



TRB
BUILD TO
LAST

RADAR SYSTEMS

COASTAL PROTECTION

ELECTRONIC SYSTEMS

C4I

VIDEO SURVEILLANCE & NETWORK

AIR FORCE RADAR SYSTEMS

TRB-06 ATAR



TECHNICAL INFORMATION

SPECIFICATIONS

Instrumental range: **180 km**

Range accuracy: **30 m**

Azimuth accuracy: **0.5°**

Elevation accuracy: **1°**

Elevation coverage: **60°**

Transmission: **1600 W**

peak, L band

solid state

Interface Protocol: **Asterix**

IFF modes: **1, 2, 3/A, C mode 4 optional**

Operational temp: **- 30°C to + 50°C**

FEATURES

- ▶ Automatic detection of Airborne targets
- ▶ TWS up to 100 targets
- ▶ Low power consumption (2500 WTyp)
- ▶ Extensive BIT
- ▶ High MTBF (2500 hour)
- ▶ Low MMTR (20 min)
- ▶ Solid State T/R module
- ▶ Elevation multi-beam by phased array technology
- ▶ Extensive ECCM capabilities
- ▶ Digital receiver
- ▶ Digital pulse compression
- ▶ Digital beam forming

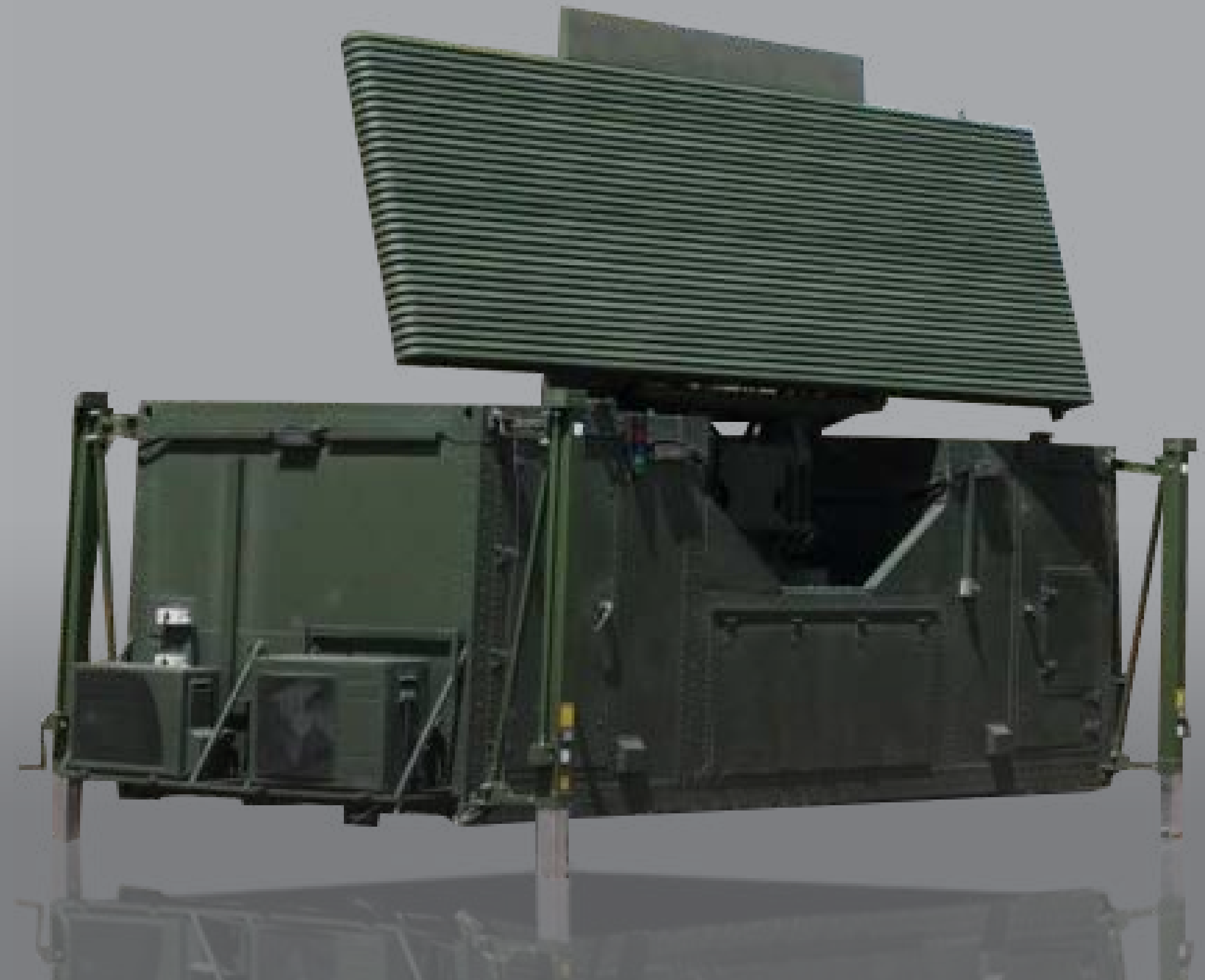
APPLICATIONS

- ▶ Search radar for supporting surface-to-air missile system
- ▶ Gap filler
- ▶ Local air defense C3 System
- ▶ Protection of sensitive sites



AIR FORCE RADAR SYSTEMS

TRB-88 MR



TECHNICAL INFORMATION

SPECIFICATIONS

Operations frequency: **S band**
Antenna type: **Multi beam/Phased array**
Instrumental range: **480 km**
Azimuth coverage: **360°**
Elevation coverage: **30°**
