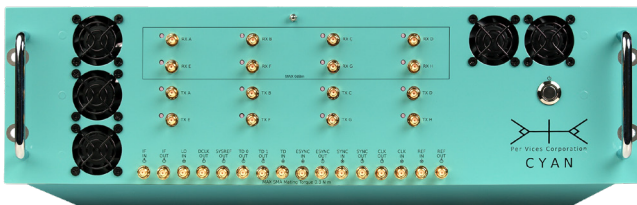


# PRODUCT SHEET

Per Vices Corporation  
High Performance SDR for Radar Systems

## What is SDR?



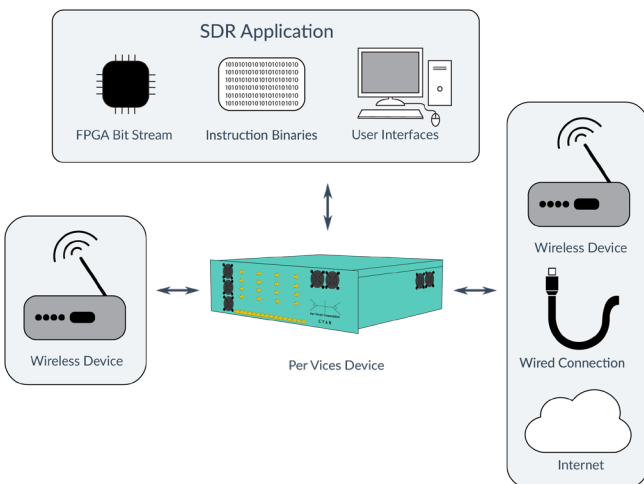
### OVERVIEW

Software Defined Radio (SDR) is an RF solution that may include transmit capability, receive capability, or both. For transmit, waveforms are generated in software, then passed through a DAC to a flexible Radio Front End (RFE) before transmission. Conversely, for receive the signal passes from the RFE, through an ADC, to the software to be decoded.

Use of a DAC or ADC allows waveforms of any frequency (up to the limit of the converter) to be generated or interpreted. This wide and flexible tuning range is just one of the benefits of SDR over traditional radios, where only narrow band operation is available.

High resolution ADCs contribute to high dynamic range in SDRs. The processor is capable of computations for multiple DSP channels, so that several independent transmit and receive channels are contained in one SDR.

### WHERE WE FIT IN YOUR APPLICATION



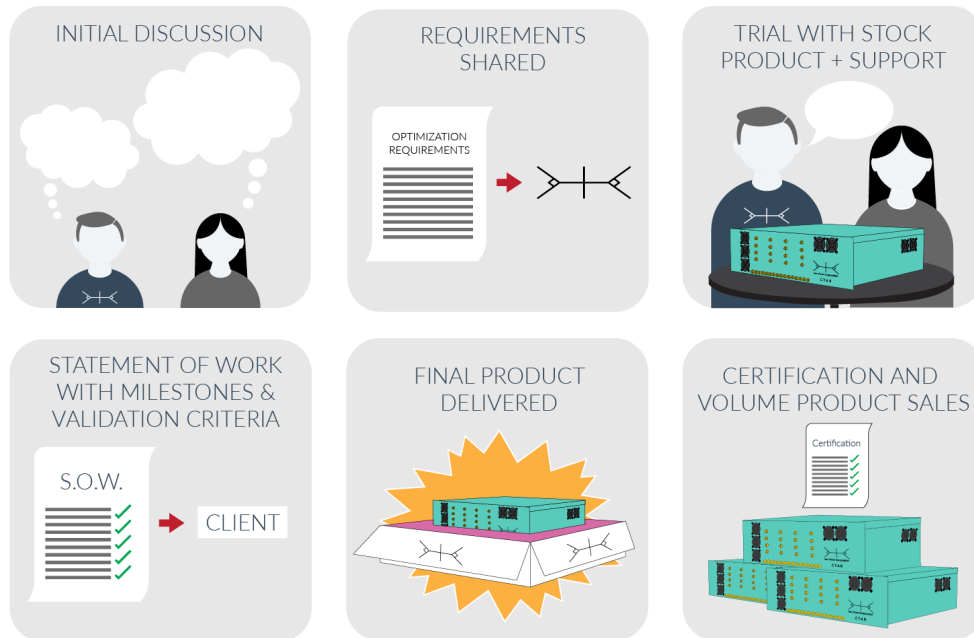
### KEY INTEGRATION VALUE

The wide frequency tuning range of SDRs allows one platform to be integrated into multiple products, reducing development time and support burden. The high dynamic range of SDR allows discrimination between two close returns with different radar cross sections. SDRs multiple independent transmit chains allow beam forming, to enable directional transmit and receive capabilities without mechanically rotating antenna.

### END CUSTOMER BENEFITS

The wide frequency tuning range of SDRs enables a radar to operate in multi-band or multi-mode increasing the radar operator versatility. Discrimination between two close returns with different radar cross-sections allow radar operators to identify targets more accurately. Using multiple fixed antennae for beam forming can reduce mechanical complexity and remove a potential failure point. The integration of multiple independent channels in a single SDR allows beam forming with a less bulky total radar system, which may be transported easily or integrated into a vehicle.

## PER VICES COLLABORATIVE PROCESS



## WHAT WE NEED FROM YOU

- RF parameters to be followed. We offer customization options such as low phase noise reference crystals. To ensure your technical requirements are met, we offer custom product tests to be carried out on each unit - in addition to standard tests - before delivery.
- What function we are responsible for. For example: all equipment specification and purchasing, site setups, only our radios, etc.
- Timelines and priorities. Most of our solutions are COTS products with very short lead times, however, if you need something optimized for your project, we will work with you to meet the timelines and goals you set for the project. We will also discuss the priorities of the project as they relate to costs and performance to ensure you have exactly what you need within your given budget.

## WHAT TO SHARE WITH US

- The most important things we need are the performance requirements that you are looking to

hit so we can ensure that we can provide an effective solution meeting your RF performance, digital resource requirements, digital backhaul, number of channels, and form factor. During these discussions we will also discuss timelines and goals for the project as they relate to optimizing for lower immediate costs vs. unit costs, volumes, timelines, and support.

- All of this information helps us make sure that we are providing you with the solution best matching your needs while managing your own risks associated with new projects.

## WORKING TOGETHER

Please contact us at [solutions@pervices.com](mailto:solutions@pervices.com) to learn more about how we can help you. Following our initial discussion, our team will support you throughout the whole process, from a trial with a stock product, to developing out specific requirements for a statement of work, all the way to the volume integration for a certification stage. Our sales engineers work with you each step of the way to ensure it's a smooth and easy integration of our product into your systems.