**PhantomIRxr**

Extended Range Thermal Biocular (AN/PAS-28)

The PhantomIRxr is a rugged lightweight extended-range infrared biocular system that uses the latest in low-power, compact, uncooled thermal technology. The PhantomIRxr provides excellent range performance enhanced with 2× and 4× electronic zoom capabilities.

**Benefits**
- Latest 640 × 480 focal plane array (FPA) technology
- Rugged design
- Easy to use
- 2× and 4× electronic zoom

**PhantomIRxr Overview**

The PhantomIRxr by Raytheon ELCAN is a rugged lightweight infrared biocular system that uses the latest in low-power, compact, uncooled thermal technology. PhantomIRxr can recognize a moving man-sized target at greater than 2,000 meters.

Unlike image intensification night-vision devices that only magnify existing light, thermal imaging cuts through darkness, through smoke, dust and most fogs. It cannot be defeated by artificial light or adverse visible conditions.

**Latest 640 × 480 FPA Technology**

Using the latest uncooled microbolometer technology ensures our customers obtain the clearest images for their detection and surveillance needs.

**Rugged Design**

The PhantomIRxr has a cast aluminum housing surrounded by rubber armor. It was designed to meet stringent military standards for operation in harsh environments, but weighs < 3.6 pounds (1.6 kg).

**Easy to Use**

Easy access to key function buttons allow the user to maintain visual contact during system operation.

**2× and 4× Electronic Zoom**

The PhantomIRxr employs world renowned ELCAN precision optics with high transmission coatings to deliver high resolution images. The range performance is further enhanced with 2× and 4× electronic zoom capabilities.

**Flexibility**

Designed with enough flexibility to serve both as a man-portable biocular and a multifunction surveillance and targeting system, the PhantomIRxr is ideal for military combat operations and for border security, surveillance and targeting applications.
### Features
- Digital magnetic compass
- Tripod mount attachment
- Digital image/video recording and playback (JPEG and MPEG-4)
- Dual-mode integrated laser marker
- Certified MIL-STD-810F
- Capable of detecting tracer rounds
- MIL-STD-1913 rail option

### Specifications

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<tr>
<th>Feature</th>
<th>Details</th>
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<tr>
<td>Detect/recognize upright moving man (1.5 m x 0.5 m)</td>
<td>70% probability 2,200 meters</td>
</tr>
<tr>
<td>Detect vehicle (2.89 m x 2.89 m)</td>
<td>70% probability &gt;5,000 meters</td>
</tr>
<tr>
<td>Optics</td>
<td>76 mm f/1.2</td>
</tr>
<tr>
<td>Field of view (wide)</td>
<td>12º x 9º</td>
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<tr>
<td>Magnification</td>
<td>2×</td>
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<tr>
<td>Detector</td>
<td>FPA 640 x 480 VOx (vanadium oxide)</td>
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<tr>
<td>Pitch</td>
<td>25 μm</td>
</tr>
<tr>
<td>Size</td>
<td>12.7 in. (L) x 7 in. (W) x 3.5 in. (H)</td>
</tr>
<tr>
<td>Display type</td>
<td>640 x 480 color display</td>
</tr>
<tr>
<td>Weight</td>
<td>&lt;3.6 pounds with batteries (&lt;1.6 kg)</td>
</tr>
<tr>
<td>Operational temperature range</td>
<td>-36ºC to 60ºC</td>
</tr>
<tr>
<td>Environmental</td>
<td>MIL-STD-810F certifications</td>
</tr>
<tr>
<td>Rugged design</td>
<td>Aluminum housing surrounded by rubber armor</td>
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<tr>
<td>Tripod mounting</td>
<td>¼ – 20 tripod mounting thread</td>
</tr>
<tr>
<td>Accessory rail adapter</td>
<td>MIL-STD-1913 rail available</td>
</tr>
<tr>
<td>Video output</td>
<td>NTSC and digital USB streaming</td>
</tr>
</tbody>
</table>

### Physical Features
- **Size**: 12.7 in. (L) x 7 in. (W) x 3.5 in. (H)
- **Display type**: 640 x 480 color display
- **Weight**: <3.6 pounds with batteries (<1.6 kg)
- **Operational temperature range**: -36ºC to 60ºC
- **Environmental**: MIL-STD-810F certifications
- **Rugged design**: Aluminum housing surrounded by rubber armor
- **Tripod mounting**: ¼ – 20 tripod mounting thread
- **Accessory rail adapter**: MIL-STD-1913 rail available
- **Video output**: NTSC and digital USB streaming

### Power Requirements
- **Internal power**: 4 AA lithium batteries > 7 hours at 25ºC
- **External power**: Optional AC power adapter capability; NATO slave cable for vehicle power; BA5590 battery cable
- **Power save mode**: Yes; >10 hours operation at 50% duty cycle

### Additional Features
- **Image capture**: Digital image/video recording (JPEG and MPEG-4)
- **Laser pointer**: Integrated Class 1 and 3B infrared laser
- **Interpupillary adjustment**: 54 mm to 71 mm
- **Body surface finish**: Black, foliage green, brown, urban gray
- **Electronic compass**: Azimuth readings (±3º accuracy), elevation, tilt
- **Reticule options (user changeable)**: MIL-DOT style, with size adjusted to zoom setting; cross hair style; or stadiametric reticle
- **Polarity control**: Black hot / white hot
- **Gain/level control**: Manual mode, full field automatic and spot automatic
- **Calibration**: Automatic or operator directed
- **Operator/system interface**: Easy direct access keypad for use during operation

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