

# MODULAR MULTI SENSOR SYSTEM

Medium range



**dat con**

## FUNCTIONALITY

Multi sensors are electro optical units that enable continuous observation at short and long range regardless to time of day or weather circumstances. They accomplish this by using more than one type of camera (hence the name "multi sensor"), typically day / night camera and thermal camera. The cameras are mounted on a moving platform called pan - tilt that allows the pointing of those cameras in any direction needed. This combination enables operators to see in total darkness and bad weather (for, rain or snow) using the thermal camera and also get a high resolution colour image with high sensitivity day / night camera. All cameras support continuous zoom giving the operators ability to reach even the furthest targets with ease.

All our multi sensors are modular and allow the customer to select the combination of payloads they need for their specific application. Configuration of every multi sensor is tailored to requirements of the specific project and the environment in which it will be used (portable, fixed, remote, vehicle mounted...).

## GENERAL FEATURES

- Simultaneous preview of day/night camera and thermal
- Continuous zoom on both payloads
- Radar connectivity (Slew to Cue)
- Radar tracking possibility
- Video tracking with auto/manual target acquisition (optional)
- Auto / manual / remote focus on both payloads
- Rigid system design  
(up to 90 km/h wind without damage and 50 km/h in use)
- CE marked
- TCP/IP interface
- Gyro stabilized pan-tilt platform (optional)
- Electronic image stabilization on both payloads
- Temperature range of the whole system: -32 to +55°C
- Maximum humidity of the whole system: 95 %
- Complys with: IP67  
Vibration test: IEC 60068-2-64  
Shock test: IEC 60068-2-27  
Icing test: NEMA 250  
Salt fog test: IEC 60068-2-52

## SYSTEM CONFIGURATION

Multiple payloads on one pan- tilt system within a separate housing (individually removable to enable service of one payload while the other is still operational):

- Thermal camera (cooled MWIR or uncooled LWIR)
- Day/Night camera or/and SWIR
- Laser range finder (optional)
- Radar (optional)
- Robust Pan Tilt system
- software SOVA for preview and control (optional)
- GPS and digital magnetic compass (optional)

Compatibility with 3<sup>rd</sup> party payloads

- Flir HRC and HDC series of thermal cameras
- Leonard Horizon and SLX series of thermal cameras
- Other 3<sup>rd</sup> party payloads upon customer demand



**CLRT-Series** are a range of cooled Medium Wave Infra-Red (MWIR) thermal imaging cameras. They employ the latest focal plane array technology to meet long-range surveillance and target identification requirements. CLRT-Series have a very high life span because they are fitted with long life cooler. CLRT-Series cameras incorporate continuous zoom lenses with autofocus and F/4 aperture to ensure high sensitivity even at high magnifications. This makes CLRT-Series cameras an ideal tool for medium-range observation over sea and land.

DRI – Detection, recognition and identification

Human target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>1.8 m x 0.5 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b> <b>1.0 / km</b>

NATO (Vehicle) target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>2.3 m x 2.3 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b> <b>1.0 / km</b>

DRI	$\sigma = 0.2 / \text{km}$	$\sigma = 1.0 / \text{km}$
<b>DRI – NATO (VEHICLE) TARGET (2.3m x 2.3m)</b>		
Detection	13.29 km	4.86 km
Recognition	5.95 km	3.48 km
Identification	3.22 km	2.38 km
<b>DRI - HUMAN TARGET (1.8m x 0.5m)</b>		
Detection	7.13 km	3.76 km
Recognition	2.67 km	2.09 km
Identification	1.35 km	1.22 km

Technical specifications

Model	<b>CLRT-275</b>
Detector	Cooled MWIR
Resolution	640 x 512
Frame rate	25 / 30Hz
Detector pitch	15 $\mu\text{m}$
Spectral range	3 to 5 $\mu\text{m}$
NETD	$\leq 25\text{mK}$
Focal length	19 to 275 mm
Field of View	28.4° to 2° (H)
Continuous Optical Zoom	Yes, up to 14x
Continuous Digital Zoom	Yes, up to 16x
Focus	Automatic or Manual (remote)
Image stabilization	Yes*
Image processing	Tuneable Digital Detail Enhancement Histogram Equalization Non uniformity correction White Hot/Black Hot, Colour Palette
Video outputs	analog, optional RTSP H.264 Ethernet stream*
Control interface	Serial, Ethernet
Consumption	35 W typical, < 120 W maximum with heaters / lens defrost
Operating voltage	18 - 48 Vdc
Operating temperature range	-32°C to +55°C
IP rating	IP67, built according to MIL-810
Dimensions	558 x 222 x 216 mm
Weight	14 kg
MTBF including cooler	Up to 20200 hours**

\* This function is only available if the device is used in combination with VPU/ST unit.