Height: **Up to 100 kFt**
IFF mode: **1, 2, 3/A, C**
Transmitter type: **Solid state**
Number of SS module: **32**
MTTR time: **Less than 30 min**
MTBCF: **Over 2.100 hours**
Range resolution: **150 m**
Azimuth resolution: **5 deg**
Plot extractor: **2.000 plots/scan**

FEATURES

- ▶ Digital beam forming in elevation
- ▶ Coherent Pulse-Doppler processing
- ▶ Target classifications
- ▶ Ballistic missile detection
- ▶ Advanced ECCM capabilities
- ▶ Local and remote operation
- ▶ Integrated IFF antenna
- ▶ Operation room, antenna and hardware in a single container

APPLICATIONS

- ▶ Air traffic control
- ▶ Air defense system
- ▶ Early warning
- ▶ Air defense operations



COMMAND, CONTROL, COMMUNICATIONS, COMPUTER & INTELLIGENCE C4I

COMMON FUNCTION

- ▶ Airspace surveillance system
- ▶ Detection, evaluation & classification of threats
- ▶ Assists threat countermeasures selection
- ▶ Data exchange with other levels
- ▶ Recording of all data
- ▶ Data & voice communications
- ▶ Target interception decision support

FEATURES

- ▶ Different command & control level support
- ▶ Modern COTS hardware
- ▶ Fully redundant & data secured system
- ▶ Scalable, modular and configurable
- ▶ Open architecture enables integration with external radars, interfaces & functionalities with no impacts on the system
- ▶ Simple maintenance



