

# *On-board modules*

# TV Module TV918

## Basic technical specifications



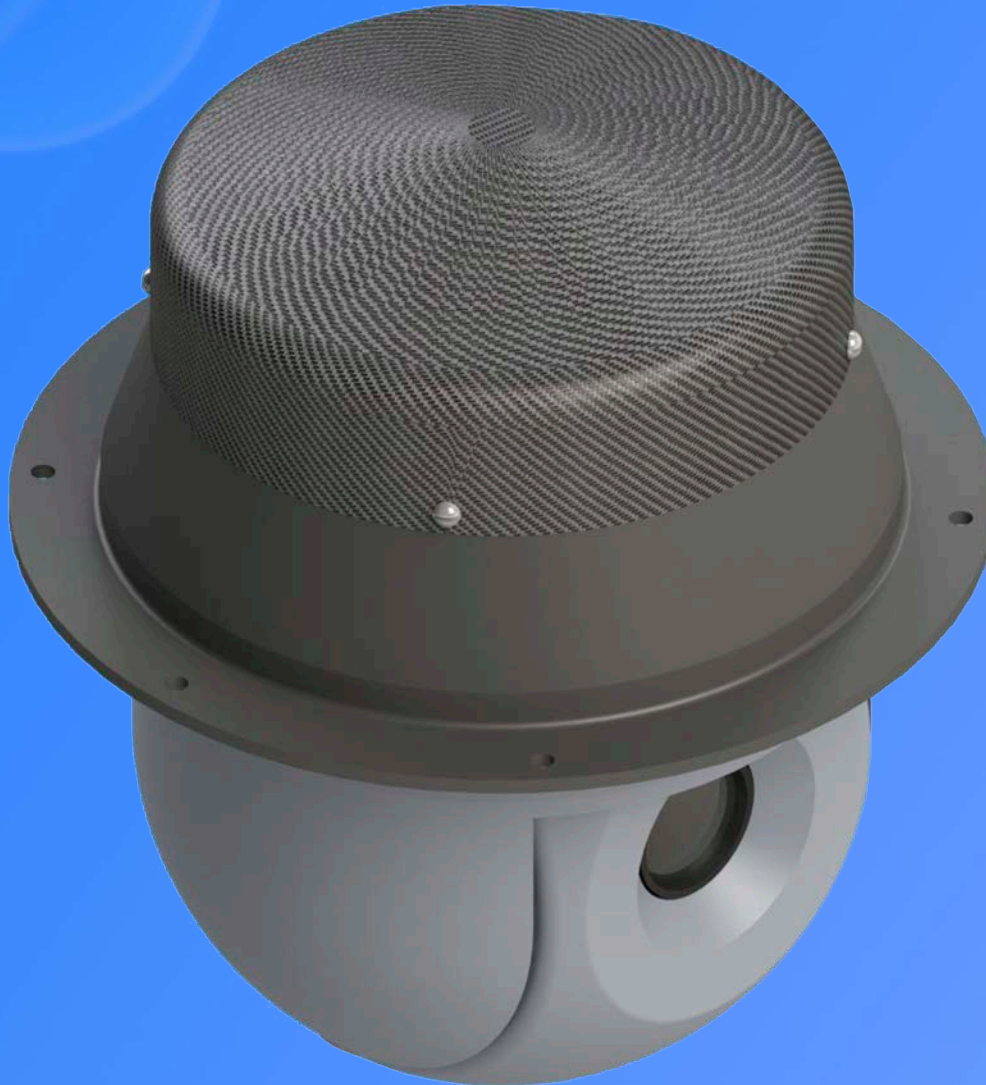
### TV Module:

- image standard .....	PAL
- matrix .....	1/4" EXview HAD CCD
- lens focal distance .....	4.2 mm (W) ~ 42.0 mm (T)
- wide field of view .....	46.0°(H)
- narrow field of view .....	4.6°(H)
- image definition .....	530 tvl
- number of effective pixels .....	~ 440,000
- minimum light intensity .....	1.0 lx
- magnification .....	120× (10× optical, 12× digital)
- zoom control .....	automatic
Suspension arrangement .....	two-axis, gyro-stabilized
- camera turning rate .....	100°/s
- camera turning angle in vertical plane .....	+20...-110°
- camera turning angle in horizontal plane .....	±175°
- stabilization level .....	500 μrad
Operating temperature range .....	-30°C ... +40°C
Overall dimensions .....	120×120×132 mm
Weight, no more than .....	700 g
Power consumption, no more than	
- average .....	5 W
- maximum .....	25 W
Permissible operating overload .....	50 g
UAV carrier .....	ELERON-3SV family; ELERON-10SV family

Ball diameter 90 mm / Two-axis suspension arrangement

# TV Module TV923

## Basic technical specifications



### TV Module:

- image standard .....	PAL
- matrix .....	1/3" CMOS
- lens focal distance .....	3.3 mm (W) ~ 33.0 mm (T)
- wide field of view .....	58.2°(H)
- narrow field of view .....	6.9°(H)
- image definition .....	1080p HD
- number of effective pixels .....	~ 4,080,000
- minimum light intensity .....	0.5 lx
- optical magnification .....	10×
- zoom control .....	automatic
Suspension arrangement .....	two-axis, gyro-stabilized
- camera turning rate .....	100°/s
- camera turning angle in vertical plane .....	+20...-110°
- camera turning angle in horizontal plane .....	±175°
- stabilization level .....	500 μrad
Operating temperature range .....	-30°C ... +40°C
Overall dimensions .....	120×120×132 mm
Weight, no more than .....	700 g
Power consumption, no more than	
- average .....	5 W
- maximum .....	25 W
Permissible operating overload .....	50 g
UAV carrier .....	ELERON-3SV family; ELERON-10SV family