\*\* The value depends on the selected detector and cooler.



CLRT/HD-Series cameras are a range of cooled Medium Wave Infra-Red (MWIR) HD thermal imaging cameras. They employ the latest focal plane array technology with 10-micron HD detector. CLRT/HD-Series have a very high life span because they are fitted with long life cooler. CLRT/HD-Series cameras incorporate continuous zoom lenses with autofocus and F/4 aperture to ensure high sensitivity even at high magnifications. This makes CLRT/HD-Series cameras an ideal tool for high-definition medium-range observation over sea and land.

DRI – Detection, recognition and identification

Human target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>1.8 m x 0.5 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km 1.0 / km</b>

NATO (Vehicle) target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>2.3 m x 2.3 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km 1.0 / km</b>

DRI	$\sigma = 0.2 / \text{km}$	$\sigma = 1.0 / \text{km}$
<b>DRI – NATO (VEHICLE) TARGET (2.3m x 2.3m)</b>		
Detection	16.52 km	5.23 km
Recognition	8.35 km	4.01 km
Identification	4.69 km	3.02 km
<b>DRI - HUMAN TARGET (1.8m x 0.5m)</b>		
Detection	9.77 km	4.29 km
Recognition	9.94 km	2.71 km
Identification	2.04 km	1.71 km

### Technical specifications

Model	<b>CLRT-HD300</b>
Detector	Cooled MWIR
Resolution	1280 x 720
Frame rate	25 / 30Hz
Detector pitch	10 $\mu\text{m}$
Spectral range	3 to 5 $\mu\text{m}$
NETD	$\leq 25\text{mK}$
Focal length	15 to 300 mm
Field of View	44.9° to 2.40° (H)
Continuous Optical Zoom	Yes, up to 20x
Continuous Digital Zoom	Yes, up to 16x
Focus	Automatic or Manual (remote)
Image stabilization	Yes*
Image processing	Tuneable Digital Detail Enhancement Histogram Equalization Non uniformity correction White Hot/Black Hot, Colour Palette
Video outputs	HD-SDI, optional RTSP H.264 Ethernet stream*
Control interface	Serial, Ethernet
Consumption	35 W typical, < 120 W maximum with heaters / lens defrost
Operating voltage	18 - 48 Vdc
Operating temperature range	-32°C to +55°C
IP rating	IP67, built according to MIL-810
Dimensions	558 x 222 x 216 mm
Weight	13 kg
MTBF including cooler	Up to 20200 hours**

\* This function is only available if the device is used in combination with VPU/ST unit.

\*\* The value depends on the selected detector and cooler.



**ULRT-Series** are a range of Long Wave Infra-Red (LWIR) cameras equipped with a highly reliable, long-wave, un-cooled Vanadium Oxide (VOx) detector latest generation with 12-micron pitch which offers good sensitivity and stability of the image. ULRT-series cameras require virtually no maintenance since there is no cooling device. ULRT-Series use large aperture continuous zoom lenses that offer excellent situational awareness while also enable possibility to zoom in at an object of interest. ULRT-Series are the norm for high performance medium range price effective multisensor systems.

