material	Aluminum	Aluminum	Aluminum
Product Weight	40 kg	75 kg	70 kg
Dimensions (HxWxD)	496 x 218 x 152 mm	542 x 1003 x 370 mm	542 x 695 x 370 mm
Protection / IP Rating	IP66	IP 65	IP 65
Humidity Resistance	95%	95%	95%
Protocol	GSPT Protocol	GSPT Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D38999	D38999



Products
Electromechanical Products

Pan-Tilt Positioners

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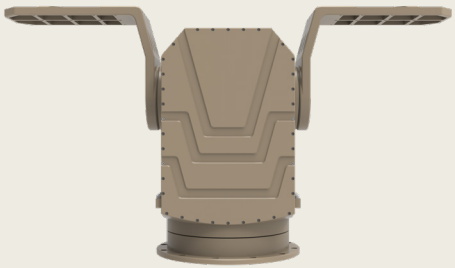
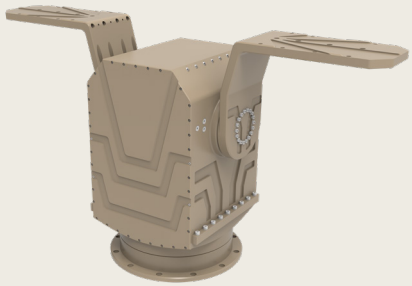
DUO (2-AXIS) Pan-Tilt
T Series

GSPT-

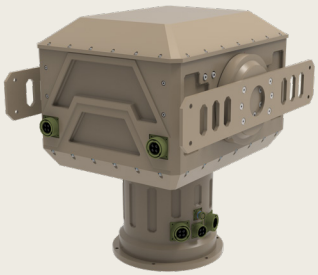
DUO-T-5000™

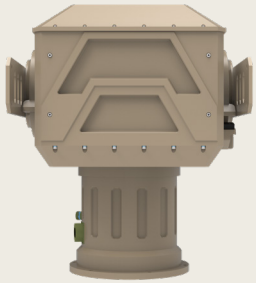




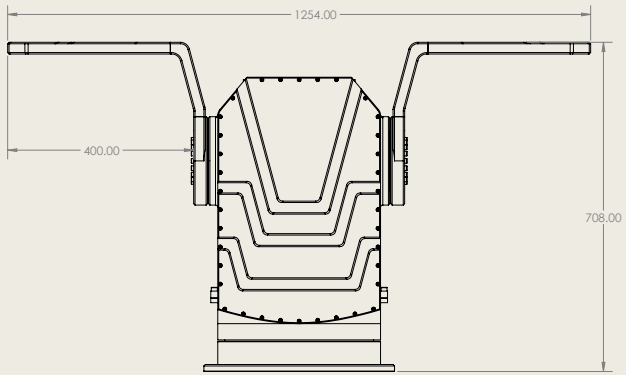
GSPT-

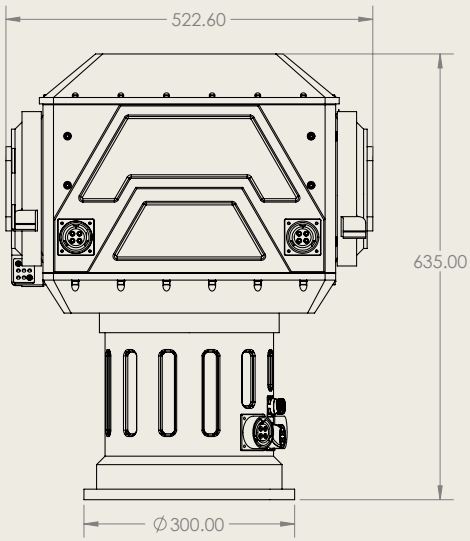
DUO-T-5100™





Specification	GSPT-DUO-U-5000™	GSPT-DUO-U-5100™
Max. Payload Capacity	80 kg	100 kg
Nominal Torque (Tilt)	200 Nm	300 Nm
Maximum Power Consumption	850W	2100W
Operating Voltage Range	48 VDC	48 VDC
Pan Movement Capability	n × 360°	n × 360°
Maximum Pan Speed	60°/s	90°/s
Tilt Movement Capability	(- 35°/ + 75°)	-5°/ +75°
Maximum Tilt Speed	60°/s	48°/s
Position Accuracy	0.01°	0.05°
Position Repeatability	0.01°	0.05°
Minimum Motion Sensitivity	0.02°	0.02°
Backlash / System Slack Ratio	1 Arcmin	1 Arcmin
Mechanical Limits	Optional	Optional
Encoder Type	Absolute Encoder	Absolute Encoder
Pan Encoder Resolution	± 0.00017°	± 0.00001°
Tilt Encoder Resolution	± 0.00001°	± 0.00001°
Operating Temperature	(-32° C/ + 55° C)	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)	(-40° C / +60° C)
Drive System (Pan)	BLDC motor	BLDC motor
Drive System (Tilt)	BLDC motor	BLDC motor
Brake (Electromechanical)	Optional	Available
Body Material	Aluminum	Aluminum
Product Weight	80 Kg	132 Kg
Dimensions (HxWxD)	707 x 1254 x 410 mm	635 x 555 x 525 mm
Protection / IP Rating	IP66	IP66
Humidity Resistance	95%	95%
Protocol	GPTK Protocol	GPTK Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999	D389997





Products
Electromechanical Products

Pan-Tilt Positioners

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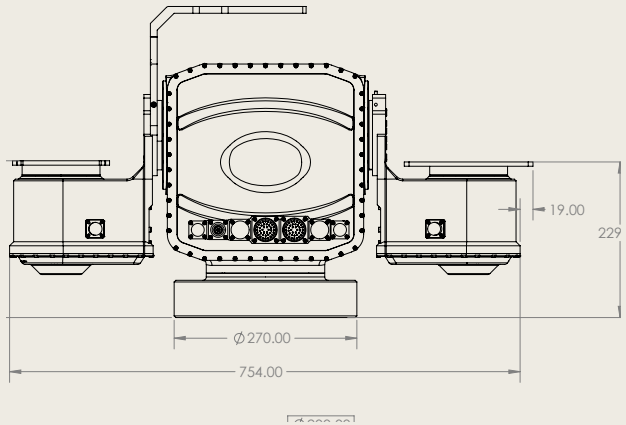
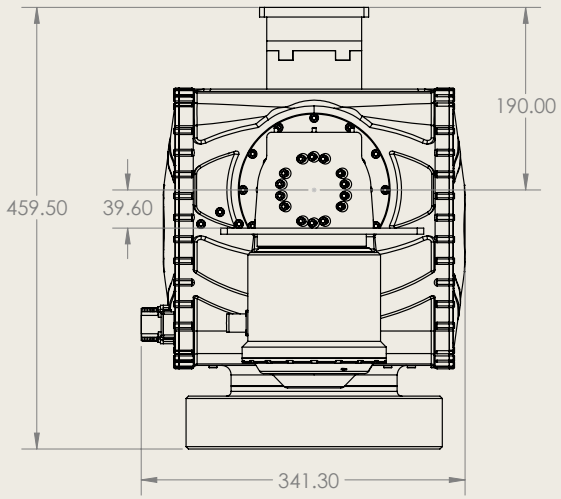
PENTA (5-AXIS) Pan-Tilt
T Series

GSPT-

PENTA-T-4000™

Specification	GSPT-PENTA-T-4000™
Max. Payload Capacity	52 kg
Nominal Torque (Tilt)	120 Nm
Maximum Power Consumption	560 W
Operating Voltage Range	18-36 VDC
Pan Movement Capability	n × 360°
Maximum Pan Speed	Pan1: 6°/s - Pan2: 4.8°/s-Pan3: 4.8°/s
Tilt Movement Capability	±15°
Maximum Tilt Speed	Tilt:1 6°/s- Tilt 2 : 6°/s
Position Accuracy	"Penta Pan: 0.05° Tetra Pan: 0.01""
Position Repeatability	0.05°
Minimum Motion Sensitivity	0.01°
Backlash / System Slack Ratio	1 Arcmin
Mechanical Limits	Optional
Encoder Type	Incremental/Absolute encoder
Pan Encoder Resolution	Penta Pan: 0.00017° Tetra Pan: 0.00034°
Tilt Encoder Resolution	Penta Pan: 0.00017° Penta Pan: 0.00017°
Operating Temperature	(-32° C/ + 55° C)
Storage Temperature	(-40° C / +60° C)
Drive System (Pan)	Hybrid Step Motor
Drive System (Tilt)	Hybrid Step Motor
Brake (Electromechanical)	Optional
Body Material	Aluminum
Product Weight	70 kg
Dimensions (HxWxD)	460 x 770 x 318 mm
Protection / IP Rating	IP66
Humidity Resistance	95%
Protocol	GSPT Protocol
Communication	"RS422/RS485 /Ethernet (Ops)"
Main Connector	D38999





Gürbağ Defence Pan-Tilt Positioner

Field in use

- Provides precise motion control for a wide range of defense and security applications.

