Combatant Command Common Capability Needs

Rollup Category	Rollup Subcategory	USAFRICOM	USCENTCOM	USEUCOM	USNORTHCOM	USPACOM	USSOCOM	USSTRATCOM	USOUTHCOM	USTRANSCOM
C2/C4I/ Cyber	Architectures & Components	Communications: C4ISR for Multi-National Operations; C4ISR Data Transport; Coalition-shareable Airborne ISR Architecture	Information Sharing: Data Management–Compression and Processing

Information Sharing: Multiple Domain/ Cross Domain Assurance | Improved Interoperability with Partner and Allied Capabilities | Threat Information Sharing, Collaboration, Dissemination/Mission Assurance Common Integrative Framework | Architectures and Systems to Support Information Sharing, Assured Connectivity, as well as Enhanced Interoperability among Allies and Partners | Command, Control, Communications, and Computers: Low Visibility/Low Profile/ Conformal/Multi-Spectral Antennas. Ability to selectively permit/deny net connection of personal electronic devices.

Proficiency to conduct cyber-enabled SOF operations to influence foreign audiences, reduce risk to the force, and gain advantage over competitors, adversaries, and enemies. | Information Sharing: Multiple Domain/ Cross Domain Architecture | Improved interoperability with partner and Allied capabilities. Threat Information Sharing, Collaboration, Dissemination | Survivable/Secure Comms/Networks, Information Infrastructure Protection and Survivable Systems Engineering |
| | Cyber Defense | Communications: Cyber Freedom of Action (FOM) | Assured C2 in all environments; Ability to move and secure information across all domains ; reduced threats to automation & autonomy | Cyber COP Capable of Providing COCOM Freedom of Action | Network Resiliency | Cyber Defense/Network Security | Capabilities to counter detection in denied spaces, urban/rural areas, social media, and enhanced deception measures | Build Cyberspace Capability & Capacity | Cyber/Information Assurance. Cyber network Defense. Cyber COP capable of providing COCOM freedom of action | Cyber/Information Assurance: Defend Info and Mitigate Threats to Mobility Operations |
| | Sensors & Radars | ISR: Radio Frequency Direction Finding (RFDF); Stand Off Home-made/ Improvised Explosive Device (HME/IED) Detection; Fused Multi-Int'l Airborne/ FMV; Autonomy-enabled PED; Drone Sense & Avoid | Reductions in SWAP across all sensor modalities; while preserving sensor capability and sensitivity; multi-modal sensor suites which leverage onboard processing; reduction in PED for all sensors | C4: Low Vis/Low Phased Array Radio Detect and Ranging (RADAR). Optics: Undetectable | Detect, Track, and ID Air Targets/Northern Approaches Sensors | Persistent Wide Area ISR | Command, Control, Communications, and Computers: Low Vis/Low Pro Phased Array Radio Detect and Ranging (RADAR). Optics: Undetectable Aiming Laser and Advanced Sensors (persistent surveillance systems also referred to as unattended ground sensor (UGS) systems, tactical surveillance systems, and force protection systems). | Persistent Wide Area ISR/Multiple sensor integration for common integrative framework | Persistent Wide Area Surveillance to detect, track, and ID contacts of interest in CENTCOM and Caribbean approaches.

UAS Due Regard Radar for Sense and Avoid foliage penetration. | Ability to Determine Security of a Landing Site for Arrival and Throughput Operations without Use of a Pre-coordinated On-site Survey as well as All-weather/Lights-out Taxi, Take-off and Landing Capability for Mobility Aircraft Operations from Prepared and Unprepared Fields. |
| | Communications | Communications: Centralized Commercial SATCOM Management; Language Translation; Situational Awareness; Coalition Radio Interoperability | Multi-path C2 capability in the presence of denial, spoofing & jamming; assured C2 ; improvements in underwater communications | Information Sharing/ Data Sharing with Partners and Allies. | Arctic Communication Capability: 24 Hour Persistent Comms Above 65 Degrees North | Assured, Interoperable and Cross-domain | Intelligence systems that provide unparalleled interoperability of data to support global SOF battlespace awareness for mission planning, rehearsal, analysis, & operations. Sufficiency to collect, store, retrieve, analyze, and disseminate data in near real-time (next generation Common Operating Picture) | Strategic Comms: Infrastructure Issues, and Compatibility | Information/Data sharing with partners, coalitions and allies. Assured interoperable and cross-domain comms. Caribbean Collaboration Environment | |
| | Precision, Navigation & Timing | | Assured PNT in all environments; more robust non-GPS reliant PNT | Improved PNT in a contested environment | Critical Time Mgmt. Relative to GPS: Persistent and accurate timing signals | Assured Navigation | Position Location Information (PLI) for Disadvantaged Environments. Develop the ability to determine location information of friendly and enemy forces without relying | Assured PNT in an A2/AD environment | | Delivery of joint forces and their sustainment within a GPS denied environment. |

