

		ASN	2012-CSA-84-COA
		Case Status	APPROVED
		Date Created	03/13/2012
		Date Submitted	10/10/2012
Proponent Organization		Sponsor	Ohio Department of Transportation
		Attn Of	Fred Judson
		Address	317 E.Poe Rd
		Address2	
		City	Bowling Green
		State	OH
		Postal Code	43402
		Telephone	(419) 373-4497
		Email	fred.judson@dot.state.oh.us
Declaration		Declaration(a)	Yes
		Declaration(b)	Yes
Point of Contact		Representative	Fred Judson
		Address	317 E.Poe Rd.
		Address2	
		City	Bowling Green
		State	OH
		Postal Code	43402
		Telephone	(419) 373-4497
		Email	fred.judson@dot.state.oh.us
Operational Description	Requested Effective Period	Beginning	
		End	
		Light out operation	No
		VFR operation	Yes
		IFR operation	No
		Day operation	Yes
		Night operation	No
		Program Executive Summary	The Ohio Department of Transportation intends on using the product to capture aerial photography throughout the entire lifecycle of a project or as operational need dictates. From pre-construction, during construction or post-construction the district will be able to capture aerial imagery and have it available for project engineers in a timely and cost effective manner. This imagery will be used to assist with critical planning, design and quality control of projects ranging from hundreds of thousands to multi-million dollar State of Ohio investments.
		Operational Summary	Operations of the swinglet CAM will be conducted to support highway mapping, highway construction projects, and gathering photographic images over highway construction sites. Operations will be conducted below 250' AGL, strictly within Class G airspace. Operations will take place during daylight hours between 7:00AM ET and 5:00PM ET. Flight operations will last no longer than 25 minutes for each flight. Flights may be as frequent as two days per month during spring, summer and fall.
	Location	State	OH
		County	Williams
		Nearest Airport	A.C. MILLER
		AOR	Ohio
	Class Of Airspace	Class-A	
		Class-B	
		Class-C	
		Class-D	
		Class-E	
		Class-G	Yes
System Description		Aircraft Type	
		Aircraft Type And Model Description Attachment	1
		Control Station Attachment	1
		Communications System Attachment	1
		List Certified Components (TSO) Attachment	1
		Other Attachment	0
Performance Characteristics		Climb Rate (feet/Minute)	590
		Descent Rate (feet/Minute)	250
		Turn Rate (Degrees/Second)	45.0
	Cruise Speed	Maximum	25
		Minimum	15
		Approach Speed	6
	Operating Attributes	Maximum MSL	3000
		Minimum MSL	0
		Gross Takeoff Wt	1.1
		Launch/Recovery Attachment	1
Airworthiness		FAA Type Certificate	
		If No FAA Certificate (Public Aircraft Only) Attachment	2

Procedures		Lost Link/Mission Procedures Attachment	1
		Lost Communications Procedures Attachment	1
		Emergency Procedures Attachment	1
Avionics/Equipment		Equipment Suffix Type	G
		GPS	Yes
		Moving map indicator (Command Station)	Yes
		Tracking capability	Yes
		TCA/MCAS	No
		ELT	No
		Transponder	No
		On	
		Off	
		Standby	
		Ident	
		Mode S	
	Mode C		
	Transponder Retuneable in Flight		
Lights		Landing	No
		Position/Navigation	No
		Anti-collision	No
		Infrared (IR)	No
Spectrum Analysis Approval		Data Link	Yes
		Data Link Attachment	0
		Control Link(s)	Yes
		Control Link Attachment	0
		Operations utilizing Radio Control (R/C) frequencies as described in Title 47 CFR 95	Yes
	NTIA/FCC Authorization Attachment	0	
ATC Communications	Transmitter VHF Band	VHF Band	No
		Quantity	
		In-Flight Retunable	No
	Transmitter UHF Band	UHF Band	No
		Quantity	
		In-Flight Retunable	No
	Transmitter HF band	HF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver VHF Band	VHF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver UHF Band	UHF Band	No
		Quantity	
		In-Flight Retunable	No
	Receiver HF band	HF Band	No
Quantity			
In-Flight Retunable		No	
Guard (Emergency) Frequencies VHF Band	VHF Band	No	
	Quantity		
Guard (Emergency) Frequencies UHF Band	UHF Band	No	
	Quantity		
Instantaneous Two-Way Voice	Direct to pilot	No	
	SATCOM	No	
	Relay via aircraft	No	
Electronic Surveillance/ Detection Capability		EO/IR	No
		Terrain detection	No
		Weather/icing detection	No
		Radar	No
		Other Attachment	0