- Ensures reliable performance under various operational scenarios.

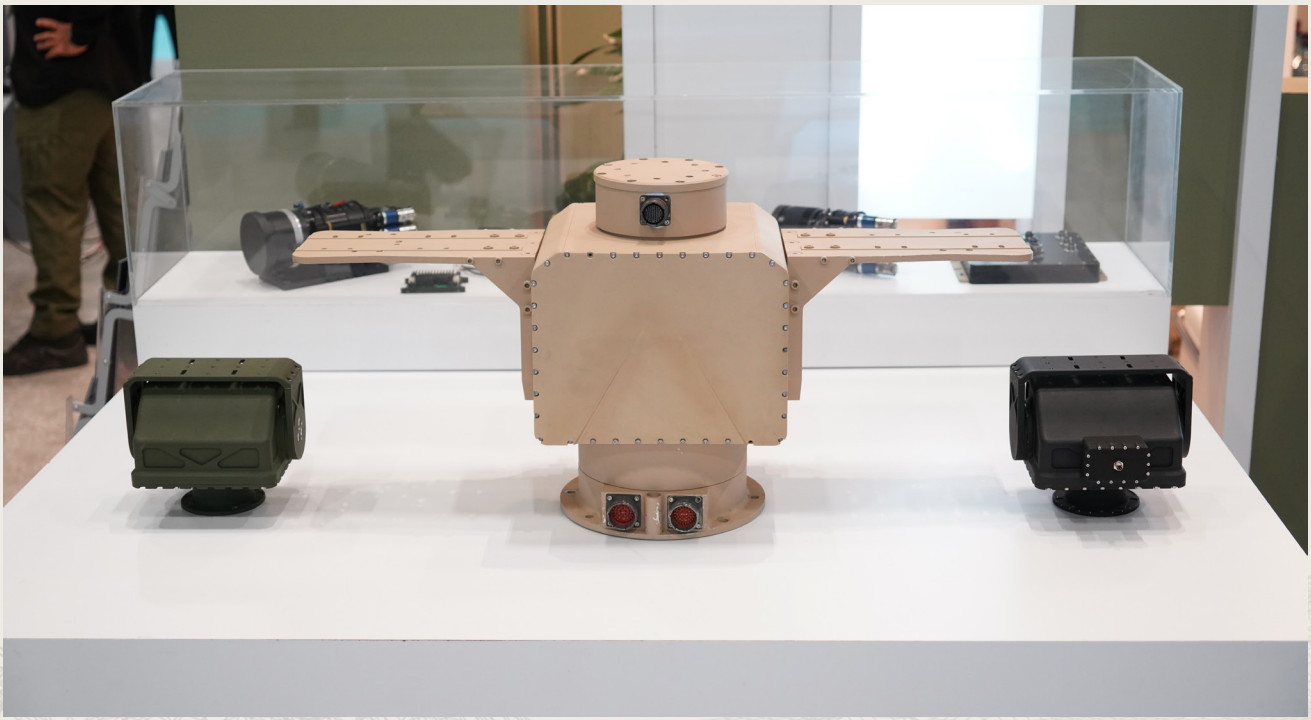
- Features advanced pan-tilt mechanisms for high-precision positioning.

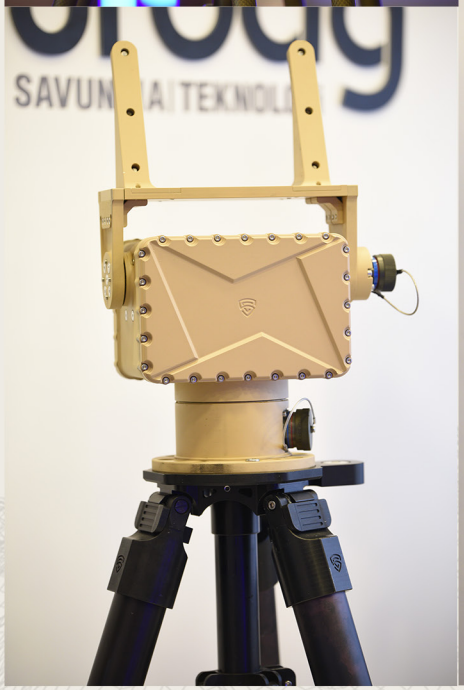
- Maintains accuracy and mechanical durability even in harsh and demanding environments.

- Designed for seamless integration with modern surveillance, targeting, and communication systems.

- Offers modular and scalable architecture, supporting mission-specific payloads and interfaces.

Enhances operational capabilities through intelligent motion algorithms and feedback control.





Products
Electromechanical Products

Command,Control, Communications, Computer and Intelligence (C4I)

Precise Control, Effective Management, Unlimited Dominance

Control, Guidance and Interface (I/O) systems developed by Gürbağ Defence provide full control to the user in all tasks requiring fast decision-making and high precision in critical operations. Supported by high-tech hardware and software

Command Control Stations

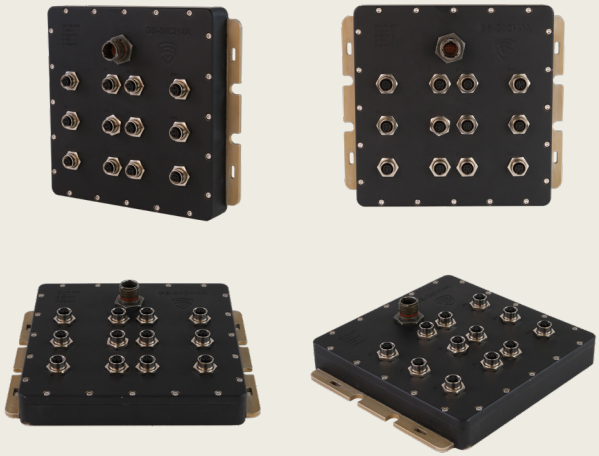
GSKK1/2/3/4/5

Building upon Gürbağ Defence's high-performance control and guidance infrastructure, our Control Stations serve as the central interface for mission execution, decision-making, and real-time monitoring across all operational domains. Designed to meet the stringent requirements of modern defense applications, these stations ensure uninterrupted control, situational awareness, and tactical superiority in the field.

Gürbağ Defence control stations are equipped with high-resolution multi-display setups, ruggedized operator consoles, and customizable software environments tailored for command, telemetry, targeting, and platform coordination. Through their ergonomic design and modular structure, they provide seamless interaction between operator and system, significantly reducing cognitive load during high-pressure operations.