NATIONAL C4I SR



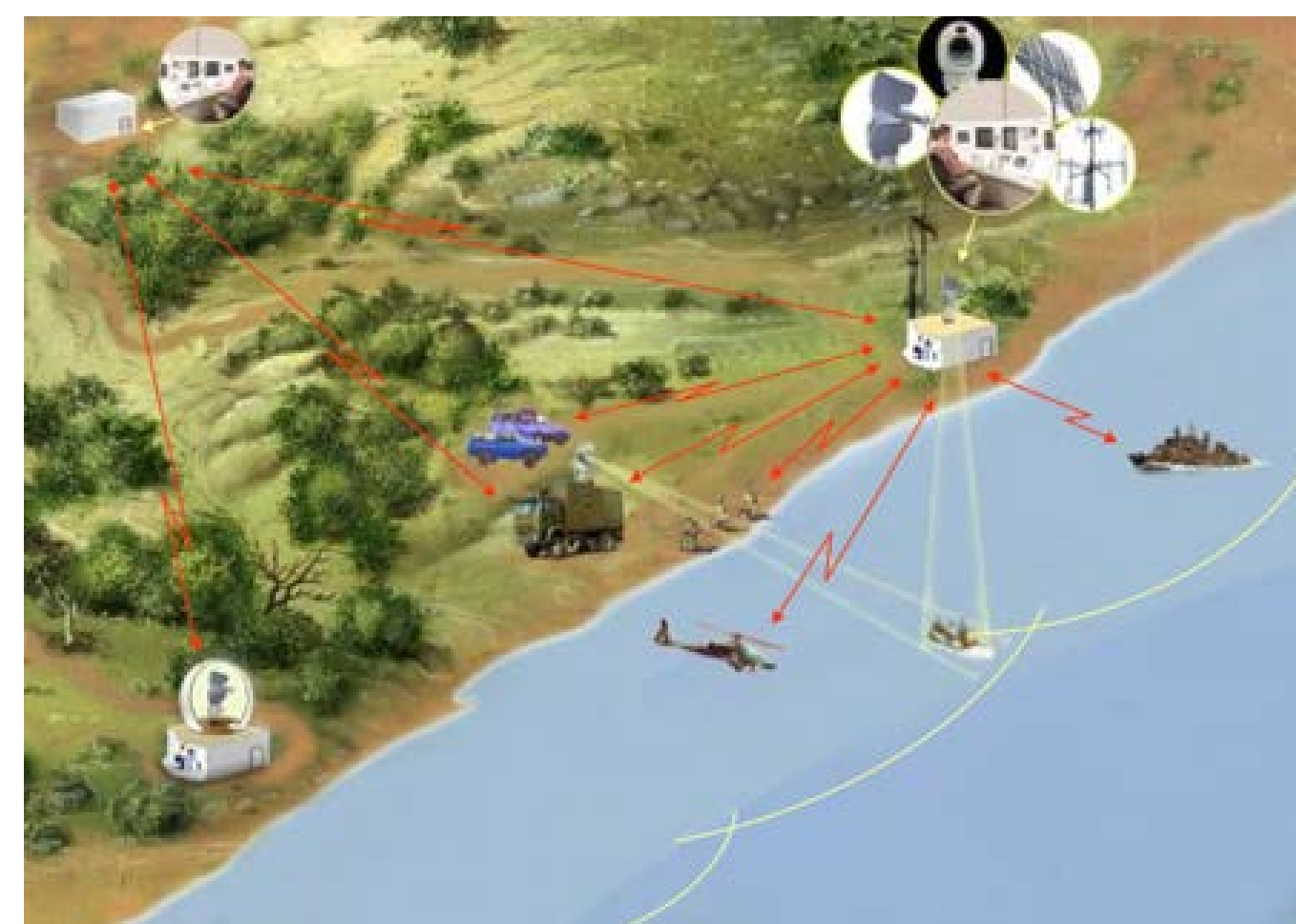
OPERATIONAL CENTER

TECHNICAL INFORMATION

COASTAL PROTECTION



COASTAL PROTECTION



COMBINED EFFORTS

COMMON FUNCTION

- ▶ Territorial water protection
- ▶ Coastal & asset protection
- ▶ Sea port protection
- ▶ Offshore asset protection
- ▶ Fishing rights protections
- ▶ Natural assets
- ▶ Anti smuggling

FEATURES

- ▶ Layered command & control
- ▶ Integration with National command & control system
- ▶ Modern hardware
- ▶ Easy maintenance