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C2/C4I/ Cyber	A2/AD		Ability to selectively penetrate A2AD systems at a time and location of our choosing without the need to conduct 'rollback'	ISR/Communications in a contested environment		ISR/Communications in a contested environment	SOF aviation requires precise navigation in Anti-Access/Area Denial (A2AD) environments. Navigation Independent Relative Positioning System (NIRPS) that that can provide precise navigation independent of INS and GPS. Ability to achieve denial of enemy visual augmentation systems (VAS) capability during select phases of combat operations	Cyber/ISR/Communications in a contested environment		Cyber/Information Assurance: Ability to conduct operations in a cyber contested environment.
Force Protection & Medical	Medical	Medical: Extend the "Golden Day"; Disease Surveillance and Prevention; Disease Modeling and Trauma Intervention; Remote / Austere Trauma Medicine; Medical Evacuation; Medical Informatics & Telemedicine	Medical: extend the "golden hour"; provide remote medical care in austere environments; automate medical care/monitoring during patient transport via unmanned systems	Rapid response to pandemic influenza/ infectious disease occurrence	Counter WMD preparedness and response in the domestic AOR	Counter pandemic and infectious disease	Counter WMD (CWMD) Bio-Med Systems: Tactical Portable Oxygen Generator Far-forward small team Tactical Combat Casualty Care (TCCC)-medical equipment/ protocols for rapid diagnostics, treatment, and prophylaxis. Freeze-dried Plasma/ Whole Blood Substitute	Counter WMD preparedness and response support	Biosurveillance, Countering Epidemic, Pandemic and Infectious disease. Counter IED (land, water-borne)	Virtual borders, decontamination of transportation assets, screen cargo for smuggled goods/explosives/chem-bio threats, stand-off/robotic detectors, enhance aircraft survivability
Domain Awareness	Subsurface	Maritime Domain Awareness (MDA): Beyond-Line-of-Sign; Coalition Interoperability; Automated Anomaly Detection; Common Maritime Picture	Improve all timelines associated with Mine Warfare/Q-routing; automate detection and tracking of underwater systems – manned/unmanned ; provide for assured PNT and C2 during subsurface ops – land & sea	Maritime security/ maritime domain awareness	Maritime surveillance sub-surface/ mine/under water IED	Maritime security/ maritime domain awareness		Persistent Wide Area Surveillance to detect, track, and ID air contacts of interest Workforce development	Persistent Wide Area Surveillance to detect, track, and ID air contacts of interest in CENTCOM and Caribbean Approaches. UAS Due Regard Radar for Sense and Avoid. Foliage penetration.	Capability to explore, analyze and identify trends and correlations between elements of large data sets Synchronized planning, forecasting and collaboration capabilities
Power and Energy	Power Management	Operational Energy: Expeditionary Basing & Logistics; Reduced SWaP; Alternative Energy (Solar, Wind, Geothermal); Waste-to-Energy Disposal; Expeditionary Water Purification/Energy Efficient Housing, Power Distribution	Reduce the energy burden for forward operations; assure energy & power SCADA systems secure from attack/disruption; reduce power consumption requirements across the force	Electrical energy security: ensured power where needed Electrical energy security: Secured Supervisory Control And Data Acquisition (SCADA)	Secured power and energy in all mission sets. Humanitarian assistance/disaster relief		Power and Energy: Undersea Manned Power System Safe, scalable non-flammable Li-Ion Cell	Secured Supervisory Control And Data Acquisition (SCADA)	Technologies that reduce dependence/consumption of fossil fuels while maintaining or improving speed, flexibility, range, and responsiveness.	Technologies that reduce dependence/consumption of fossil fuels while maintaining or improving speed, flexibility, range, and responsiveness.

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Operations & Mission Support	**Counter terrorism**	Counter-Violent Extremist Organization (C-VEO) - Social Media Analysis; Open Source Intelligence (OSINT) Indications & Warnings. ISR: Personnel Recovery.	Create Identity Dominance across the battlespace; deny sanctuary for VEOs; leverage all forms of media to provide I&W of potential VOE action(s); improve collection, storage, transfer, and analysis of big data sets		Counter WMD preparedness and response in the domestic AOR	Counter terrorism/ extremism	Tagging, Tracking and Locating (TTL) technologies that can be used on persons and objects - technologies of interest would provide reductions in size, weight and power/price (SWaP2), improved accuracy or new capabilities	Assured PNT	Alternative platform and payload systems (APPS) for Counter-terrorism, CTOC, and CIT. Special Purpose Marine Air Ground Task Force (SPMAGTF). Counter WMD Preparedness and Response	Automated loading / offloading systems; rapid distribution technologies; innovative delivery technologies; rapidly establish ports of debarkation in austere/anti-access environments
	Counter transnational crime	Identity Activities: Biometrics, Forensics, Documentation and Media Exploitation, Denial of Anonymity, Coalition Interoperability	Assure linkages to Federal, State, Local, and International crime databases		Counter WMD preparedness and response in the domestic AOR	Counter transnational crime			Alternative platform and payload systems (APPS) for Counter-transnational organized crime	
Weapons	**Non-Lethal**	Non-Lethal Systems: Mobile Counter-Personnel, Counter-Materiel, Active Denial	Provide a range of non-lethal options for vessel/vehicle stop/detaining personnel, with reversibility as a key attribute		Maritime Non-Lethal Engagement/Counter UAS Non-Lethal Operations	Non-lethal capabilities across many mission sets (e.g., counter unmanned threats, Vessel/Vehicle stopping)	Scalable Effects Weapons (SEW)- counter material and counter personnel Maritime Disablement Operations (MDO)		Maritime vessel stopping Non-lethal weapons	
	Directed Energy		Provide novel and unique uses for DE: C-IED; counter-mobility; deep magazine engagements; assured C2; wireless energy transfer		Directed Energy-High power optics/laser for track/ID Directed Energy-High energy laser to engage Directed Energy-MM wave radar for Area Denial Directed Energy--High power microwave for Defense	Directed Energy: Offensive/Defensive	Airborne High Energy Laser (HEL)			
Electronic Spectrum Management	**EW management in contested environment**	Communications: Contested-EW Continuity of Operations (COOP)	Real time characterization of the EW environment ; assure friendly use of the EW spectrum while denying adversary use	Capability to continue normal military operations in a contested EW environment		Electronic Warfare and Operations in contested EMS environment			EW management in contested environment	