Ball diameter 90 mm / Two-axis suspension arrangement

# Combined module TV924-1

## Basic technical specifications

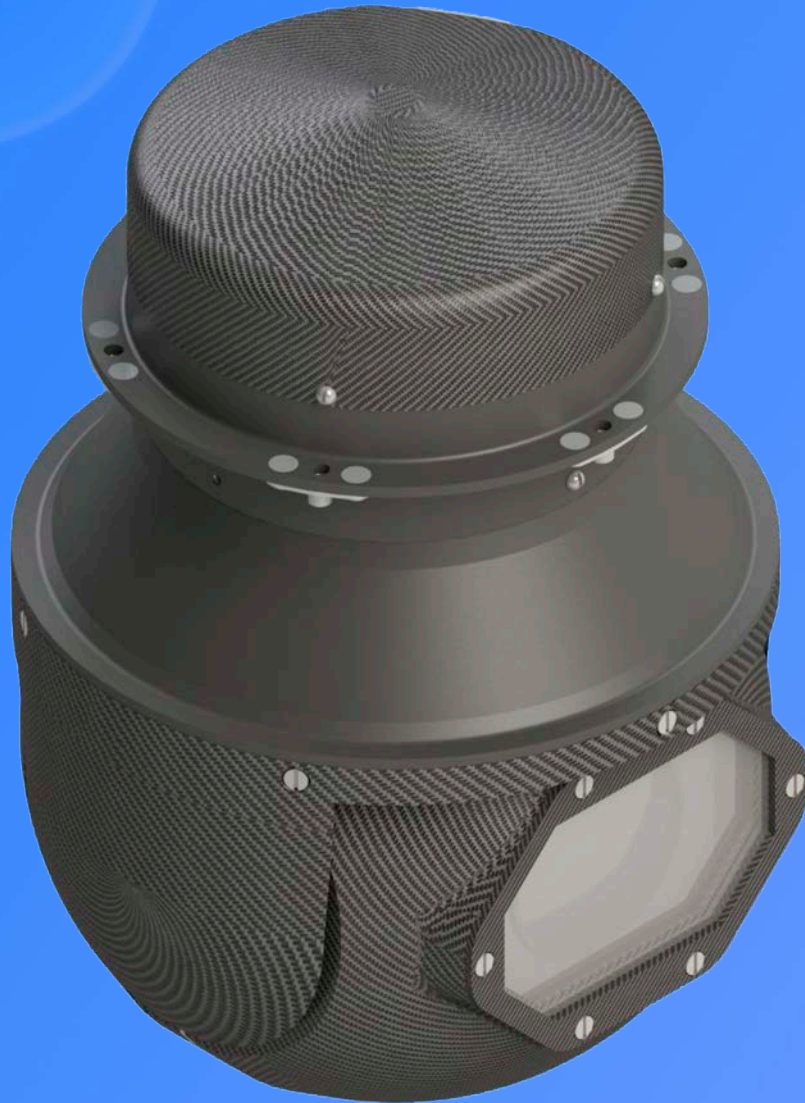


Ball diameter 90 mm / Two-axis suspension arrangement

<b>Infrared Module:</b>	
- image standard .....	PAL
- lens focal distance .....	35 mm
- field of view .....	18°(H)×14°(V)
- image definition .....	640×512
- angular resolution .....	0.496 mrad
- image update frequency .....	50 Hz
- spectral band .....	7.5-13.5 μm
- thermal sensitivity .....	<50 mK
- digital magnification .....	2x and 4x
- human activity detection limit .....	up to 1,150 m
<b>Color TV Module:</b>	
- image standard .....	PAL
- matrix .....	1/4" CMOS
- lens focal distance .....	6 mm
- field of view .....	33.2°(H)×25.2°(V)
- image definition .....	625 tvl
- number of effective pixels .....	640(H)×480(V)
- minimum light intensity .....	0.05 lx
<b>Black-and-white TV Module:</b>	
- image standard .....	PAL
- matrix .....	1/4" CMOS
- lens focal distance .....	12 mm
- field of view .....	17°(H)×12.8°(V)
- image definition .....	625 tvl
- number of effective pixels .....	640(H)×480(V)
- minimum light intensity .....	0.03 lx
Suspension arrangement .....	two-axis, gyro-stabilized
- camera turning rate .....	100°/s
- camera turning angle in vertical plane .....	+20...-110°
- camera turning angle in horizontal plane .....	±175°
- stabilization level .....	500 μrad
Operating temperature range .....	-30°C ... +40°C
Overall dimensions .....	120×120×132 mm
Weight, no more than .....	700 g
<b>Power consumption, no more than</b>	
- average .....	5 W
- maximum .....	25 W
Permissible operating overload .....	50 g
UAV carrier .....	ELERON-3SV family; ELERON-10SV family