		Electronic detection systems	No
		Electronic detection systems attachment	0
		Radar observation	No
		NAS Operational Capability Attachment	0
Visual Surveillance/ Detection Capability	Maximum Distance from UA	Vertical	350 Feet
		Horizontal	0.5 Nautical Miles
		Airborne based (Chase Aircraft)	No
		Ground based	Yes
		Visual observation from one or more ground sites	Yes
		Forward or side looking cameras	No
		Attachment for All	1
Aircraft Performance Recording		Flight data recording	Yes
		Control station recording	Yes
		Voice Recording	No
Flight Aircrew Qualifications	Pilots	Private (Written)	Yes
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	Yes
		Unique Trained Pilot Description	Completed the written portion of the private pilot's licensing ID: 50051120120460345 on 05/11/2012 from PSI Service LLC. Training completed by Paul Ziegler CFI# 2849115. Trained in the operation and maintenance of a 1.1 lb styrofoam electric sUAS, sensefly swinglet CAM, from sensefly LLC.
		DOD certified/trained	No
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	Passed 7/2012 by Dr. Bell a registered FAA medical examiner in Bowling Green, Ohio
		Duty Time Restrictions	No more than 8 hours duty per 24 hour day.
		Single UAS Control	Yes
		UAS Description	There is only one PIC and one Observer.
		Total Numbers of UAS Controlled	1
	Observers	Private (Written)	Yes
		Private (Certified)	No
		Instrument	No
		Commercial	No
		Air Transport	No
		Unique Trained Pilot	Yes
		Unique Trained Pilot Description	Completed the written portion of the private pilot's licensing ID: 50091320120466742 on 09/13/2012 from PSI Service LLC. Training completed by William J. Davis CFI# 3121815. Trained in the operation and maintenance of a 1.1 lb styrofoam electric sUAS, sensefly swinglet CAM, from sensefly LLC.
		DOD certified/trained	No
		Other Certified Training	Yes
		Trained on FAR Part 91 Requirement	Yes
		DOD Certified Training Attachment	1
		Medical Certification Class (FAA or DOD equivalent)	2
		Currency Status	Passed 7/2012 by Dr. Bell a registered FAA medical examiner in Bowling Green, Ohio
		Duty Time Restrictions	No more than 8 hours duty per 24 hour day.
		Single UAS Control	Yes
		UAS Description	There is only one PIC and one Observer.
		Total Numbers of UAS Controlled	1

Special Circumstances		Special Circumstances	<p>Swinglet CAM Operations will support highway mapping and construction projects and gathering photographic and video images over potential highway construction sites. The Ohio Department of Transportation will maintain control of the area beneath the flight path of the swinglet CAM thereby greatly decreasing the potential for damage or injury to persons or property beneath the aircraft if necessary.</p> <p>The size and weight of the swinglet CAM is approximately 2.5 feet (wingspan) weighing 1.1 pounds and consists mostly of foam construction. The size and construction minimizes the potential to cause any harm or damage in the event of a critical failure of the flight systems.</p> <p>Flight operations have redundant methods of communication to insure the PIC remains in control of the UA at all times. Computer data link and a remote control (manual flight) help mitigate any potential issues that may arise.</p> <p>The 8 rural counties of Northwest Ohio (District 2) are predominantly rural agricultural areas. These areas are very sparsely populated and the terrain is extremely flat and level thereby lending safe and efficient flight operations of this sUAS.</p> <p>This particular location is closed to the public due to construction until sometime in the fall of 2012.</p>
-----------------------	--	-----------------------	---

Flight Operations Area/Plan

Type	User Defin Point	Loc ID	Degree	Distance	Latitude	Longitude	MSL Ceilin	MSL Floor
USER DEFINED ARE 20 and 20A Bridge			1					
			2					
			3					
			4					

Total Map Attachment 3

Maximum	Minimum	ξ Radius	SUA Description		
	41-38-38.24N		84-34-16.60W	1110	960
	41-38-37.93N		84-34-08.59W	1110	960
	41-38-35.62N		84-34-08.75W	1110	960
	41-38-35.93N		84-34-16.76W	1110	960

19
19
19
19

6
6
6
6