



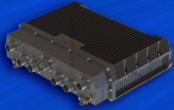
TUBITAK
BILGEM



NEW GENERATION AVIONICS



DATA PROCESSING



VMC
VEHICLE MANAGEMENT
COMPUTER

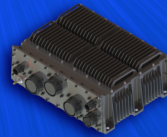


CMC
CORE MANAGEMENT
COMPUTER

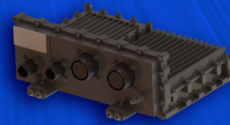


MMC
MISSION MANAGEMENT
COMPUTER

ADVANCED INTERFACE CONVERSION



VS DCU
VEHICLE SYSTEM DATA
CONCENTRATOR UNIT

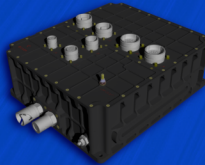


FLCS DCU
FLIGHT CONTROL SYSTEM DATA
CONCENTRATOR UNIT

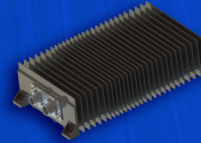


AvDCU
AVIONICS DATA
CONCENTRATOR UNIT

NEXT-GEN FIBER OPTIC AVIONICS NETWORK

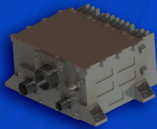


HSN IR SW
HIGH SPEED NETWORK)
INTER-RACK SWITCH



DTN IR SW
DETERMINISTIC NETWORK)
INTER-RACK SWITCH

HIGH-PRECISION TIMING AND SYNCHRONIZATION



SGU
SYNCHRONIZATION
GENERATION UNIT

OPERATING SYSTEM AND MIDDLEWARES

RTOS MIDDLEWARE

INDIGENOUS REAL TIME OPERATING SYSTEM
MULTI CORE / SINGLE CORE
ARINC 653 / POSIX
GRAPHICS SERVICES
TRANSPORT SERVICES
IO SERVICES
HETEROGENEOUS COMPUTING SERVICES
CORE MANAGEMENT SOFTWARE

NEW GENERATION AVIONICS

DATA PROCESSING

VMC

VEHICLE MANAGEMENT COMPUTER

Monitors engine, manages flight control surfaces, and other aircraft systems.

CMC

CORE MANAGEMENT COMPUTER

Manages the aircraft's main systems and communication systems, generates graphics for Large Area Display and Helmet-Mounted Display, protects aircraft's cyber security.

MMC

MISSION MANAGEMENT COMPUTER

Processes and manages data from communication, navigation, electro-optical targeting, radar, and electronic warfare systems.

ADVANCED INTERFACE CONVERSION

VS DCU

VEHICLE SYSTEM DATA CONCENTRATOR UNIT

Converts onboard sensor and actuator signals and enables communication with systems that have legacy interfaces.

FLCS DCU

FLIGHT CONTROL SYSTEM DATA CONCENTRATOR UNIT

Converts onboard sensor and actuator signals and enables communication with systems that have legacy interfaces.

AvDCU

AVIONICS DATA CONCENTRATOR UNIT

Converts onboard sensor and actuator signals and enables communication with systems that have legacy interfaces.

NEXT-GEN FIBER OPTIC AVIONICS NETWORK

HSN IR SW

HIGH SPEED NETWORK INTER-RACK SWITCH

Enables the rapid transfer of substantial volumes of sensor data to management computers at remarkably high speeds.

DTN IR SW

DETERMINISTIC NETWORK INTER-RACK SWITCH

Facilitates the transmission of data with varying levels of criticality over the same medium without interference.

HIGH-PRECISION TIMING AND SYNCHRONIZATION

SGU

SYNCHRONIZATION GENERATION UNIT

Provides a global high-precision timing reference, synchronizing all avionics components and enabling deterministic data exchange.

OPERATING SYSTEM AND MIDDLEWARES

RTOS

NATIONAL REAL TIME OPERATING SYSTEM

Runs on all computers of KAAN and enables applications with different criticality levels to operate without affecting each other, while maintaining high performance.

Middleware

Provides communication between hosted applications and sensors/actuators, performs protocol conversion for interfaces, enables generation of graphical user interfaces and the execution of artificial intelligence applications of KAAN.