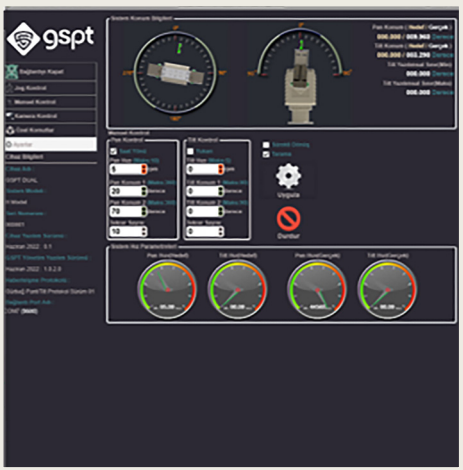
Sensor Fusion Module Integration to Electromechanical Systems

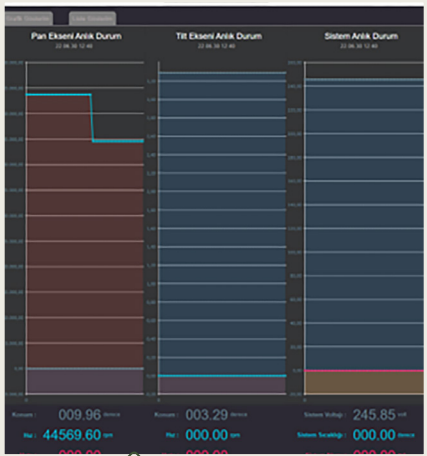
Control, Guidance, and Interface systems (I/O – Military-Grade Input Analog Modules) developed by Gürbağ Defence provide full control to the user in all tasks requiring fast decision-making and high precision in critical operations. Supported by high-tech hardware and software infrastructure, these systems maximize operational efficiency through simultaneous information flow, precise motion coordination, and advanced command capabilities. Gürbağ Defence products, which can be easily integrated into different platforms, enhance mission planning with real-time data transmission and secure communication infrastructure. User-friendly interfaces and MIL-STD compliance ensure reliable performance even in the most demanding tactical environments.



Electromechanical Information System Software Solutions

Within the scope of control, management and testing of electromechanical systems and integration between electromechanical systems; required infrastructure and interface software development processes are carried out.





Our Systems

- **Mission Based Systems**

  Control Systems Based Mission Systems
  - GSS-Spine™
  - GSS-Fibula™
  - ZEYBEK-LAUNCHER™
  - EFE-LAUNCHER™

  Electro-Optical Mission Systems
  - GSS-Moon™
  - GSS-Spotter™
  - GSS-Penta™
  - GSS-Atlas™
  - GSS-Pera™

  Antenna Based SIGINT / ELINT Mission Systems
  - GSS-Aligner™

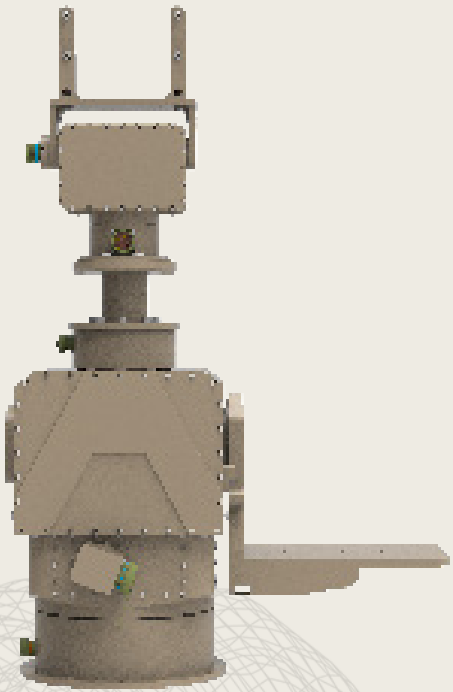
  Radar-Assisted Mission Systems
  - GSS-Iris™

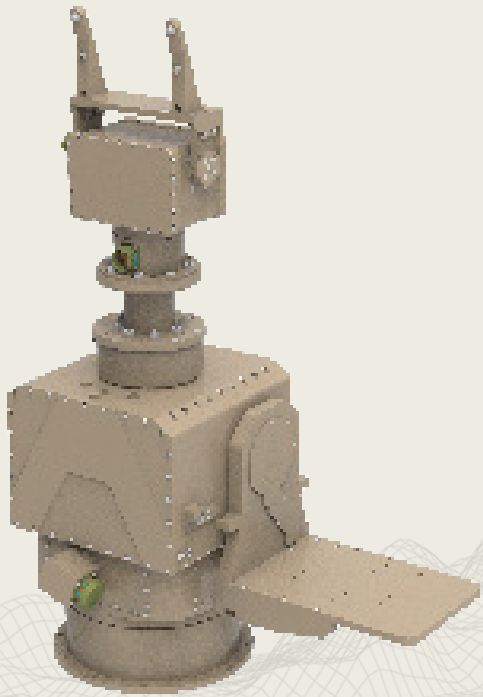

ALWAYS TECHNOLOGY
FOR THE FUTURE

Mission Based Systems
Control Systems Based Mission Systems

GSS-Fibula-S-001™

GSS-Fibula-S-001™ is a dual-axis electro-mechanical mission platform developed by Gürbağ Defence for multi-sensor surveillance applications requiring simultaneous payload operation. The system integrates **GSPT-DUO-A-2100™ (top)** and **GSPT-DUO-T-3000 (bottom)** pan-tilt units, supporting up to **65 kg of EO/IR**, radar, or SIGINT payloads with high torque and angular precision. Featuring **±360° pan** and wide tilt ranges, it allows independent control of both sensors for multi-directional tracking. **GSS-Fibula-S-001** operates on **24–36 VDC with 425 W total power** consumption, is **IP65-rated,** and performs reliably between **-32°C and +55°C.**
Its modular structure enables integration into towers, vehicles, and tactical platforms, making it ideal for border surveillance, infrastructure protection, and field deployments.

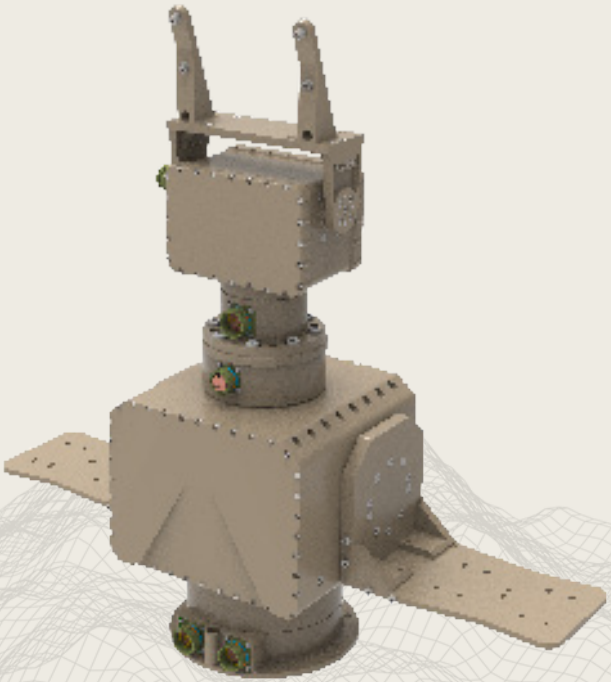


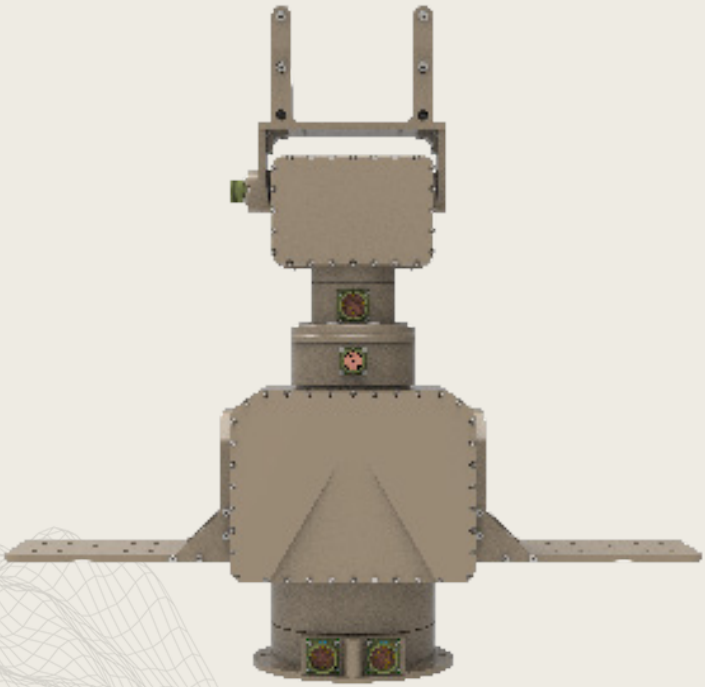


Mission Based Systems
Control Systems Based Mission Systems

GSS-Spine-S-001™

GSS-Spine-S-001™ is a dual-axis electro-mechanical mission platform developed by Gürbağ Defence for fixed and semi-mobile surveillance applications. The system integrates GSPT-**DUO-A-2100™ (top)** and **GSPT-DUO-T-2000™ (bottom)** pan-tilt units, supporting up to **105 kg** of EO/IR, radar, or SIGINT payloads with high stability and torque.Featuring **n × 360° pan** and wide tilt motion with up to **80 Nm torque**, it enables precise, independent control of two sensors for vibration-free multi-directional tracking. Designed for long-range optics and multi-sensor units, it ensures accurate targeting in demanding environments.Operating on **24–36 VDC** with **285 W** total power consumption and enclosed in an IP65-rated housing, the system maintains reliable performance between **–32°C and +55°C**. Its modular structure allows easy integration into towers, vehicles, or mobile platforms, making it ideal for border security, infrastructure protection, and wide-area surveillance missions.

