



# SPYNEL-X

## Wide Area Surveillance Solution



120Mpix day/night  
panoramic video



Cooled MWIR  
thermal sensor



Human detection  
range up to 9km



### 360° PANORAMIC DETECTION, ANYWHERE, ANYTIME

**SPYNEL®** are proven wide-area surveillance solutions, acquiring real-time panoramic thermal images with automatic detection, tracking and classification capabilities thanks to the integrated CYCLOPE software.

**SPYNEL®-X** integrates a MWIR Megapixel focal plane array and is the InfraRed Search&Track sensor (IRST) offering the highest resolution on the market.



### APPLICATIONS



Airport/ Airfield  
surveillance



Military base protection  
(air, naval, FOB)



Maritime  
wide area surveillance



Offshore platforms and  
oil rigs security



Border & Coastal  
passive surveillance



Critical infrastructure  
protection



Self-protection of ships  
(IRST)



Passive air Defence

### BENEFITS

- Day & night panoramic imaging in total darkness in any weather conditions
- Human, vehicle, RHIB or UAV detection capabilities
- Automatic tracking and classification of any ground/sea/air threats
- Passive operation unlike radars (undetectable, no EM disturbance)
- Proven, reliable and COTS technology
- Robust and rapidly deployable
- Motorized tilt for fine-tuned installations
- All events recorded over 360°

# SPYNEL-X

## Wide Area Surveillance Solution

### TECHNICAL SPECIFICATIONS

|                                                                                                                                                                                                                                                                                                                             | SPYNEL-X 3500                                                                                                                                                                                                                                                                                                                                                                                                 | SPYNEL-X 6000                                                                                                                                                                                                                                                                                                                                                                                                  | SPYNEL-X 8000                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Horizontal FOV                                                                                                                                                                                                                                                                                                              | 360°                                                                                                                                                                                                                                                                                                                                                                                                          | 360°                                                                                                                                                                                                                                                                                                                                                                                                           | 360°                                                                                                                                                                                                                                                                                                                                                                                                               |
| Vertical FOV                                                                                                                                                                                                                                                                                                                | 20°                                                                                                                                                                                                                                                                                                                                                                                                           | 10°                                                                                                                                                                                                                                                                                                                                                                                                            | 5°                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Vertical motorized tilt                                                                                                                                                                                                                                                                                                     | ± 45°                                                                                                                                                                                                                                                                                                                                                                                                         | ± 45°                                                                                                                                                                                                                                                                                                                                                                                                          | ± 45°                                                                                                                                                                                                                                                                                                                                                                                                              |
| IFOV                                                                                                                                                                                                                                                                                                                        | 0.3 x 0.3 mrad x mrad                                                                                                                                                                                                                                                                                                                                                                                         | 0.15 x 0.15 mrad x mrad                                                                                                                                                                                                                                                                                                                                                                                        | 0.08 x 0.08 mrad x mrad                                                                                                                                                                                                                                                                                                                                                                                            |
| Scanning speed                                                                                                                                                                                                                                                                                                              | 2 rps (360°/0.5sec)                                                                                                                                                                                                                                                                                                                                                                                           | 1 rps (360°/ sec)                                                                                                                                                                                                                                                                                                                                                                                              | 0.5 rps (360°/2sec)                                                                                                                                                                                                                                                                                                                                                                                                |
| Detector type                                                                                                                                                                                                                                                                                                               | MWIR megapixel FPA                                                                                                                                                                                                                                                                                                                                                                                            | MWIR megapixel FPA                                                                                                                                                                                                                                                                                                                                                                                             | MWIR megapixel FPA                                                                                                                                                                                                                                                                                                                                                                                                 |
| Cooling                                                                                                                                                                                                                                                                                                                     | Stirling microcooler                                                                                                                                                                                                                                                                                                                                                                                          | Stirling microcooler                                                                                                                                                                                                                                                                                                                                                                                           | Stirling microcooler                                                                                                                                                                                                                                                                                                                                                                                               |
| Image resolution                                                                                                                                                                                                                                                                                                            | 23 000 (H) x 1280 (V)                                                                                                                                                                                                                                                                                                                                                                                         | 46 000 (H) x 1280 (V)                                                                                                                                                                                                                                                                                                                                                                                          | 92 000 (H) x 1280 (V)                                                                                                                                                                                                                                                                                                                                                                                              |
| Video output and control                                                                                                                                                                                                                                                                                                    | IP                                                                                                                                                                                                                                                                                                                                                                                                            | IP                                                                                                                                                                                                                                                                                                                                                                                                             | IP                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimensions (Dia x H)                                                                                                                                                                                                                                                                                                        | 385 mm x 580 mm                                                                                                                                                                                                                                                                                                                                                                                               | 385 mm x 580 mm                                                                                                                                                                                                                                                                                                                                                                                                | 385 mm x 580 mm                                                                                                                                                                                                                                                                                                                                                                                                    |
| Weight                                                                                                                                                                                                                                                                                                                      | < 40 kg                                                                                                                                                                                                                                                                                                                                                                                                       | < 40 kg                                                                                                                                                                                                                                                                                                                                                                                                        | < 40 kg                                                                                                                                                                                                                                                                                                                                                                                                            |
| Operating temperature                                                                                                                                                                                                                                                                                                       | -40°C to +71°C                                                                                                                                                                                                                                                                                                                                                                                                | -40°C to +71°C                                                                                                                                                                                                                                                                                                                                                                                                 | -40°C to +71°C                                                                                                                                                                                                                                                                                                                                                                                                     |
| Protection standard                                                                                                                                                                                                                                                                                                         | IP 66                                                                                                                                                                                                                                                                                                                                                                                                         | IP 66                                                                                                                                                                                                                                                                                                                                                                                                          | IP 66                                                                                                                                                                                                                                                                                                                                                                                                              |
| Power supply                                                                                                                                                                                                                                                                                                                | 24V DC / 10 Amps                                                                                                                                                                                                                                                                                                                                                                                              | 24V DC / 10 Amps                                                                                                                                                                                                                                                                                                                                                                                               | 24V DC / 10 Amps                                                                                                                                                                                                                                                                                                                                                                                                   |
| Detection/Recognition ranges for<br>Human: <br>Vehicle: <br>RHIB:  | <div>  <b>Detection</b><br/>Up to 2.5 km            <b>Recognition</b><br/>Up to 900 m         </div> <div>           Up to 5 km           Up to 1.7 km         </div> <div>           Up to 5 km           Up to 1.7 km         </div> | <div>  <b>Detection</b><br/>Up to 5 km            <b>Recognition</b><br/>Up to 1.8 km         </div> <div>           Up to 9 km           Up to 3.3 km         </div> <div>           Up to 9 km           Up to 3.3 km         </div> | <div>  <b>Detection</b><br/>Up to 9 km            <b>Recognition</b><br/>Up to 3.3 km         </div> <div>           Up to 12.5 km           Up to 6 km         </div> <div>           Up to 12.5 km           Up to 6 km         </div> |

### CONTROL AND DISPLAY SOFTWARE



#### Advanced video processing

Artificial Intelligence, smart image enhancements, detection/classification algorithms, data fusion



#### Multi-layer display

Real-time panoramic or zoom display, geolocation of threats



#### High integration capabilities

ONVIF, H264, XML, MIME, TCP/IP, Client/Server



#### Advanced Alarm Management

Track analysis to trigger alarms and customized security actions

DRI ranges according to Johnson criterium and STANAG standards

Range values represent optimal performance, which will vary depending on target size, clutter environment, atmospheric conditions and sensor operational settings

Above information is subject to changes without notice



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