DRI – Detection, recognition and identification

Human target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>1.8 m x 0.5 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b> <b>1.0 / km</b>

NATO (Vehicle) target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>2.3 m x 2.3 m</b>
delta T	<b>2 K</b>
Background temperature	<b>288 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b> <b>1.0 / km</b>

Model	ULRT-150	ULRT-225	ULRT-300
Detector	Uncooled LWIR VOx microbolometer		
Resolution	640 x 512		
Frame rate	25 Hz		
Detector pitch	12 $\mu$ m		
Spectral range	8 to 14 $\mu$ m		
NETD	$\leq 50$ mK @ F/1.0, 25°C		
Focal length	30 – 150 mm	25 – 225 mm	37.5 – 300 mm
Field of View	14.6° - 3.0°	17.6° - 2.0°	11.5° - 1.5°
Continuous Optical Zoom	Yes, up to 5x	Yes, up to 9x	Yes, up to 8x
Continuous Digital Zoom	Yes, up to 8x		
Focus	Automatic or Manual (remote)		
Image stabilization	Yes*		
Image processing	Tuneable Digital Detail Enhancement Brightness Contrast Digital Noise Reduction Non uniformity correction White Hot / Black Hot Colour Palette, OSD		
Video outputs	Analog, RTSP H.264 Ethernet stream*		
Control interface	Serial, Ethernet		
Consumption	15 W typical, < 60 W maximum with heaters / lens defrost		
Operating voltage	18 - 48 Vdc		
Operating temperature range	-32°C to +55°C		
IP rating	IP67, built according to MIL-810		
Dimensions	596 x 222 x 216 mm	704 x 347 x 310 mm	
Weight	14 kg	27 kg	

\*This function is only available if the device is used in combination with VPU/ST unit.



DRI	ULRT-150	ULRT-225	ULRT-300	ULRT-150	ULRT-225	ULRT-300
Atmosphere extinction	$\sigma = 0.2 / \text{km}$			$\sigma = 1.0 / \text{km}$		
<b>DRI - NATO (VEHICLE) TARGET (2.3m x 2.3m)</b>						
Detection	11.15 km	12.70 km	15.39 km	4.20 km	4.53 km	4.83 km
Recognition	5.28 km	5.92 km	8.11 km	2.90 km	3.26 km	3.71 km
Identification	2.74 km	3.36 km	4.96 km	1.99 km	2.29 km	2.82 km
<b>DRI - HUMAN TARGET (1.8m x 0.5m)</b>						
Detection	6.35 km	7.04 km	9.44 km	3.19 km	3.54 km	3.96 km
Recognition	2.28 km	2.81 km	4.18 km	1.83 km	2.03 km	2.56 km
Identification	1.17 km	1.44 km	2.15 km	1.08 km	1.22 km	1.66 km



**ULRT/HD-Series** are a range of Long Wave Infra-Red (LWIR) cameras equipped with a highly reliable, long-wave, un-cooled Vanadium Oxide (VOx) detector latest generation with 12-micron pitch which offers good sensitivity and stability of the image. ULRT/HD-series cameras require virtually no maintenance since there is no cooling device. ULRT/HD-Series use large aperture continuous zoom lenses that offer excellent situational awareness while also enable possibility to zoom in at an object of interest. ULRT/HD-Series are the norm for high performance medium range price effective multi-sensor systems.

DRI – Detection, recognition and identification

Human target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>1.8 m x 0.5 m</b>
delta T	<b>2 K</b>
Background temperature	<b>298 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b>

NATO (Vehicle) target	
Method	<b>STANAG 4347</b>
Probability	<b>50 %</b>
Target size	<b>2.3 m x 2.3 m</b>
delta T	<b>2 K</b>
Background temperature	<b>298 K</b>
Atmosphere extinction coefficient ( $\sigma$ )	<b>0.2 / km</b> <b>1.0 / km</b>

DRI	$\sigma = 0.2 / km$		$\sigma = 1.0 / km$	
<b>DRI - NATO (VEHICLE) TARGET (2.3m x 2.3m)</b>				
	ULRT-HD300	ULRT-HD350	ULRT-HD300	ULRT-HD350
Detection	15.39 km	16.10 km	4.83 km	4.96 km
Recognition	8.11 km	8.59 km	3.71 km	3.85 km
Identification	4.96 km	5.13 km	2.82 km	2.96 km
<b>DRI - HUMAN TARGET (1.8m x 0.5m)</b>				
Detection	9.44 km	9.92 km	3.96 km	4.08 km
Recognition	4.18 km	4.40 km	2.56 km	2.68 km
Identification	2.15 km	2.33 km	1.66 km	1.75 km