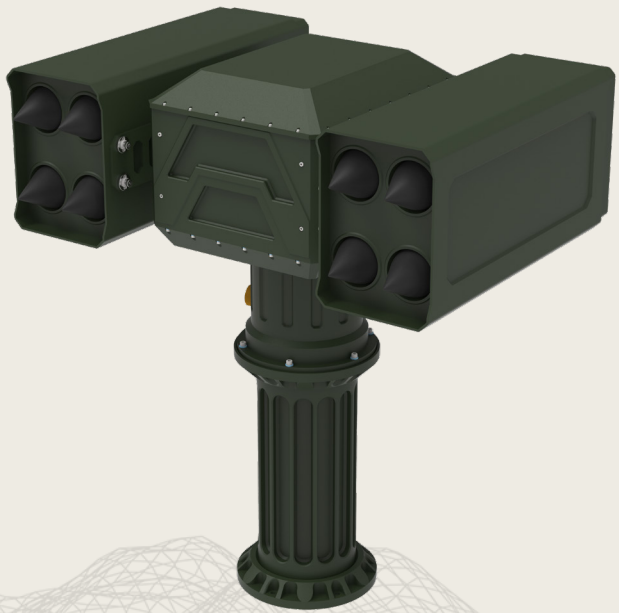


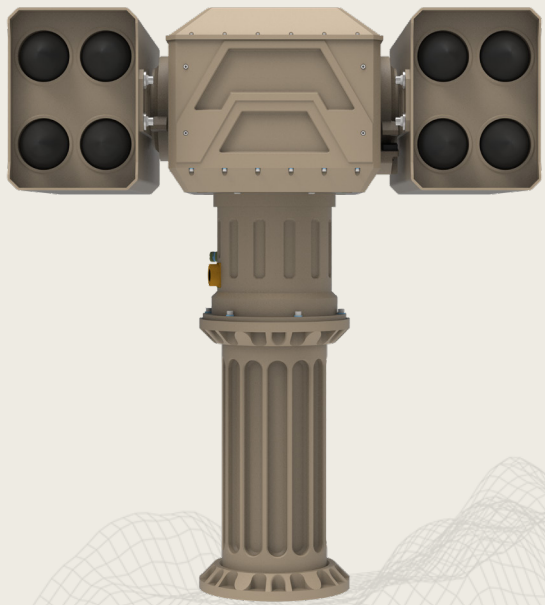


Mission Based Systems
Control Systems Based Mission Systems

ZEYBEK-LAUNCHER™

ZEYBEK-LAUNCHER™ is a high-power, dual-axis stabilized launcher platform developed by Gürbağ Defence for rapid-response and high-precision engagement in fixed or mobile operations. The system integrates the **GSPT-DUO-T-5100™** pan-tilt unit, offering **n × 360° pan** motion, up to **300 Nm tilt torque**, and support for payloads up to 100 kg, enabling fast and stable positioning under dynamic conditions.Fully compatible with modular launcher systems, it enables precise directional control of anti-drone munitions, programmable pyrotechnics, or multi-role payloads. Operating on **48 VDC with 2100 W power** consumption, it ensures consistent performance in harsh environments. Its rug ged structure supports integration with sensors, fire control, and command systems, making it ideal for base protection, counter-UAV operations, and tactical defense missions.

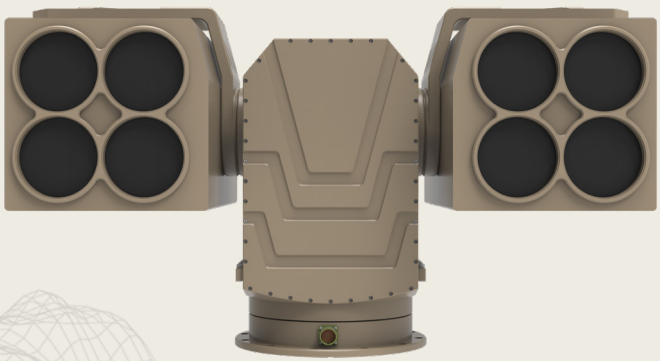




Mission Based Systems
Control Systems Based Mission Systems

EFE-LAUNCHER™

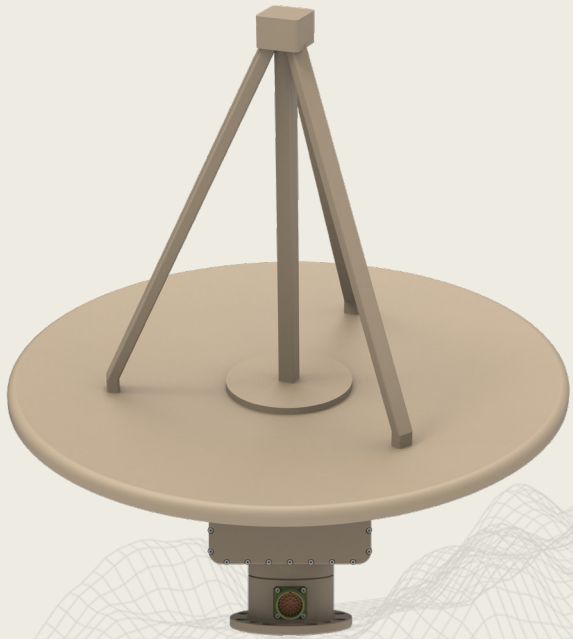
EFE-LAUNCHER™ is a high-performance, dual-axis stabilized launcher platform developed by Gürbağ Defence for precise targeting in fixed or mobile operations. The system features the **GSPT-DUO-T-5000™** pan-tilt unit with **n × 360° pan, 200 Nm tilt torque**, and support for **payloads up to 80 kg**, enabling stable repositioning under heavy launcher configurations. Designed for programmable launch systems, anti-drone payloads, and multi-role munitions, it delivers reliable directional control and fast response. Operating on **48 VDC with 850 W** power consumption, the platform ensures robust performance in harsh environments. Its architecture allows integration with sensor inputs, fire control modules, and mission systems, making it ideal for tactical response, perimeter protection, and automated launch applications.



Mission Based Systems
Antenna Based SIGINT / ELINT Mission Systems

GSS-Aligner™

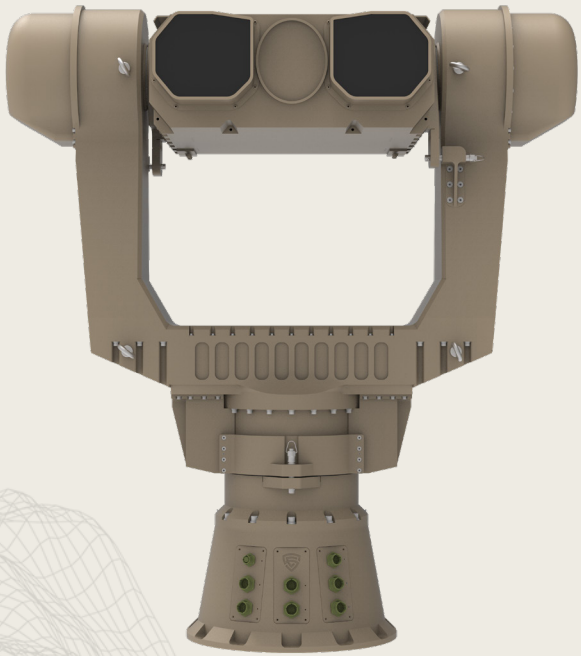
GSS-Aligner™ is a high-precision electro-mechanical platform developed by Gürbağ Defence for stabilizing and positioning large tactical antennas in satellite communication and signal intelligence applications. Built on the **GSPT-DUO-A-2100™** pan-tilt base unit, it supports integrated directional antennas mounted on top for fine control.
The system handles **payloads up to 25 kg**, provides **n × 360°** pan and **±35°** tilt range with **±0.01°** accuracy and **50 Nm torque**, enabling stable alignment across **C, Ku, Ka, X,** and **S bands**. Designed to operate in extreme environments between **-32°C and +55°C**, it runs on **24–36 VDC** with **IP66** protection.GSS-Aligner is ideal for fixed towers or mobile platforms requiring precise antenna steering, high-bandwidth data transfer, and reliable l**ong-range communication** in tactical field conditions.



