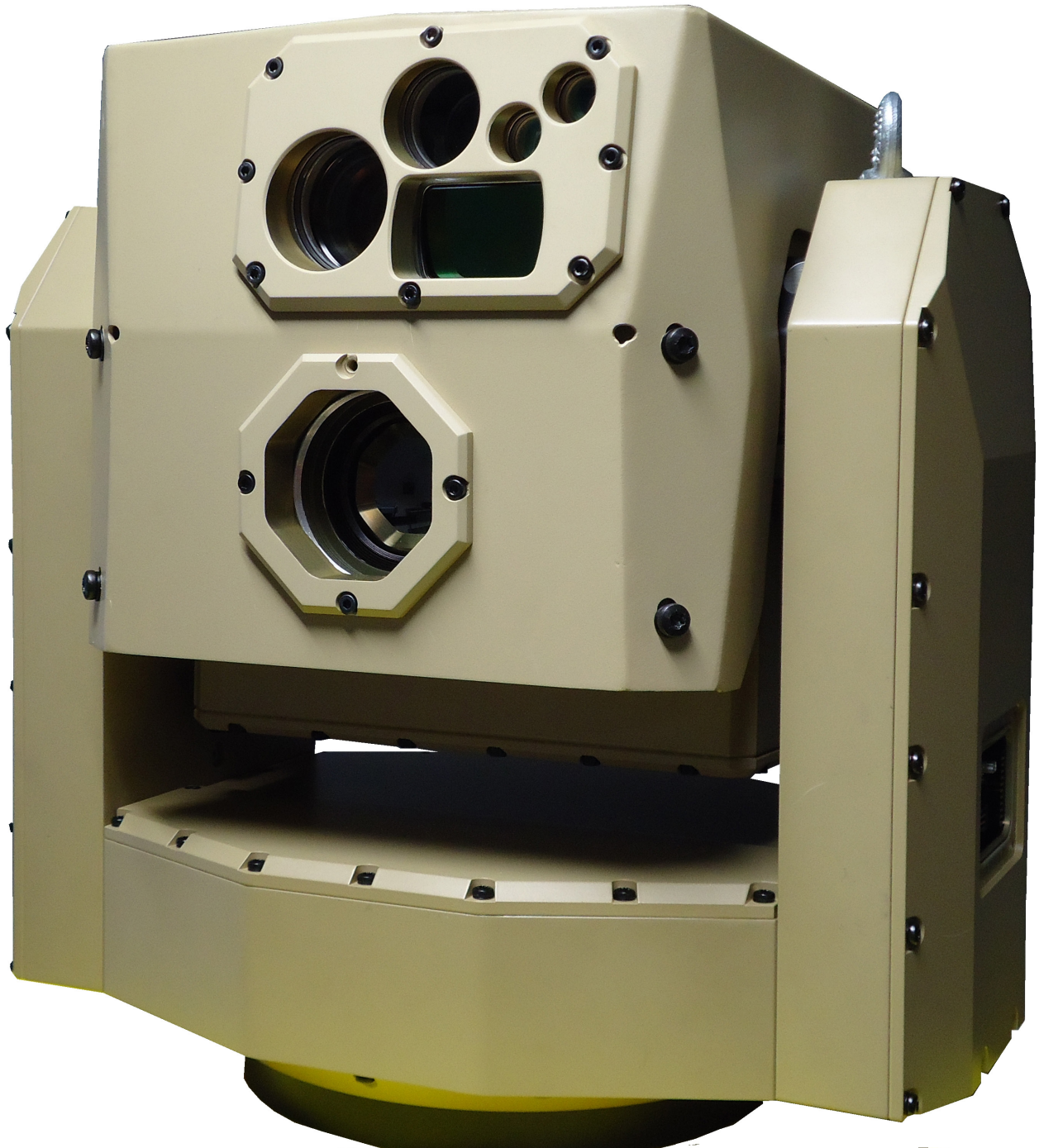


FIRE CONTROL SYSTEMS (FCS) BUILDING BLOCKS



DENEL MECHATRONICS

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DENEL VEHICLE SYSTEMS



Denel Mechatronics has developed a suite of building blocks for Fire Control Systems ranging from MMI to Fire Control Computers and Sighting Systems.

These products are all developed, manufactured and maintained by Denel Mechatronics and can be adapted to comply with specific user requirements. These building blocks are used in several of the systems offered by the company in order to achieve maximum commonality and management of obsolescence.

Using these building blocks as part of the upgrades offered by Mechatronics, older equipment can compete with advanced systems in the digital battlefield. For example, the Independent Stabilised Sight or Video Tracker and Controller (VTAC) can be easily integrated into existing Fire Control Systems and adapted for other Turrets and FCS.



Fixed Sight for Light Turrets with Ballistic Calculation

Day Camera	2 or 3 Fixed FOV Vehicle Recognition > 3 000m
Night Camera	Uncooled Thermal 8-12 μ m Vehicle Recognition > 2 400m
Laser Range Finder	Typical 10-15 km 5m Accuracy
User Display	Colour 1024 x 768
Ballistic Computer	16 Programmable keys Accuracy 0.1 mRad

Video Tracker And Controller (VTAC)

Video Input	2x PAL or NTSC, Differential and Isolated
Video Output	2x PAL or NTSC, Differential and Isolated
Interface	Serial for control and commands
Minimum Contrast	5%
Minimum S/N	4
Noise (position value)	< 1 tv line
Error latency	5ms
Power	MIL-STD-1275B Input 18-32 VDC 20 Watts

Stabilised Panoramic Video Sight

Excursion Range Elevation	-20° to 65°
Excursion Range Azimuth	n x 360°
Low Profile	Height < 400mm
Velocity Range	0.1 mrad/s to 2 rad/s
Acceleration	> 15 rad/s ²
Stabilization	< 50 μ Rad (1 σ)



Sensors Day Cameras, LRF and IR Camera

Camera performance Customised per application

Typical Thermal Camera Tank ID > 3km

Typical Day Camera Tank ID > 4km

LRF Up to 15km

Options Laser Pointer and GPS

Video Interface Computer (VIC)

Computing Ballistic Computation
User mode and sub-system control

Panel type TFT, Active matrix

Panel size Sizes dependant on the LCD screen size

Panel resolution XGA 1024(H) x 768(V)
(Can accommodate higher res video)

Video Input 6x PAL or NTSC,
differential and isolated

Video Output 2x PAL or NTSC,
differential and isolated
Zero Delay

Communication 9x RS-422
2x RS232
1x USB

Discrete lines 20

Target Tracking Video target auto-tracker
built-in

Operating system None, 6 sec start-up

Mass Typical 6 kg for 10 inch LCD

Operating temp -20°C to +55°C

Environmental MIL-STD-810E

Power Input 18 – 32 VDC 40 Watts

Disclaimer

This document gives only a general description of products and services and except where expressly provided otherwise shall not form part of any contract. From time to time, changes may be made in the products or conditions of supply.