TECHNICAL INFORMATION

COASTAL PROTECTION

SPECIFICATIONS

OTH radar

Max range: **200 NM**

Min range: **24 NM**

Frequency: **HF Band**

Persistent coastal surveillance radar

Frequency: **X band**

Multi beam solid state radar

High doppler, range & azimuth

Electro optical sensors

Day/night cameras

Stabilized systems

Long/short range options

Integrated with C4ISR

APPLICATIONS

- ▶ Coastal protection systems



**MULTI BEAM SOLID STATE
SURVEILLANCE RADAR**



ELECTRO OPTICAL SYSTEMS

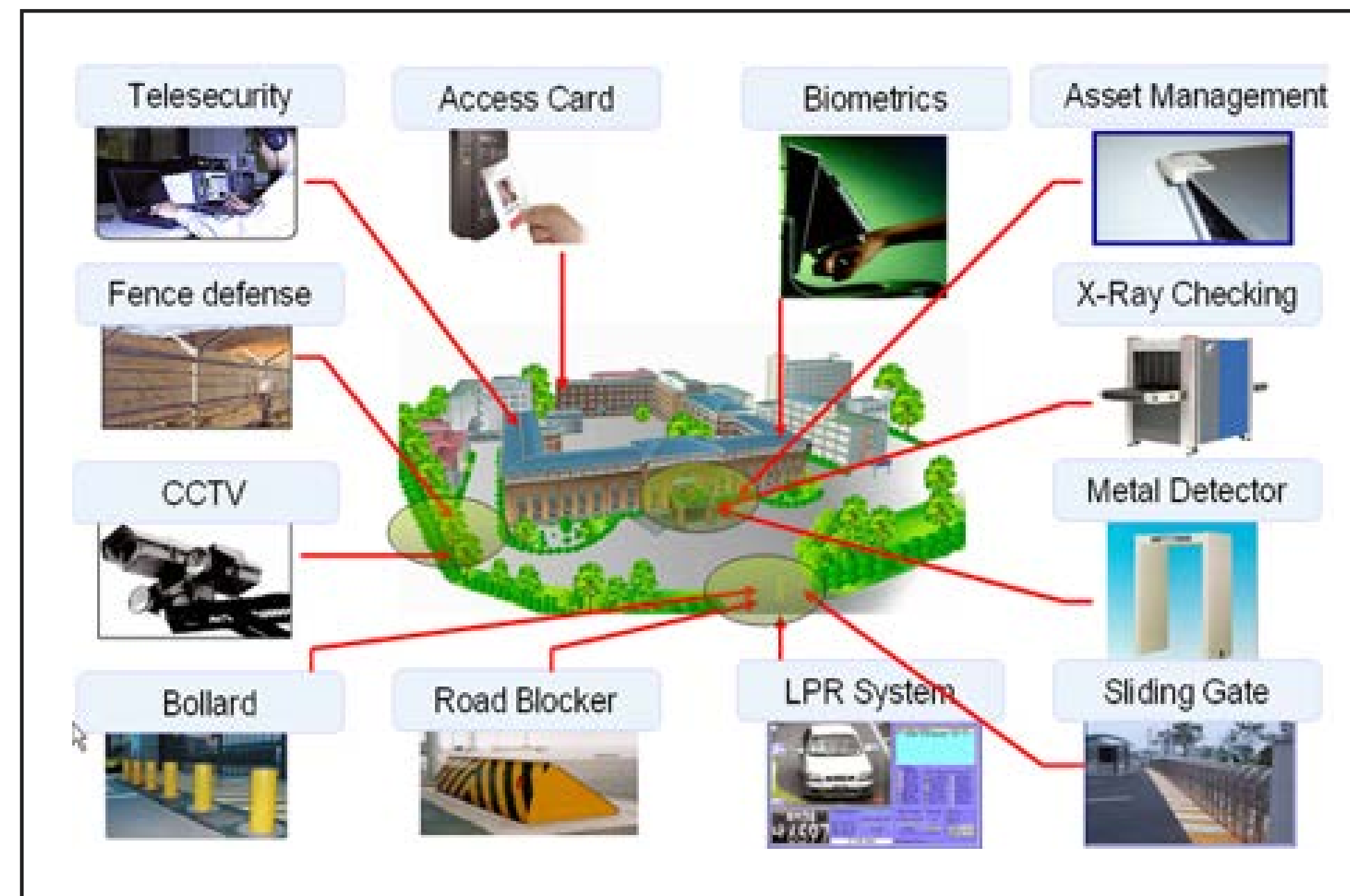


OTH RADAR ANTENNAS

VIDEO SURVEILLANCE, ACCESS CONTROL & NETWORK

VIDEO SURVEILLANCE SYSTEM

- ▶ Implemented through video management systems
- ▶ Broad array of sensors, cameras & other devices controlled & coordinated by central servers
- ▶ Integral support for alarm/incident reports with direct access to related video recordings
- ▶ Integration of detectors & sensors
- ▶ Integrated control of output devices:
 - Gates
 - Lights
- ▶ Consolidated view of multiple & remote sites

