ARKA

SOFTWARE RANGE RECEIVER (SRR)

Telemetry receiver for processing range / launch telemetry data

Digitizes in hardware and radio processing in software

Features AGC, LDPC, Reed-Solomon, and more

FEATURES

CAPABILITIES
The Software Range Receiver (SRR) is a software telemetry receiver that can interface at a Radio Frequency (RF) or Intermediate Frequency (IF) to process a wide array of range / launch telemetry data.

TRUE SOFTWARE RECEIVER
The SRR's processing algorithms (including modulation/demodulation and Forward Error Correction (FEC)) are implemented entirely in software, making the system a true software receiver.

FEATURES
Features include an Automatic Gain Control (AGC), Turbo and Reed-Solomon (RS) FEC, Low Density Parity Check (LDPC), RS, Viterbi, Telemetry over IP (TMoIP), sample record and playback, and telemetry record and file playback.

THE POWER OF SOFTLINK®
ARKA systems are built on SOFTLINK, our flexible and configurable software-defined architecture. SOFTLINK leverages a vetted library of modular, scalable software applications (Apps) and services to tailor and evolve system capabilities with minimal risk and cost.

BUILT-IN TOOLS
The SRR offers a suite of intuitive tools to customize, monitor, troubleshoot, test, and analyze mission-critical data. Tools include Additive White Gaussian (AWG) noise generation; a spectrum analyzer to assess and measure power levels, purity, frequency offsets, C/N0, distortion, and interference; data viewers to monitor raw telemetry data; I/Q sample recording and analysis; I/Q Constellation diagrams to test the quality of a signal; TestExec™ to automate testing, a UI editor to customize the user interface, and inSIGHT Analytics to collect, store, and visualize data to provide an in-depth look—real-time and historical—at how your data moves through your system.

VIRTUAL AND CLOUD DEPLOYMENTS
When Apps are deployed in the Cloud, they can be hosted in VMs or orchestrated in containers— Interoperating across network boundaries. Multiple instances of these environments can exist simultaneously in various locations to provide resilient, fail-safe solutions. What's more, Apps are "Cloud agnostic," allowing them to perform seamlessly across Cloud platforms.

OPTIONS

RECEIVER SOFTWARE			
Operational Waveforms:			
BPSK / PM	QPSK	GMSK	UAQPSK
BPSK / FM	FSK	PCM/FM	SQPSK/OQPSK
BPSK	FSK/AM	PCM/PM	SOQPSK
Custom Waveforms:			
Ask about your waveform.			

RECEIVER SOFTWARE CONT.	
Record and Playback:	**Test:**
Ch10, Proprietary, or Raw	Channel Emulation
Analog Sample	Noise Injection
BASEBAND PROCESSING	
Randomization/Scrambling	FEC (Viterbi, RS, LDPC, Turbo, BCH, CRC)
RS-422/TTL/ECL/LVDS	Frame Sync
PCM Codes (NRZ-L/M/S, BIO-L/M/S, RNRZ-L)	

RECEIVER FREQUENCIES
70 MHz
L-Band
S-Band
Ask about additional bands. RF options may be combined.

BEYOND BEGINS HERE

AT-H9999-CORP-0347 V1

INTUITIVE AND CONFIGURABLE USER INTERFACE

RECEIVER OVERVIEW WINDOW

The SRR features an **intuitive** and **user-configurable** web-based User Interface (UI). Use the Overview window to **control and status** how data is flowing through the system and **drill down** into detailed parameters. The flow of data is visually represented using component blocks, arrows, and status indicators.
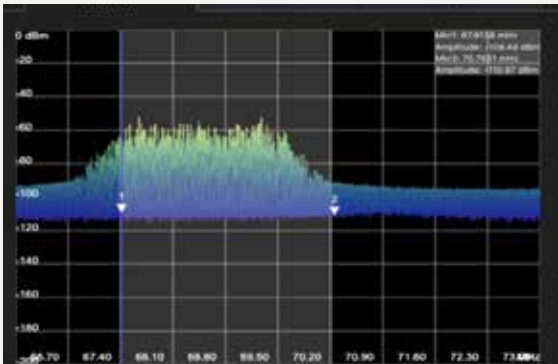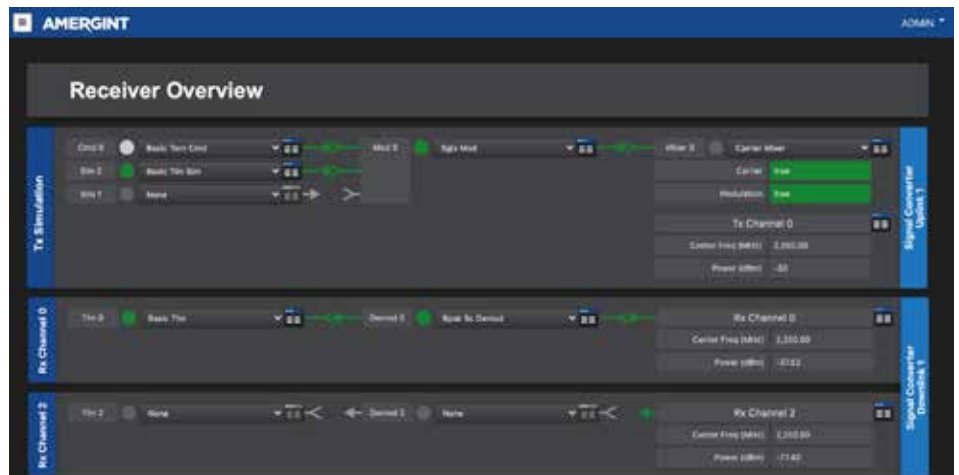
SPECTRUM ANALYZER

Use the **fully functional** internal spectrum analyzer to find a signal's peak, make marker-delta measurements, and measure the band power and noise density of your data.

IQ CONSTELLATION DIAGRAM

The IQ Constellation Diagram is a graphical representation of the demodulated received signal. The tool is particularly useful tool for **system design** and **debugging** because it allows you to **quickly and visually** determine system properties, such as modulation type, signal-to-noise ratio, carrier lock, symbol lock, carrier phase offset, and symbol jitter.
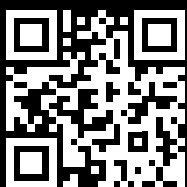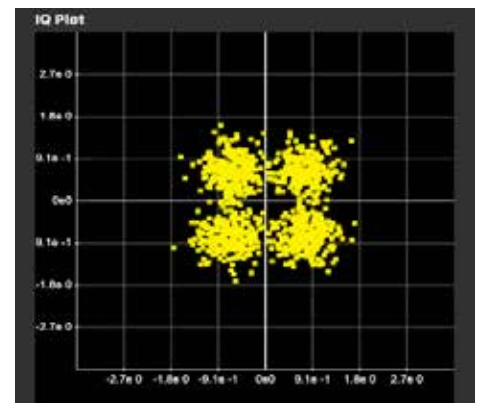
FOR ADDITIONAL INFORMATION:

2315 Briargate Pkwy., Suite 100
Colorado Springs, CO 80920 USA

Tel: 719-522-2800 | Fax: 719-522-2810

in **arka-group-technologies**   🌐 **www.arka.org**

AT-H9999-CORP-0347 V1