#### Technical specifications

model	ULRT-HD300	ULRT-HD350
<b>Detector</b>	Uncooled LWIR	
<b>Resolution</b>	1280 x 1024	
<b>Frame rate</b>	25 Hz	
<b>Detector pitch</b>	12 $\mu$ m	
<b>Spectral range</b>	8 to 14 $\mu$ m	
<b>NETD</b>	$\leq 50mK @ F/1.0, 25^{\circ}C$	
<b>Focal length</b>	37.5 – 300 mm	50 – 350 mm
<b>Field of View</b>	22.6° - 3.0° (H)	17.5° - 2.6° (H)
<b>Continuous Optical Zoom</b>	Yes, up to 8x	Yes, up to 7x
<b>Continuous Digital Zoom</b>	Yes, up to 8x	
<b>Focus</b>	Automatic or Manual (remote)	
<b>Image stabilization</b>	Yes*	
<b>Image processing</b>	Tuneable Digital Detail Enhancement, Brightness, Contrast, Digital Noise Reduction, Non uniformity correction, OSD, White Hot/Black Hot, Colour Palette	
<b>Video outputs</b>	HD-SDI, RTSP H.264 Ethernet stream*	
<b>Control interface</b>	Serial, Ethernet	
<b>Consumption</b>	15 W typical, < 60 W maximum with heaters / lens defrost	
<b>Operating voltage</b>	18 - 48 Vdc	
<b>Operating temperature range</b>	-32°C to +55°C	
<b>IP rating</b>	IP67, built according to MIL-810	
<b>Dimensions</b>	704 x 347 x 310 mm	
<b>Weight</b>	27 kg	

\*This function is only available if the device is used in combination with VPU/ST unit.



The **LRCS-series** are a range of high-performance Day/Night HD cameras using high sensitivity CMOS sensors and big aperture continuous zoom lenses. These features combined with selectable optical filters for fog penetration and IR-cut makes them a very versatile medium-range tool to be used in all conditions such as fog, dusk/dawn, low light and high dynamic range scenery. LRCS-series Day/Night cameras are indispensable element of and multisensor unit and as such often overlooked but they play a huge role in its overall performance.

	LRCS-A210	LRCS-A300	LRCS-A400 LRCS-A400-OIS	LRCS-A500
<b>Sensor</b>	1/1.9" CMOS sensor		1/1.8" CMOS sensor ½.4" used area equivalent	1/1.8" CMOS sensor 1/3.6" used area equivalent
<b>Pixels (H x V)</b>	1920 (H) x 1080 (V)			
<b>Sensitivity</b>	Colour 0.001 Lux @ (F1.5, 25 fps); B&W 0.0001 Lux @ (F1.5, 25 fps);	Colour 0.001 Lux @ (F1.4, 25 fps); B&W 0.0001 Lux @ (F1.4, 25 fps);	Colour 0.005 Lux @ (F1.4, 25 fps); B&W 0.0005 Lux @ (F1.4, 25 fps);	Colour 0.1 Lux @ (F1.4, 25 fps); B&W 0.001 Lux @ (F1.4, 25 fps);
<b>Field of view</b>	59°- 2.25°	63°- 1.6°	65°- 1.3°	67°- 0.9°
<b>Continuous Optical Zoom</b>	Yes, up to 30x	Yes, up to 43x	Yes, up to 57x	Yes, up to 86x
<b>Continuous Digital Zoom</b>	Yes, up to 16x			
<b>Focus</b>	Automatic or Manual (remote)			
<b>Image stabilization</b>	Yes* (This function is only available if the device is used in combination with VPU/ST unit)		LRCS-A400: EIS* LRCS-A400-OIS: OIS + EIS*	Yes* (This function is only available if the device is used in combination with VPU/ST unit)
<b>Optical filters</b>	Colour: IR Cut filter / B&W: Defog Filter – NIR only			
<b>Image processing</b>	Auto / Manual White Balance Auto / Manual Gain Control True Wide Dynamic Range Digital Fog Removal / Auto Contrast Dynamic Noise Reduction			
<b>Video outputs</b>	HD-SDI or analog (optional), RTSP H.264 Ethernet stream*			
<b>Control interface</b>	Serial, Ethernet			
<b>Consumption</b>	15 W typical, < 60 W maximum with heaters / lens defrost			
<b>Operating voltage</b>	18 - 48 Vdc			
<b>Operating temperature range</b>	-32°C to +55°C			
<b>IP rating</b>	IP67, built according to MIL-810			
<b>Dimensions</b>	488 x 166x 172 mm			
<b>Weight</b>	7.5 kg			