# TV Module M001

## Basic technical specifications

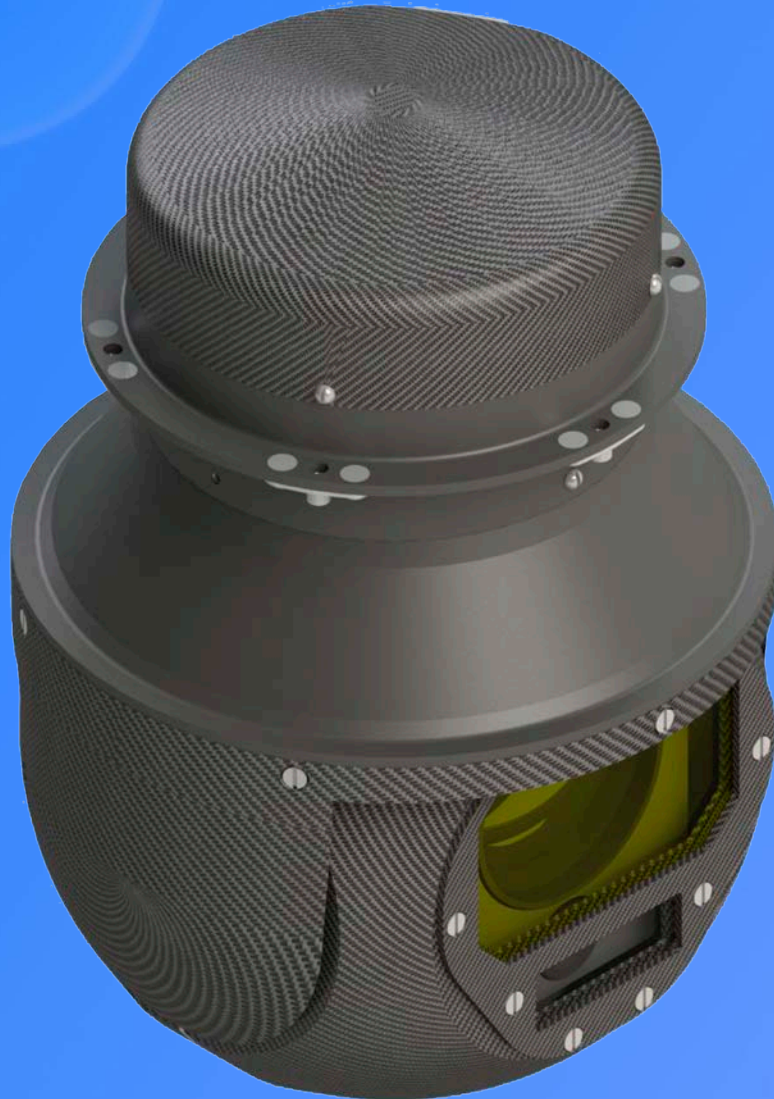


Ball diameter 120 mm / Three-axis suspension arrangement

<b>TV Module:</b>	
- image standard .....	PAL
- matrix .....	1/4" EXview HAD CCD
- wide field of view .....	57.8°(H)
- narrow field of view .....	1.7°(H)
- image definition .....	540 tvl
- number of effective pixels .....	~ 440,000
- minimum light intensity .....	1.4 lx
- optical magnification .....	36×
- zoom control .....	automatic
Suspension arrangement .....	three-axis, gyro-stabilized
- camera turning rate .....	100°/s
- camera turning angle in vertical plane .....	+20...-160°
- camera turning angle in horizontal plane .....	not limited
- stabilization level .....	250 μrad
Operating temperature range .....	-30°C ... +40°C
Overall dimensions .....	123×123×183 mm
Weight, no more than .....	1,350 g
Power consumption, no more than	
- average .....	10 W
- maximum .....	60 W
Permissible operating overload .....	50 g
UAV carrier .....	ELERON-10SV family

# Combined module M002

## Basic technical specifications



### Infrared Module:

- image standard .....	PAL
- lens focal distance .....	35 mm
- field of view .....	18°(H)×14°(V)
- image definition .....	640×512
- angular resolution .....	0.496 mrad
- image update frequency .....	50 Hz
- spectral band .....	7.5-13.5 μm
- thermal sensitivity .....	<50 mK
- digital magnification .....	2× and 4×
- human activity detection limit .....	up to 1,150 m

### Color TV module:

- image standard .....	PAL
- matrix .....	1/4" CMOS
- lens focal distance .....	12 mm
- field of view .....	17°(H)×12.8°(V)
- image definition .....	625 tvl
- number of effective pixels .....	640(H)×480(V)
- minimum light intensity .....	0.05 lx

Suspension arrangement ..... three-axis, gyro-stabilized

- camera turning rate .....	100°/s
- camera turning angle in vertical plane .....	+20...-160°
- camera turning angle in horizontal plane .....	not limited
- stabilization level .....	250 μrad

Operating temperature range ..... -30°C ... +40°C

Overall dimensions ..... 123×123×183 mm

Weight, no more than ..... 1,350 g

Power consumption, no more than

- average .....	10 W
- maximum .....	60 W

Permissible operating overload ..... 50 g

UAV carrier ..... ELERON-10SV family

Ball diameter 120 mm / Three-axis suspension arrangement