Osprey-Steps to Success

APPLIED SATELLITE ENGINEERING

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STEP 1-IDENTIFY MOUNTING LOCATION AND POWER ASSESSMENT

The first step to getting your Osprey to perform is to identify the location and choice of Osprey. Here is a list of items to consider for the best choice.

External or Internal Antennas?

ANTENNA TYPE			
Use Indoors with External Antennas?	YES-Use Osprey "Bay"	NO-Use Osprey "TMC" with internal antennas	
Use Outdoors with Internal Antennas?	YES-Use Osprey "TMC"	NO-Use Osprey "BAY" with external antennas	
If using external antennas, identify cable length	Cable length for antennas will determine size	See user's manual for cable part numbers for distance	Choose appropriate cable and routing
Will the Antennas have a clear view of the sky?	Antenna type and location are fundamental to proper performance		
Will the Antennas have a clear view of the sky intermittently?	Some applications will have intermittent blockages	If intermittent blockages (such as tunnels, covered depots, et cetera, identify behavior	
What Power is available to the Osprey for continuous or recharging power	To charge the Osprey, at least +10VDC must be present. Keep in mind for cables that are longer than 2M.	(I-squared-R) losses become a factor in deciding DC Power and Cable length	Choose connection method. Cabling will be required.

STEP 2-DEFINING FUNCTIONALITY

The second step is define the functionality of the Osprey. This will be based upon what you need the Osprey to do and how it should behave.

FUNCTIONS			
Location Tracking?	Choose Mapping Service	Also important to understand the message reporting time	Weigh the reporting agains the cost of Satellite messaging.
Will Analog-to-Digtial (A/D) be used?	Identify external input.	Will conversion circuitry be needed?	Contact us for support, Cabling will be needed.
Will the Digital Inputs 1 and or 2 be utilized?	Identify external inputs, levels and behavior	Identify reporting or internal action to be taken	Contact us for support, Cabling will be needed.
Will the Digital Outputs 1 and or 2 be utilized?	Identify external inputs and levels.	External Circuitry may be needed.	Contact us for support, Cabling will be needed.
Will email notification alerts be needed for flags?	Choose method for email notification	Some 3rd Party Tracking platforms such as GAP have excellent email notifications to multiple parties, or groups.	

STEP 3-SELECT MESSAGING REPORTING DESTINATION

The third step is to select how and where the Osprey will be sending its reports.

Message Delivery Method?

MESSAGING DESTINATION			
Delivery to your email address	choose email address	strict messaging length, address, subject (IMEI) and proper settings with your Service Provider must be followed	See User's Manual for details on using email delivery methods.
Delivery to your enterprise server	see packet encoding in user's manual		
Delivery to the ASE Demo Server	see user's manual. SOAP or XML Interface	demo.ase-corp.com/ASE	Contact us for Support
Delivery to 3rd Party Mapping Service	Example GAP		We can help with a Demo Account. Contact us.
Identify email alert flags	Identify email addresses or groups	GAP provides excellent email alerts for individual and group email messaging	We can help with a Demo Account. Contact us.

STEP 4-ACTIVATION ON THE IRIDIUM NETWORK AND OTHER SERVICES

The fourth step is get the Osprey activated on the Iridium network.

Activate on Iridium Network			
ASE can help with Demo activation, Airtime and Service!			Contact us for Support
Choose Service Provider	Select Data Plan based upon expected messaging quantities,	Work through expected messages per day/month.	We can help you find the appropriate provider if needed.
Activate the Osprey using the IMEI number	Work with Service Provider		
Activate with 3rd Party Tracking/Notification Service	Optional.		We can help with a Demo Account. Contact us.

STEP 5-CONFIGURE OF REPORTING AND I/O THE OSPREY

The fifth step is to configure the Osprey for its behavior based upon reporting methods, times, digital and analog inputs and outputs.

Configuration of Reports/Digital I/O/AD

Configuration Method			
Configure with USB Port on Osprey		Use a Terminal Emulation Program such as HyperTerm or TerraTerm	Contact us for Support
Over-The-Air Method		This can use your enterprise server service, or 3rd Party Tracking Service	Contact us for Support
Configure using Online Configuration Tool		demo.ase-corp.com/OspreyClient/CreateConfig.seam	This tool creates a file that you can email to the Osprey.

STEP 6-TEST THE OSPREY EVAL SETTING (EVAL KIT)

Step 6 is to test the Osprey. **Make Certain it is fully charged and that the antennas have a clear view of the sky. The two largest problems we see with testing are these two items not being addressed properly!**

TESTING-MAKE CERTAIN FULLY CHARGED AND ANTENNAS HAVE CLEAR VIEW OF SKY

TESTING			
Test first using Report Queries to see if Osprey is responding.			Check that the reporting is valid and the Osprey is responsive.
Test to see that GPS is accurate			It is recommended that the GPS is accurate and validated.
Consider Changing the Configuration and validating the change took place			

STEP 7-PUTTING OSPREY INTO SERVICE (AFTER EVAL)

Once all six steps above have been completed, it is time to put the Osprey into service. Follow the steps below for successful operation.

In Service			
Make certain Osprey is fully charged.			This very simple step often results into lost time on-site
Make certain Osprey antennas have an excellent view of the sky	Mount the Osprey		This is the second most common problem with personnel trying to put into service while the Ospreys are indoors.
Make certain the Antenna Cables are the appropriate length.		This is only applicable to the Osprey BAY.	Contact us for Support
Make certain all the connectors are properly connected.		Also, if using +12VDC power, keep cabling distance short.	If using longer cable runs, ideally use higher Voltage (such as +24V)
Make certain the Osprey will have sufficient Power for application	Identify email addresses or groups	GAP provides excellent email alerts for individual and group email messaging	We can help with a Demo Account. Contact us.
Test the Osprey while in the field and verify with the appropriate personnel that the Osprey is sending reports	If in remote locations, consider taking a SatPhone with you to communicate.	Communication with the IT personnel (or other appropriate personnel) is key while in the field.	Contact us with help if needed.
Test the Osprey for Duplex Communication		Make certain device is receiving messages prior to putting into service.	This can be achieved by seeing that the device is active and reporting/ responding on the ASE Demo Server.

STEP 8-MAINTENANCE

A successful installation will also have a maintenance plan. If batteries are used, plan on replacing these every two years. Also consider and prepare for items like snow and ice build-up on the Osprey itself, or external antennas

MAINTENANCE			
Plan Maintenance over life of Osprey			Batteries will need replacing every two years.
Consider environmental issues.			Plan appropriately for Ice and Snow, or other environmental issues

Step Number	EVALUATION DEMO		IN SERVICE UNITS
1	Identify Mounting Location and Method	For the Osprey BAY (external antennas) this will be mounting of Iriidum/GPS Antenna as well as the Osprey itself.	
2	Define Functionality	Identify reporting times, or frequency, Digital Input and Output behavior, whether vibration will be used, et cetera	
3	Select Message Delivery Destination	Where will the messages be sent? What happens to the message once received	
4	Activate the Device on the Iridium network. Will other third-party services be needed?		
5	Configure (program) the device.		
6	*For Evaluation*, Test the Osprey (outdoors, or with antennas outdoors)		
7	Put into service		