**LRSW-series** are mid-range Short-Wave infra-red (SWIR) cameras with latest 5-micron detectors. SWIR wave-length is just below MWIR and although is not visible to human eyes, SWIR cameras represent the most eye friendly B&W image while still retaining the atmosphere penetration of a thermal camera. Unlike thermal cameras they rely on reflected light and with that comes their disadvantage; they cannot “see” at night. Despite this disadvantage, they are a very important part of a multisensor unit either as a replacement or an add on to the Day/Night camera on systems where the added atmosphere penetration during the day is crucial. They are however not considered as a replacement for true LWIR or MWIR thermal cameras.



**LDCO/10** represents the ultimate long-distance laser rangefinder. It is light weight and features ranging capability up to 32 km. With reduced measurement ranges LDCO meets high continuous measurement rates up to 40 measurements per second in single mode and up to 200 Hz in burst mode.

Technical specification:

<b>Model</b>	<b>LRSW-228/5</b>
<b>Detector</b>	InGaAs
<b>Resolution</b>	640 x 480
<b>Frame rate</b>	25 / 30Hz
<b>Detector pitch</b>	5 $\mu$ m
<b>Spectral range</b>	0.9 to 1.7 $\mu$ m
<b>Focal length</b>	6.5 to 228 mm
<b>Field of View</b>	26° to 0.8° (H)
<b>Continuous Optical Zoom</b>	Yes, up to 35x
<b>Continuous Digital Zoom</b>	Yes, up to 16x
<b>Focus</b>	Autofocus, manual
<b>Image stabilization</b>	Yes*
<b>Image processing</b>	Auto / Manual Gain Control Digital Fog Removal / Auto Contrast Dynamic Noise Reduction
<b>Video outputs</b>	Analog, RTSP H.264 Ethernet stream*
<b>Control interface</b>	Serial, Ethernet
<b>Consumption</b>	25 W typical, < 70 W maximum with heaters / lens defrost
<b>Operating voltage</b>	18 - 48 Vdc
<b>Operating temperature range</b>	-32°C to +55°C
<b>IP rating</b>	IP67, built according to MIL-810
<b>Dimensions</b>	488 x 166x 172 mm
<b>Weight</b>	7.5 kg

\*This function is only available if the device is used in combination with VPU/ST unit.

<b>Eye safety</b>	<b>Laser Class 1</b>
<b>Measurement range</b>	50m – 32 000m
<b>Measurement range (Standard target):</b>	10 000m – Target size 2.3 x 2.3 m, visibility 15 km, target reflectivity 30%, detection probability >90%
<b>Precision</b>	0.5 – 1.5 m depending on the distance and target reflectivity
<b>Beam divergence</b>	0.35 mrad
<b>Wave length</b>	<b>1.54 <math>\mu</math>m</b>
<b>Measurement rates</b>	40 meas. per min
<b>Control interface</b>	Serial, Ethernet
<b>Operating voltage</b>	18 - 48Vdc
<b>Power consumption</b>	3 W on standby, 7 W max on measurement
<b>IP rating</b>	IP67, built according to MIL-810
<b>Operating temperature</b>	-32°C + 55°C
<b>Dimensions</b>	172 x 151 x 75 mm with connector
<b>Weight</b>	2 kg



DAT-CON **Pan-Tilt systems** are the base of any multisensor system. They deliver high performance and stability for most demanding payloads. Their high payload to weight ratio and compact size makes them not only appropriate for fixed installation but ideal for mobile solutions as well. All systems are IP67 approved to make them suitable for all weather conditions and harsh environments, proven in critical security and observation applications with 24/7 operation. In a fully machined aluminium body lies a single powerful motion control board. Simplicity in construction and design adds to their robustness and long-life time. All units undergo a series of environmental and endurance tests before leaving production to ensure end-user satisfaction.

