

D-JHMCS

DIGITAL JOINT HELMET MOUNTED CUEING SYSTEM



DIGITAL JOINT HELMET MOUNTED CUEING SYSTEM

Low cost system—lower cost than the legacy JHMCS

Performance equivalent to JHMCS with significant growth capabilities

Significantly reduced LCC and simplification of JHMCS—cathode ray tube image source and high voltage removed and replaced with low cost, hi-reliability pilot-friendly, low voltage HVI and connectors

Low risk system—system is already in full scale development and will be qualified by mid-2015

Full backwards compatibility to aircraft Group A and MMC software interfaces—Full plug and play system to JHMCS equipped platforms



D-JHMCS Combines Standard NVGs with Glide-On Module



Designed specifically for existing JHMCS operators. It yields enhanced performance at a substantially reduced Life Cycle Cost (LCC), and is the most comfortable Helmet Mounted Display due to its improved center of gravity.

D-JHMCS is easy to install. It is a fully backward compatible system that replaces the legacy JHMCS helmet and Helmet Vehicle Interface with lighter head borne, cable and connection elements. The system connects to existing JHMCS Group A, uses the current JHMCS Group B Electronics Unit and Magnetic Transmitter Unit and eliminates the JHMCS Cockpit Unit. Installation of the D-JHMCS in JHMCS provisioned aircraft does not require any aircraft hardware or software update—it is a full plug and play system.



DJHMCS

DIGITAL JOINT HELMET MOUNTED CUEING SYSTEM

FUNCTION	CHARACTERISTICS	PERFORMANCE
Day Display	Image Source Type	OLED Flat Panel Display – Monochrome AMLCD – Color
	Image source Resolution	1280x1024
	Color	Monochrome green or color
	Projection	Day: Monocular, Off-The-Visor projected to the right eye
	Display FOV	Day: 20° circular
	Display Resolution	80 cy/mm @ on axis for exit pupil of 5mm, @ center exit pupil
	Contrast Ratio	1:250
	Exit Pupil	On axis – 15 mm diameter circular Off axis – 12 mm diameter circular
	Eye Relief	>50 mm
	Visor Type	Tinted with optical, structural, and coating requirements meeting MIL-V-43511 and MIL-C-83409
	Display Focus	Image focused at Infinity, +0, -1/6 Diopter
	Control	Brightness & Video Brightness & Contrast Control
	Night Display Module	Image Source Type
Image Source Resolution		800x600
Color		Color RGB
Projection		Overlaid on NVG imagery
Display FOV		20° circular
Tracker	Visor Type	Step-In-Visor for facial protection
	Degrees of Freedom	6 (Position and orientation)
	Accuracy	6mrad RMS – JHMCS performance
System Latency	Field of Regard	full sphere
Debriefing	Concept	Same as JHMCS
Helmet Properties	Aircrew Protection	External color scenery, HMD Symbolology Overlay, sent monochrome to aircraft DVR (color – requires SW update)
	Helmet Fit	HGU-55/P per MIL-DTL-87174
Safety	Ejection	Zeta-Liner Type fitting
Size & Weight	Up to 600KEAS	
A/C Data Interfaces	Helmet (head born)	Lightest Available: 1.9 Kg, 4.2 Lbs (day); 2.1 Kg, 4.6 Lbs (night)
	A/C Integration	Tracker Integration
A/C Integration	Installation	Same as JHMCS
	S/W	JHMCS Group A harness New pilot HVI
Modularity	Architecture	Same as JHMCS
Reliability and Maintainability	Modularity	Same as JHMCS
	Reliability and Maintainability	In flight Display Module replacement capability
	JHMCS II/m A/C Integrated	> 3,000 hours
	MTRR	Less than 30 minutes
	Day Display Module	> 8,000 hours
Night Display Module	> 8,400 hours	
Helmet Shell and Backpack	> 39,000 hours	