



THEON

SENSORS

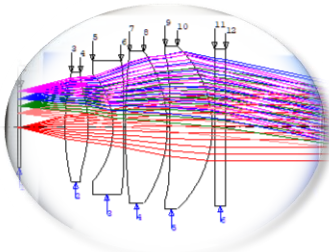
Advanced Optronics

Dr. Dimitrios Mandridis
Head of Optical Engineering
February 2021

**Operational
superiority & safety
through the best-in-class
night vision, thermal
& SWIR systems**

www.theon.com

PRODUCTS ARE IN-HOUSE DESIGNED & ASSEMBLED AND TESTED



R&D

State of the art R&D
Optics, Electronics, Mech

PRODUCTION

In-house workshop and
world-class suppliers

ASSEMBLY

Class 100 clean rooms for
final assembly

TESTING

Advanced in-house test
facilities and field trials

MARKET

Global reach

12 Night Vision Equipment



Thermal Technology Applications





- Established in 1997
- Export-oriented (>95%)
- 140 Employees, 30% engineers
- >100,000 systems delivered (2020)
- Users in 55 countries
- ISO 9001:2015 & 14001:2015



OFFICES AND STRATEGIC PARTNERS

INDUSTRIAL PARTNERSHIPS



THEON OFFICES



U.S.A.
Theon Sensors
USA

KEMPEN
Theon Deutschland

ATHENS
HEADQUARTERS

SWITZERLAND
Strategic Partner

EGYPT
Strategic Partner

RIYADH
ABU DHABI
Theon Sensors
Middle East

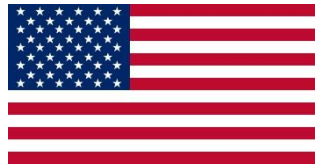
INDIA
Strategic Partner

SINGAPORE
Theon Sensors
Far East

INDONESIA
Strategic Partner



PVS-31D



NIGHT VISION



GOGGLES

Monoculars



Binoculars



Modular



WEAPON SIGHTS

Standalone



Clip-on

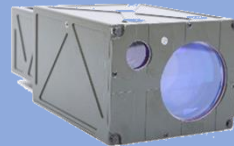


VEHICLE SYSTEMS

Driver Viewer



Day/Night Camera



Digital

THERMAL



VEHICLE SYSTEMS

Periscope



WEAPON SIGHTS

Standalone



Clip-on



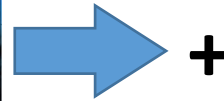
CUSTOM THERMAL SYSTEMS

Yesterday Tech → NV Goggle:

- No input/output
- No daytime use
- Analog, bulky, narrow FoV
- But 1xAA battery gives 24h

Today Tech → NV Goggle + Near-Eye Display:

- Digital → Unlimited input
- **Augmented reality**
- But somewhat power hungry
- Brightness struggle → limited daytime use



www.roadtovr.com



Tomorrow Tech → Future Soldier Helmet:

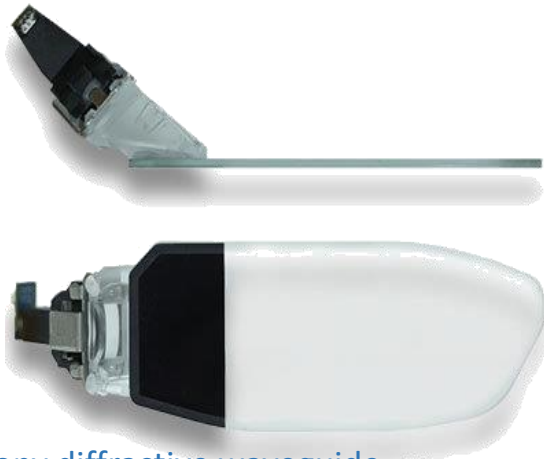
- Unlimited input/**output**
- Augmented reality
- Digital, AI, gesture control
- Ultra-Low Light CMOS (<1 mlux)
- Wider FoV (60-80°)
- Solve Brightness issue → Daytime use
- But power hungry → Soldier as a system

Microsoft IVAS headset prototype



Near-Eye Projection Optics:

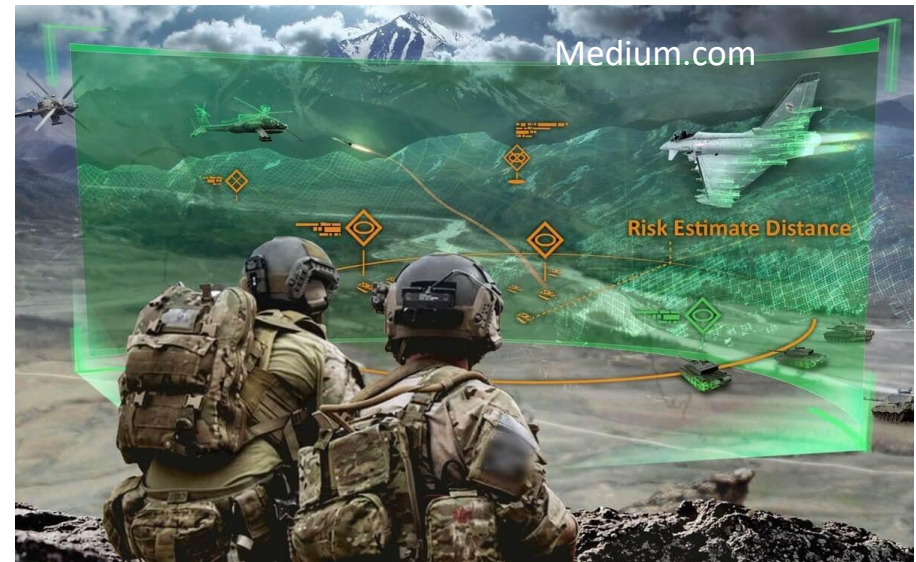
- Field-of-View ~40°
- Mil-Spec
- **High** Brightness (day)
- Low light leakage & stray light



Sony diffractive waveguide
www.etechnix.com

Integration with Soldier/Battle Management System:

- Share power
- Compatibility with data I/O
- Theon to augment input





www.theon.com

57, I. Metaxa str. / 19441 Koropi - Athens, Greece / **T** +30 210 6641420 / **F** +30 210 6644093 / **info**@theon.com