Mission Based Systems
Electro-Optical Mission Systems

GSS-Atlas™

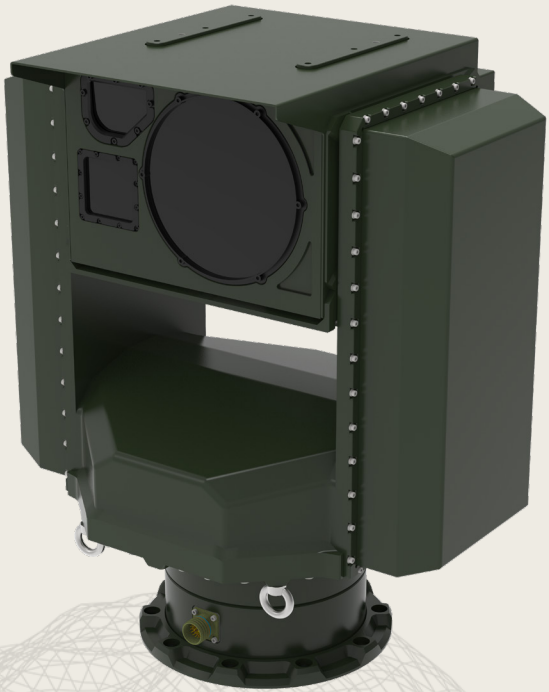
GSS-Atlas™ is a heavy-duty electro-mechanical mission platform developed by Gürbağ Defence, designed for border security, wide-area surveillance, and protection of critical infrastructure. Built on the **GSPT-DUO-U-5000™** pan-tilt unit, it supports up to **200 kg** of camera payloads and delivers ±**0.05°** positioning accuracy with **230 Nm torque, n × 360° pan**, and **-5°/+185° tilt range.** It enables precise, vibration-free operation of integrated sensors such as high-resolution daytime cameras and MWIR/LWIR thermal imagers, ensuring reliable tracking in all weather and lighting conditions. Operating on **220 VAC with 2000 W power** consumption and **IP66** protection, **GSS-Atlas™** performs reliably between **–32°C and +55°C**. Its rugged structure and intelligent control support automated scanning, remote/local operation, and multi-mission flexibility, making it ideal for both fixed towers and semi-mobile surveillance platforms.

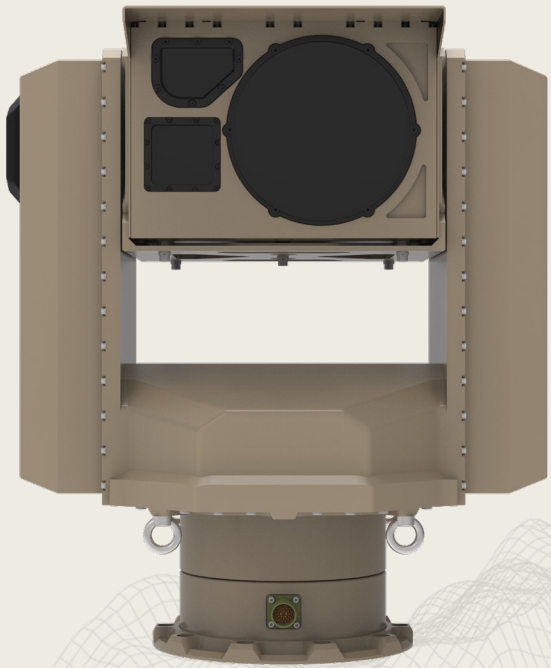


Mission Based Systems
Electro-Optical Mission Systems

GSS- Spotter™

GSS-Spotter™ is a high-precision electro-mechanical platform developed by Gürbağ Defence for long-range surveillance, tactical reconnaissance, and critical site protection. Built on the **GSPT-DUO-U-3000** pan-tilt unit, it supports integrated camera payloads up to **25 kg**, delivering ±0.05° positioning accuracy with **20 Nm tilt torque, n × 360° pan, and ±90° tilt**. The system enables smooth, **vibration-free tracking with high-resolution daytime cameras, optional MWIR/LWIR thermal imaging,** and long-range laser rangefinders, ensuring reliable identification in day/night operations. Operating on **18–36 VDC** with **525 W** power consumption, and designed to perform in harsh environments, **GSS-Spotter™** offers automated scanning and precise remote control for military, border, and infrastructure monitoring mission

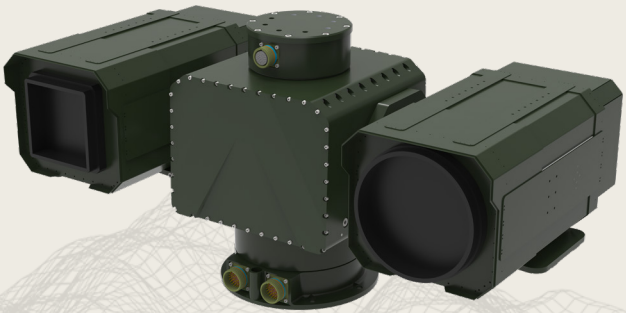


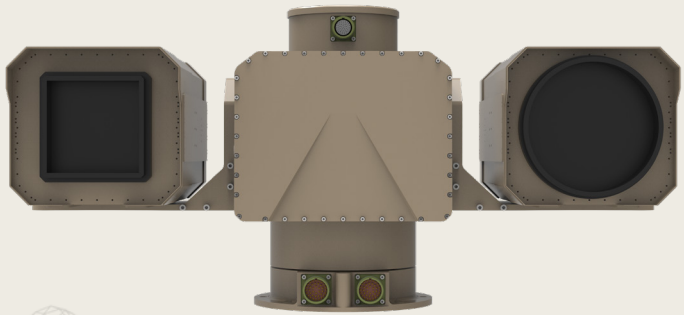


Mission Based Systems
Electro-Optical Mission Systems

GSS-Moon™

GSS-Spotter™ is a high-precision electro-mechanical mission platform developed by Gürbağ Defence for border security, critical facility surveillance, and tactical reconnaissance. Built on the **GSPT-DUO-T-2000™** pan-tilt system, it supports **up to 15 kg of payload with n × 360° pan, ±90° tilt, and ±0.05°** positioning accuracy, ensuring smooth sensor tracking and operational stability in harsh environments. The system integrates a **1920×1080 resolution daytime camera with optional MWIR/LWIR thermal imaging**, enabling long-range target detection and identification in all weather and lighting conditions. Rated **IP66** and operating between **-32°C and +55°C on 24-36 VDC power,** GSS-Spotter™ supports automated scanning and remote operation, making it ideal for both mobile and fixed surveillance platforms.

