Modular Payload Software Defined Radio (SDR) Assessment Event (AE) Q&A Telecon Transcript
15 August 2025

Note from Government team: If your organization has an SDR compliant to USSOCOM modular payload Version 5.1 standard, you can still submit to the AE for potential funding to become 6.1 compliant.

1. Are there specific open architecture SDR frameworks/APIs that the Government would like to see supported?
   The government is interested in seeing what industry has to offer. They are open to suggestions and are not looking for a locked-down radio, as they will have potential modifications/additions.

2. Is the Government willing to fund hardware modifications to an existing ModPayload compliant SDR to meet desired performance attributes?
   They don't want responses to come back saying "I can build you a mod payload compliant radio." They want something that's already mod payload compliant with version 6.1. that they can buy immediately. The assessment event will compare vendor offerings in which the government will down-select to a winner. The government will take the ModPayload compliant SDR from the winning vendor, put hands on to determine if any mods are needed at all, and then they'll go into a development effort based on that winning SDR.

3. Is there a specific device model or standard interface for external encryptor compatibility?
   As of right now, no. They have some low data rate or throughput ones that they might target. They can provide APIs for that one if that is the one that is targeted. For now, plan to load it using your standard DS 101 load.

4. To what extent will the government be assessing the ease of porting waveforms to the SDR? What about the current availability of waveforms on the SDR?
   For the ease of porting waveforms to the SDR, what they're trying to avoid is large multi-million-dollar development efforts to make your radio compatible to run that waveform or for your architecture to be locked down. They want the ability to run that waveform without large development efforts. They know that there will be some type of effort required on the winning vendor to get those waveforms onto the radio, but again, they just don't want a lockdown architecture that prevents that. Regarding current availability of waveforms on the SDR, if you have current waveforms on your SDR, then yes, just include that in your submission, what waveforms you're already running natively on your SDR, and they can assess from there. Assessing the ease of it too is just making sure that you have well defined documentation APIs and the ability to port to it.

5. What waveforms, security protocols, and interoperability standards are foundational for SDRs in SOCOM's current and future tactical communication architectures?
   As of right now they're not targeting all their legacy waveforms and everything on this, the waveforms that were listed on the event webpage are all that they're targeting at this point and they want it open to put future ones in there and ask you to refer to the mod payload standard 6.1 for a lot of those questions because that's really what they're looking at is a currently available mod payload standard compliant radio that they could purchase immediately and then go into an effort with.

6. How is SOCOM integrating modular payloads and SDRs across its platforms, and what is the preferred acquisition approach and timeline?
   The mod payload standard is going to cover group one through three UAS and they're going to want it to cover combatant craft mediums. Regarding integrating its platforms, the platforms are already built to take on mod payload standards, which is why the standard was written. So having a radio within the mod payload standard streamlines that integration process and minimizes the amount of development on that platform required to integrate. Regarding the preferred acquisition approach and timeline, the timeline and acquisition right now is dependent on this assessment event. They have to see what's out there to determine how they're going to approach getting it to where they need it or how close it is to that finish line already. So, it's more of a discussion they'll have to have later, especially after the assessment event when we accomplish our down selection.

7. What support does the industry need to provide for mod. SDR integration regarding documentation, validated waveforms, and technical assistance?
   Ensure you are documenting all of the interfaces, whatever is needed, how data is moving across from one processor to another, how you are tapping in and controlling your RF front end, how you are standing up a networking stack to get data in and out of the radio. If you have waveforms already on there, then any kind of validation, certifications, or testing reports are good. If there are waveforms that they're going to put on there, the government team will handle the validation of those waveforms.

8. There are deviations listed in mod payload standards 6.1. Will those deviations listed within 6.1 being considered for this assessment?
   Yes, those will be considered as long as it meets the requirements of mod payload 6.1 as a standalone without any further development on your end and readily available, then it will be assessed during the event as a potential candidate.

9. What resources are available to assist industries in navigating the process or ensuring the desired waveforms can be ported onto the SDR?
   The government has partnered with the Naval Integration Warfare Center, NIWC. They have some other partnerships for this effort and will have government representation for the engineering side to programmatically assist with anything related to developmental efforts regarding waveforms. So, there will be assistance on both sides of the house.

10. What strategies are being pursued to integrate new SDR waveforms and security protocols into tactical networks and address interoperability challenges?
    This is not applicable to the Assessment Event. This is more of a tactical communication strategy. Specifically, regarding mod payload, this is our strategy. The Assessment Event is to find open architecture, mod payload standard compliant, SDR that can port the waveform. If you adhere to the ModPayload standard on the webpage, then there shouldn't be any interoperability challenges.

11. What design innovations or trade-offs are prioritized to maximize performance, functionality, and power efficiency within the 1U Mod Payload SWaP envelope?
    Power consumption is high on the list, especially since it's targeting UAS. Overall processing power and performace of the radio, transmit power, the amout of power you can push out of

the radio.

12. What emphasis is being placed on optimizing thermal management, RF performance, counter EW measures, and ruggedization for various operational environments?
    Refer to the mod payload standard 6.1. which talks about all the thresholds you need to stay within and under. As far as performance and counter EW measures are concerned, that is not really in the scope of this effort, as those will be handled at a waveform or processing level.

13. Recognizing that some tweaks may be needed to an existing platform, what is the timeline to demo the capabilities listed in requirements?
    The government is looking for the ability to demonstrate the currently available mod payload compliant SDR in the Assessment Event. They will use the Assessment Event to inform them during the down select process and then choose who best meets the requirements to move forward with. So, the timeline to demonstrate would be 28-30 October 2025.

14. What is the expected quantity for platforms that meet the requirements?
    There is not a specific quantity at this time. This is something they would be able to discuss with the downselected vendors.

15. Is there interest in associated technologies for testing or just SDRs for their payloads? Also, who are the appropriate POCs if we have any further questions.
    The only thing they are interested in for this specific event is a mod payload compliant 6.1 software defined radio that is TRL 7 or higher. As far as questions, please reach out to Kristen Foraker, the Event Coordinator at SOFWERX, who would be happy to forward technical questions to the government stakeholders.

16. If we have a TRL 7 small SDR that could fit the needs here but is not compliant with the modpayload standard yet, is that worth submitting?
    We would not recommend submitting it as it would not likely move through the downselect process.

17. May have missed it, but is this limited to 1U ModPayload SDRs?
    Yes, it is.

18. What is your plan if no MP SDR's are available that meet your needs?
    The government is not anticipating that as the market research shows there are mod payload standard SDRs that are available for purchase right now. If not, then they will take that into account when doing the assessment and downselect.

19. What are some key performance parameters or requirements regarding encryption? For a communications payload for example.
    They are planning for the encryption to be external. So, no key performance parameters or requirements regarding encryption.

20. When you say 2 full transceivers, is that 2 channels that can be in one of the following configurations: 1R/1T, 2R, 2T ?
    Yes, the two channels should be able to operate fully independently.

21. What about a situation where an SDR meets most, but not all reqs. Would you fund the advancement?
    If the SDR meets the mod payload standard 6.1 and the government determines after the down selection that they want some extra capabilities, they will fund that advancement, but they are not looking to fund a capability to become mod payload compliant.