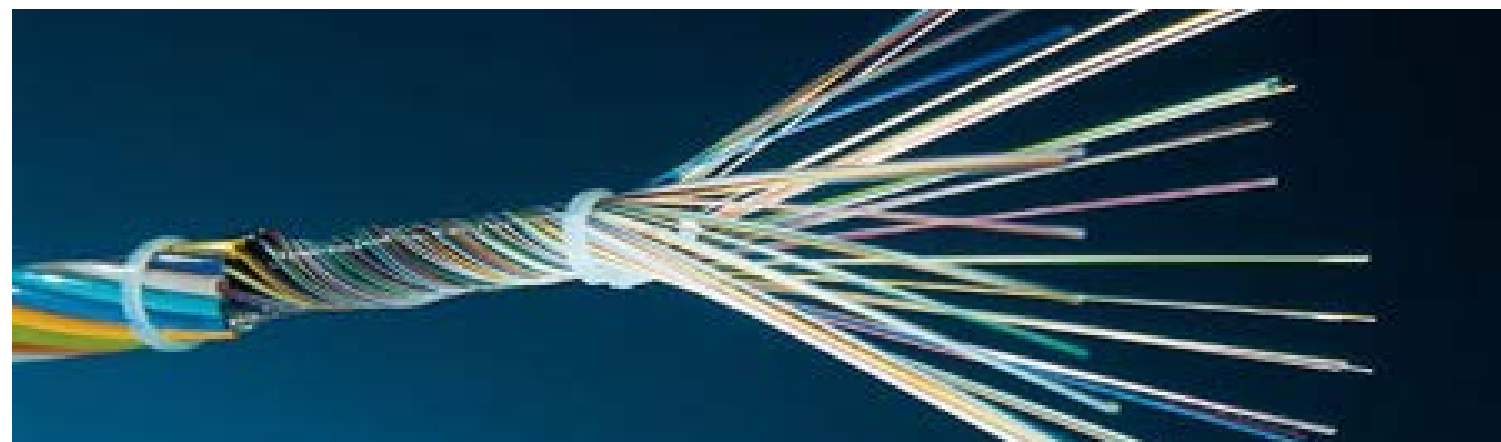


OUTPUT DEVICES INTEGRATED CONTROL

VIDEO SURVEILLANCE, ACCESS CONTROL & NETWORK

NETWORK SYSTEMS

- ▶ Fiber optics network
- ▶ Unlimited Bandwidth
- ▶ Long transmission distances
- ▶ EMI & RFI immunity
- ▶ Secure transmission
- ▶ VPN - secure connection over public network



FIBER OPTIC NETWORKS

ACCESS CONTROL

- ▶ RFID based high security access control system
- ▶ Robust & Resistant to computer network failures
- ▶ Fingerprint verification
- ▶ Sensitive security data protection
- ▶ Military standards compliant hardware
- ▶ Quick response & easy to use
- ▶ Proper back-office software & hardware tools infrastructure

ACCESS CONTROL - DATA PROTECTION

- ▶ 3DES/AES cryptographic engine
- ▶ Tags & reader device initialized by end user only
- ▶ 128-bit AES cryptographic key implemented
- ▶ Key inaccessible to other parties



RFID SECURITY ACCESS
CONTROL SYSTEM



FINGERPRINT
VERIFICATION

OTHER TRB PRODUCTS

- ▶ Despot - 4x4 armoured multi-purpose vehicle
- ▶ Drina - Small calibre ammunition production line
- ▶ MH-17 - Demining machine
- ▶ RS9 Vampir - semi-automatic 9mm pistol
- ▶ Fuzes for military use
- ▶ Mobile security systems
- ▶ Mobile power & water systems

For further information please contact your TRB representative or:

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