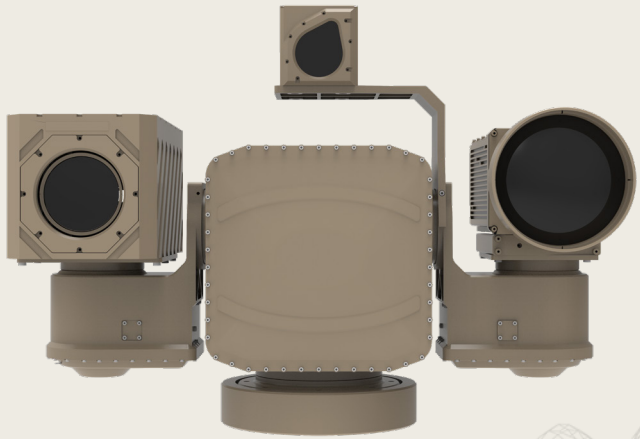




Mission Based Systems
Electro-Optical Mission Systems

GSS-Penta™

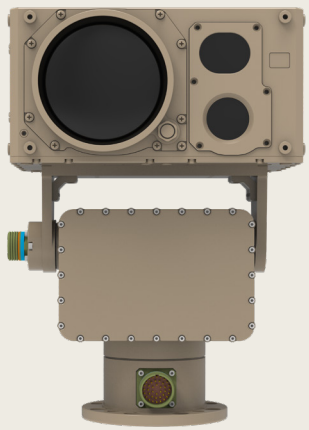
GSS-Penta™ is a high-tech electro-optical surveillance platform developed by Gürbağ Defence, integrating multi-thermal (MWIR/LWIR) and **high-resolution daytime** EO sensors onto the **GSPT-PENTA-T-4000™** precision pan-tilt mechanism. Supporting **payloads up to 52 kg**, it delivers **±0.05° positioning accuracy** with independent **dual-axis motion** (**n × 360° pan and ±90° tilt**). The integrated EO sensors feature **their own additional pan capability,** allowing for extended field-of-view control independent from the main axis. Featuring **30× optical zoom** and dual-channel EO/IR imaging, it ensures uninterrupted **day/night** situational awareness. Powered by an **18–36 VDC** input and consuming up to **560 W, GSS-Penta™** operates reliably between **–32°C and +55°C**, meets **IP66** standards, and supports automated scanning, mission route execution, and real-time video transmission via remote or local control.



Mission Based Systems
Electro-Optical Mission Systems

GSS-Pera ™

GSS-Pera™ is a compact and high-precision electro-optical surveillance platform developed by Gürbağ Defence for critical infrastructure protection, mobile observation, and short-to-medium range border monitoring missions. The system integrates the **GSPT-DUO-A-2000™** dual-axis pan-tilt unit, offering **n × 360° pan, ±90° tilt, and ±0.05° positioning accuracy**, with support for sensor payloads up to 1**5 kg. With 24–48 VDC input and 100 W power** consumption, it ensures stable motion control and fast target acquisition.
The onboard EO package includes a high-resolution daytime camera with **20–30× optical zoom** and low-light color imaging. Optional MWIR or LWIR thermal sensors enhance the system's performance during nighttime and adverse weather.



Mission Based Systems
Radar-Assisted Mission Systems

GSS-Iris™

GSS-Iris™ is a radar-integrated surveillance platform developed by Gürbağ Defence, combining a high-performance ground surveillance radar with the **GSPT-DUO-A-2100** dual-axis pan-tilt unit, offering **n × 360°, ±35° tilt, and 0.01°** positioning accuracy. The system enables 360° area scanning, detecting personnel up to **10 km** and vehicles up to **18 km**, including low-RCS micro and mini targets. It supports real-time multi-target tracking, automatic threat classification, and alarm generation. Designed for harsh field conditions, GSS-Iris operates between **-32°C and +55°C**, features IP66 protection, and is powered by **24–36 VDC**. With automated scanning, mission programming, and remote/local control, it is suited for border surveillance and critical infrastructure security.


TECHNICAL &
SECURITY FOCUSED
gürbağ
DEFENCE | TECHNOLOGY

Gürbağ Defence System

Field in use

Delivers integrated and modular solutions across command, control, communication, surveillance, and targeting operations.

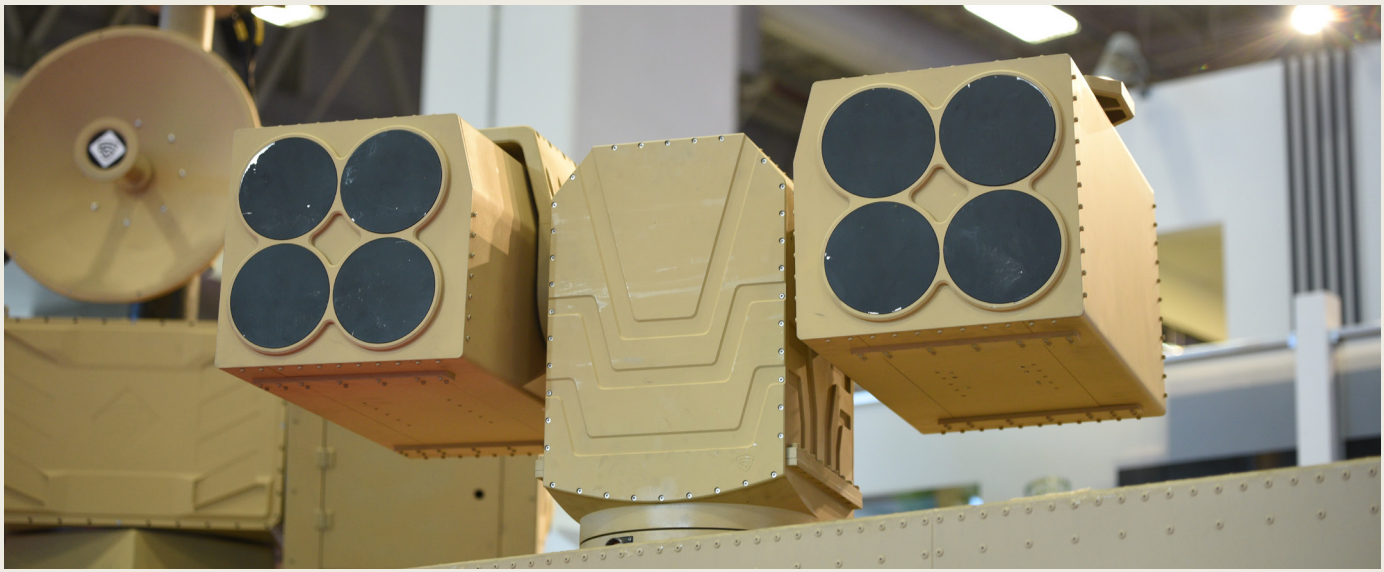
Supports multi-domain deployment across land, air, and naval platforms.

Enhances situational awareness with real-time data processing and sensor fusion capabilities.

Provides secure and robust communication infrastructure for uninterrupted data and video transmission.

Enables precise control and coordination through advanced motion systems and user interfaces.

Compatible with MIL-STD standards, ensuring reliability in harsh operational environments.



Integrated Systems

- **Border & Critical Structure Surveillance Systems**
  - GES-Raven™
  - GES-Hook™

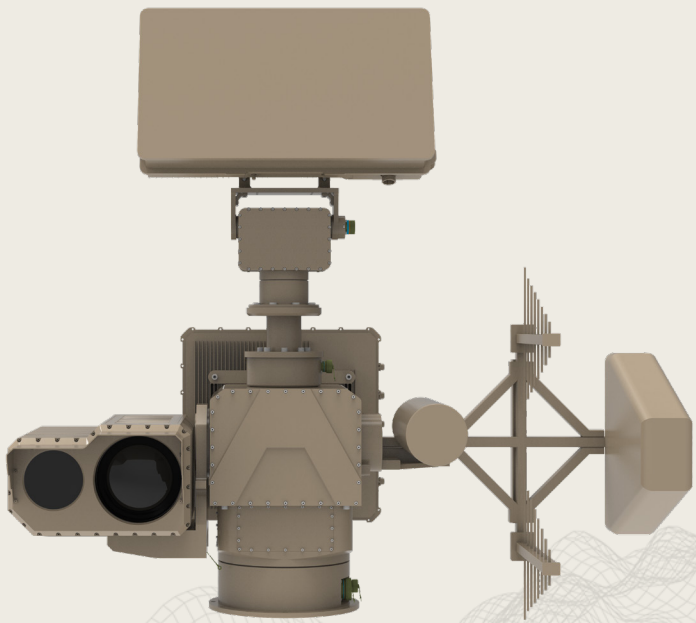
WE ARE IN TOMORROW'S WORLD

Integrated Systems
Border & Critical Structure Surveillance Systems

GES - Hook™

Modern micro and mini UAVs pose both reconnaissance and attack threats with low radar signatures and high mobility. GES-Hook™ delivers a compact, multi-layered solution combining detection, tracking, and neutralization capabilities in a single system.