**FEATURES:**

- Robustness
- High accuracy
- Smooth motion
- Big speed range
- Easy to control
- Stabilisation (optional)
- Tracking capabilities

**APPLICATIONS:**

- Observation systems
- Target tracking and control
- Communication systems
- Target acquisition

Model	Tracer	Blade
Load capacity / Torque	35 kg / 60 Nm	30 kg + 30 kg / 80 Nm
Static top	/	Optional (up to 50 kg)
Weight	17 kg (without arms)	46 kg (full configuration)
Dimensions (H x W x L)	323 x 220 x 336 mm	412 x 735 x 302 mm
Materials	Aluminium	Aluminium
Protection / IP rating	IP 67 compliant	IP 67 compliant
Operating temperature	-32°C to +55°C	-32°C to +55°C
Pan axis range / angle	n x 360°	n x 360°
Pan axis speed	0.001°/s - 60 °/s	0.001°/s - 100 °/s
Tilt axis range / angle	± 90° (depends on application)	± 90° (limited by application)
Tilt axis speed	0.001°/s - 60 °/s	0.001°/s - 100 °/s
Accuracy	0.02°	0.002°
Backlash	None	None
Stabilization (optional)	< 9 mrad	< 0.3 mrad
Brake	Self-Locking	Self-Locking
Operating voltage	24 - 48 VDC	24 - 48 VDC
Maximum power	160 W	120 W
Communication to the unit	Eth 10/100 Base-T, RS-232, RS-485/422(optional)	Eth 10/100 Base-T, RS-232, RS-485/422(optional)
Control protocol	DC-PT protocol, Pelco-D (optional)	DC-PT protocol, Pelco-D (optional)

## External video processing unit (VPU-ST)



Video processing unit (VPU-ST) is a hardware processing unit that is the “brains” of the multi sensor system. It combines all the payloads and Pan-Tilt unit into a single unit for the external observer and enable a single Ethernet connection to the whole unit including access to video streams and control of the entire system. VPU-ST enables dedicated advanced protocol that includes video as well as status and control. It has a powerful built in processor, that enables functions like video stabilization, H.264 encoding, video tracking.

Model	VPU/ST Light	VPU/ST
Power control and communication with each device	Yes	
Built in test for each device (BIT)	Yes	
Integrated Ethernet switch	Yes	
Communication interfaces: Ethernet (UDP), Serial	Yes	
H.264 Video encoding for all video payloads	Yes	
ONVIF support	Yes	No
Two separated output video streams	Yes	
Control and video interface through Ethernet and serial (control only)	Yes	
Video processing	-Base version of video stabilization; -On Screen Display (OSD)	-Advanced video stabilization with roll correction; -Advanced hardware scene and object video tracking; -On Screen Display (OSD)
Connectivity	Four military standard connectors; 3 x input / 1 output	Four military standard connectors; 3 x input / 1 output
Power	18 – 48 Vdc; 20 W max.	18 – 48 Vdc; 30 W max.
Environmental	IP 67, build with accordance to MIL-810	IP 67, build with accordance to MIL-810
Operating temperature range	-32 to 55°C	-32 to 55°C
Dimensions	261 x 185 x 73 mm	261 x 185 x 73 mm
Weight	2.9 kg	3 kg



**DC AHRS unit** is a compact cost effective AHRS unit. It provides position, Euler angles and magnetic compass reading. It supports multiple serial and Ethernet communication. It is housed in a IP 67 enclosure with a military standard connector.

**Features:**

- Full AHRS module
- Multiple communication options
- IP 67 enclosure
- Fast update rate

**Applications:**

- Positioning
- Stabilization
- Heading

<b>Specifications Weight</b>	0.2 kg
<b>Dimensions (H x W x L)</b>	90 x 80 x 25 mm
<b>Materials</b>	Plastic/Aluminium
<b>Protection / IP rating</b>	IP 67
<b>Operating temperature</b>	-40°C to +55°C
<b>Input voltage</b>	12 VDC – 48 VDC
<b>Power consumption</b>	0.3 W
<b>Communication</b>	RS-232, RS-485, RS-422, Ethernet Base 10T
<b>Protocol</b>	NMEA

**GNSS**

Position accuracy 2,5 m (horizontal)  
Update rate 10 Hz

**IMU**

Angle Accuracy < 2.5°  
Update rate 100 Hz

**DMC**

Accuracy < 2.5°  
Update rate 100 Hz





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