EO-Based Precision Tracking
Full HD daytime + **640×512 MWIR thermal** imaging with 30× optical zoom and dual-axis (n × 360°/±90°) movement.



Radar-Guided Detection
Integrated short-range radar detects and classifies UAVs, enabling real-time visual confirmation.

Directional RF Jamming
Focused jamming on **2.4 GHz, 5.8 GHz**, and GNSS to disrupt drone control with minimal interference.

Mission-Centric Durability
IP66 protection, **-32°C to +55°C** operation range, built-in mission computer.

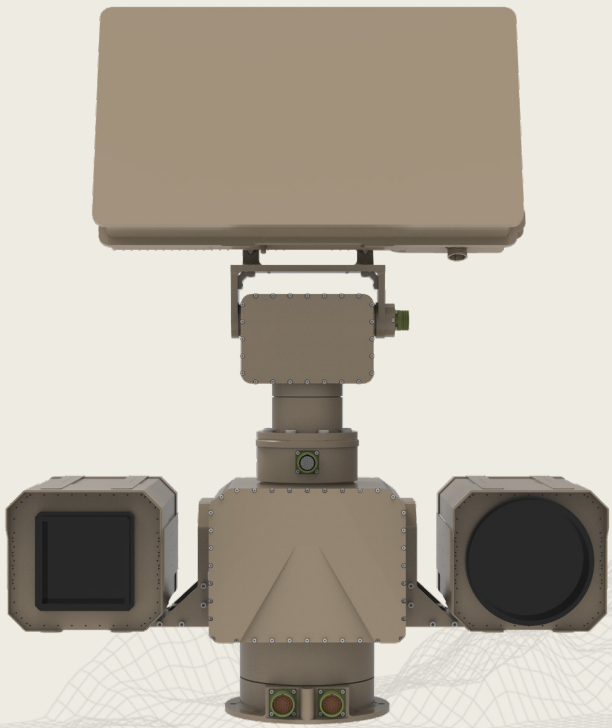
Centralized Control & Live Transmission
Real-time data relay to command centers with autonomous scanning and threat response.

Integrated Systems
Border & Critical Structure Surveillance Systems

GES-Raven™

Modular Integrated Electro-Optical and Radar Reconnaissance System for Multi-Layered Surveillance and Threat Detection

GES-Raven™ is a scalable, high-performance surveillance system integrating electro-optical and radar capabilities for multi-domain threat detection. Built upon the GSPT-DUO-T-2000™ pan-tilt platform, it offers **n × 360° pan, ±90° tilt, and ±0.05° positioning accuracy**, supporting payloads **up to 25 kg with fast**, stable, and precise motion control. The system combines EO imaging and radar sensing within a compact and modular architecture, making it suitable for mobile and fixed defense applications.



Optical Package
Equipped with a **Full HD 1920×1080 daytime camera and a 640×480 MWIR thermal imager (3.7–4.8 μm), offering 30× optical zoom and DRI algorithms for target identification between 0.5 and 3.0 km.**

Radar System
FMCW AESA radar detects **mini/micro** UAVs, personnel, and low-RCS targets (down to **0.01 m²**) within a 5 km range, supporting multiple surveillance and tracking modes.

Radar and Platform Integration
The radar performs **60°–120° e-scan** while the **GSPT-DUO-T-2000™** enables **n × 360°** mechanical rotation, ensuring synchronized tracking with EO sensors.

Command & Control and System Integration
The system supports remote operation and C2 network integration with configurable I/O and real-time data transmission.

Environmental Durability & Mobility
IP66 protection and MIL-STD-810H compliance ensure reliable performance between **–32°C and +55°C** in mobile and harsh field deployments.

Platforms

- **Integrated Counter-UAS Systems**
  - GSP-HYDRO-GIDS™
  - GSP-SENTİNEL™
  - GSP-MMGIDS™
  - GSP-SENTRA™

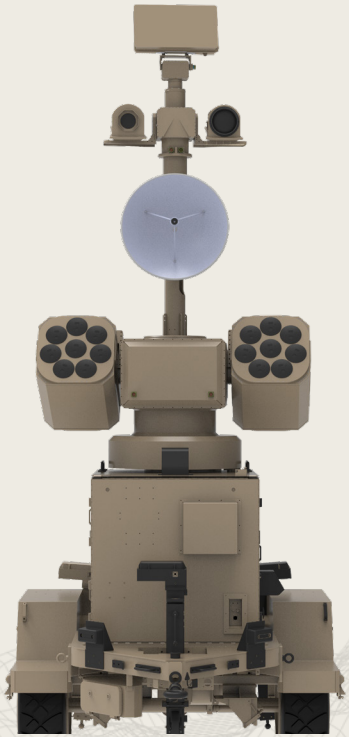
WE ARE IN TOMORROW'S WORLD

Platforms
Integrated Counter-UAS Systems

GSP-HYDRO-GIDS™

Radar, and Launcher Systems HYDRO-GIDS™ is a next-generation, multi-layered mobile defense system developed by Gürbağ Defence for tactical field operations, border security, and critical infrastructure protection. Designed on a stabilized trailer structure, **HYDRO-GIDS™** integrates advanced electro-optical imaging, radar-based detection, and a hydrogen-powered launcher into a single modular and mobile platform.

Hydrogen-Powered Launcher
HYDRO-GIDS™ features a hydrogen-powered kinetic launcher offering a safe, reusable, and low-maintenance alternative to conventional pyrotechnic systems. With reduced recoil and precision alignment, it is ideal for mobile anti-drone applications.



Platform and Stabilization
The system is mounted on a wheeled trailer with four electro-hydraulic stabilization legs for rapid deployment. At its core lies the **GSPT-DUO-T-5000™** dual-axis pan-tilt platform, delivering **n × 360° pan, ±90° tilt, and ±0.05° positioning accuracy**, with up to **80 kg payload capacity** for high-precision EO/IR and radar control.

Electro-Optical Payload
The EO system includes a Full HD 1**920×1080 daytime camera with 30× optical zoom and a 640×480 MWIR thermal imager** (**3.7–4.8** μm), supported by DRI algorithms for target identification. It enables long-range visual confirmation in varying lighting and weather conditions.

Radar and Antenna Systems
The onboard AESA radar detects RCS 0.01 m² targets at 5–6 km, including micro UAVs and personnel. Mounted on the **GSPT-DUO-A-2100™** , it provides **60°–120°** e-scan, with **360° mechanical rotation**. The directional antenna supports high-gain RF or communication tasks.

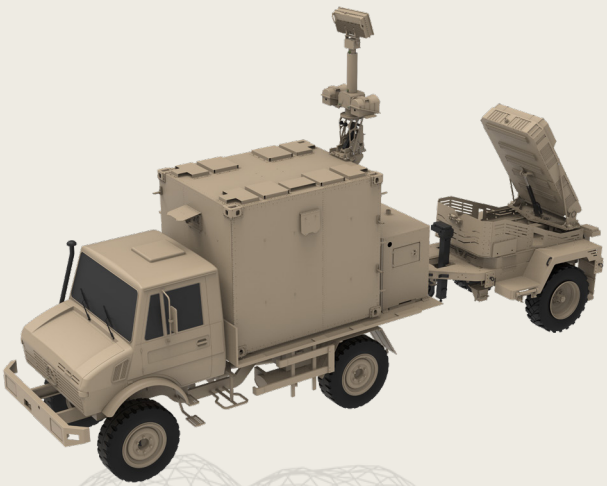
Environmental Resilience and Command Infrastructure
With IP66 rating and operation between –32°C and +55°C, the system meets MIL-STD-810H standards. A mission computer enables C2 integration, real-time video transmission, and remote operation via 4G/5G or RF.

Platforms
Integrated Counter-UAS Systems

GSP-SENTİNEL™

Multi-Domain Stabilized Pan-Tilt System
GSPT-Sentinel™ is an advanced dual-axis stabilized motion platform engineered for precise electro-optical payload control across land, sea, and mobile applications. It offers increased payload capacity, enhanced mechanical precision, and an integration-ready architecture suitable for modern surveillance, targeting, and countermeasure systems.

Environmental Performance and Standards
Built for extreme operational environments, **GSPT-Sentinel™** is **IP66**-rated, with an operating temperature range of **-32°C to +55°C**, and compliant with MIL-STD-810H for shock, **vibration, humidity, and rain , freezing test** . Internal heaters and conformal-coated PCBs provide additional resilience against condensation and moisture ingress. Power input is flexible between **24–36 VDC**, with optional **UPS integration** and surge protection.



High-Precision Motion and Control Infrastructure
Equipped with industrial-grade servo motors and dual high-resolution encoders, **GSPT-Sentinel™** delivers **sub-0.05° positioning** accuracy with absolute angular feedback on both **pan (n × 360°°) and tilt (±90°) axes.** Motion profiles can be configured for **high-speed scan (up to 60°/s) or ultra-slow precision tracking (<0.1°/s),** supporting both situational awareness and long-range targeting tasks. Closed-loop motion control ensures real-time compensation for external disturbances, vibrations, and dynamic payload shifts.

RF Payload and System Integration
GSPT-VEGA-A-1000™ is a high-precision dual-axis motion platform designed for directional RF applications such as electronic jamming, signal denial, and communication disruption. It supports integration with high-gain directional antennas, broadband RF jammer modules, and custom transmitter arrays. The system features robust communication interfaces including **RS422, RS485,** and optional MIL-STD-1553, and can operate in sync with external radar or detection systems.

Operational Modes and Software Control
VEGA supports manual and automated targeting modes, with programmable sweep profiles for sector-based RF jamming or targeted signal suppression. It can be integrated into wider electronic warfare (EW) networks and synchronized with detection systems for responsive directional jamming. Advanced control software enables real-time telemetry, jammer beam steering, and remote system updates, making it ideal for both static and mobile electronic warfare deployments.

Gürbağ Defence Platforms

- Precision and Adaptability: Designed to seamlessly integrate with advanced sensors, payloads, and communication networks, offering exceptional performance across various defense and security operations.

- Versatility Across Domains: Deployed on land, sea, or air, each platform is engineered to function in the most demanding environments, ensuring reliable performance in any condition.

- Advanced Stabilization and Motion Control: Equipped with state-of-the-art stabilization and motion control technology for precise and stable operations.

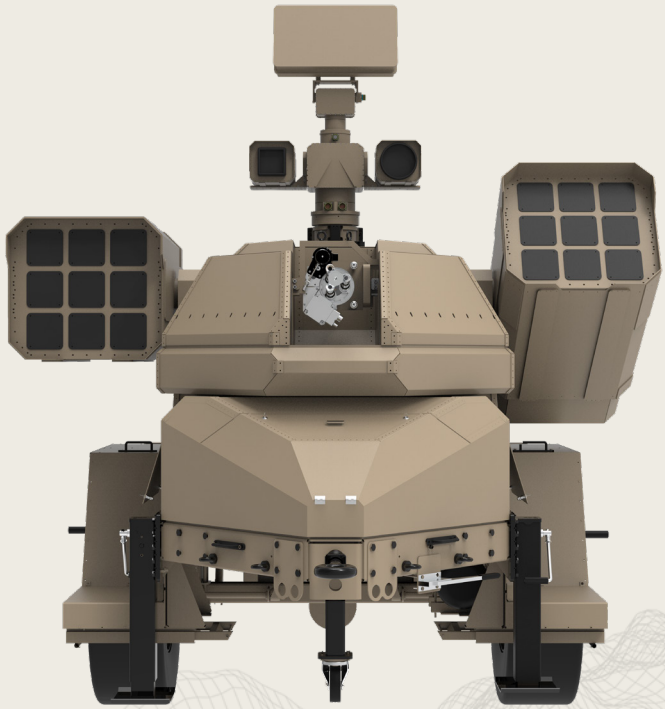
- Enhanced Situational Awareness: Real-time intelligence and superior operational capabilities enable effective mission execution in dynamic and high-risk scenarios.

- Autonomous Features: Some platforms are designed with autonomous capabilities, providing enhanced operational efficiency with minimal human intervention.

Platforms
Integrated Counter-UAS Systems

GSP-MMGIDS™

Sensor Suite and Optics
The system incorporates an **electro-optical (EO/IR)** imaging suite, **short-range radar sensors**, a **hydrogen propulsion launcher,** and optionally a **stabilized weapon system**. The EO system includes a **Full HD daytime camera (1920x1080 resolution, 30x optical zoom)** paired with **high-resolution MWIR/LWIR thermal sensors.** Mounted on a pan-tilt unit, these sensors offer **0.05° angular resolution** and provide stabilized **imaging across ±180° pan and ±90° tilt** movements. Advanced software algorithms enable **real-time target tracking**, classification, and automatic locking.
requirements.



Radar Capabilities
The radar module features a **short-range AESA radar optimized** for moving target indication (MTI) and micro/mini UAV detection with low RCS, offering a typical detection **range of 3 to 5 kilometers**. Radar data is integrated with the EO system to enhance verification and classification.

Hydrogen-Powered Launcher
A standout component is the hydrogen propulsion launcher module. Developed as an alternative to traditional pyrotechnic systems, it offers lower shock forces, reduced maintenance, and environmentally friendly discharge technology. The launcher is steerable and can perform automatic firing locked onto predefined coordinates or tracked targets. Its multi-use hydrogen propulsion extends operational endurance.

System Integration and Durability
All subsystems are managed via an integrated mission computer. **Data is securely transmitted** to command and control centers through RF, LTE, or satellite communication. The system operates within a temperature range of **-32°C to +55°C**, holds an **IP66** protection rating, and complies with **MIL-STD-810G** environmental standards.

Applications
With versatile deployment options, MM-GIDS is suitable for border security, forward operating bases, airport perimeter defense, and critical infrastructure protection. Its compact design, sensor fusion capabilities, and advanced pointing accuracy deliver a rapid-response, integrated, and sustainable defense solution on the tactical battlefield. This multi-layered architecture enables both surveillance and target neutralization tasks from a single platform.

Platforms
Integrated Counter-UAS Systems

GSP-SENTRA™

Directional RF Jamming and Threat-Focused Operation
SENTRA features **high-power broadband RF jammer** modules integrated into a compact, vehicle-mounted or fixed-site configuration. Pan-tilt controlled directional antennas target critical control and communication frequencies such as GNSS (GPS, GLONASS), **2.4 GHz, and 5.8 GHz,** focusing jamming energy exclusively on threat areas. This approach maximizes energy efficiency while minimizing interference with friendly systems. Its modular jammer architecture enables simultaneous suppression of multiple threats with scalable power and antenna options.

Sensor Integration and Autonomous Response
SENTRA can be optionally integrated with **short-range radar or electro-optical sensors** to enhance situational awareness. Upon detection, the system can automatically align its antennas toward the threat and activate jamming. Real-time software supports dynamic threat assessment, prioritization, and automatic countermeasure execution, enabling seamless transitions between manual and autonomous operation modes.

Compact Architecture and Field Durability
Designed without the need for a trailer, SENTRA is optimized for direct integration onto tactical vehicles, unmanned ground systems, or fixed infrastructure. It features **IP66** protection, a wide operating temperature range from **-32°C to +55°C**, and compliance with **MIL-STD-810H for vibration,** shock, and environmental resistance. Powered via a **24–36VDC** input, SENTRA™ ensures sustained operation across diverse mission profiles.

Operational Versatility and Deployment Areas
SENTRA provides a lightweight, mobile, and self-contained electronic warfare solution suitable for urban defense, border security, forward operating bases, airport perimeters, and critical infrastructure protection. Its compact design, fast reaction time, and seamless sensor integration enable reliable defense against UAV incursions and hostile RF activity—without the logistical burden of trailer-mounted systems.


Hydro-GIDS
Hydro-GIDS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