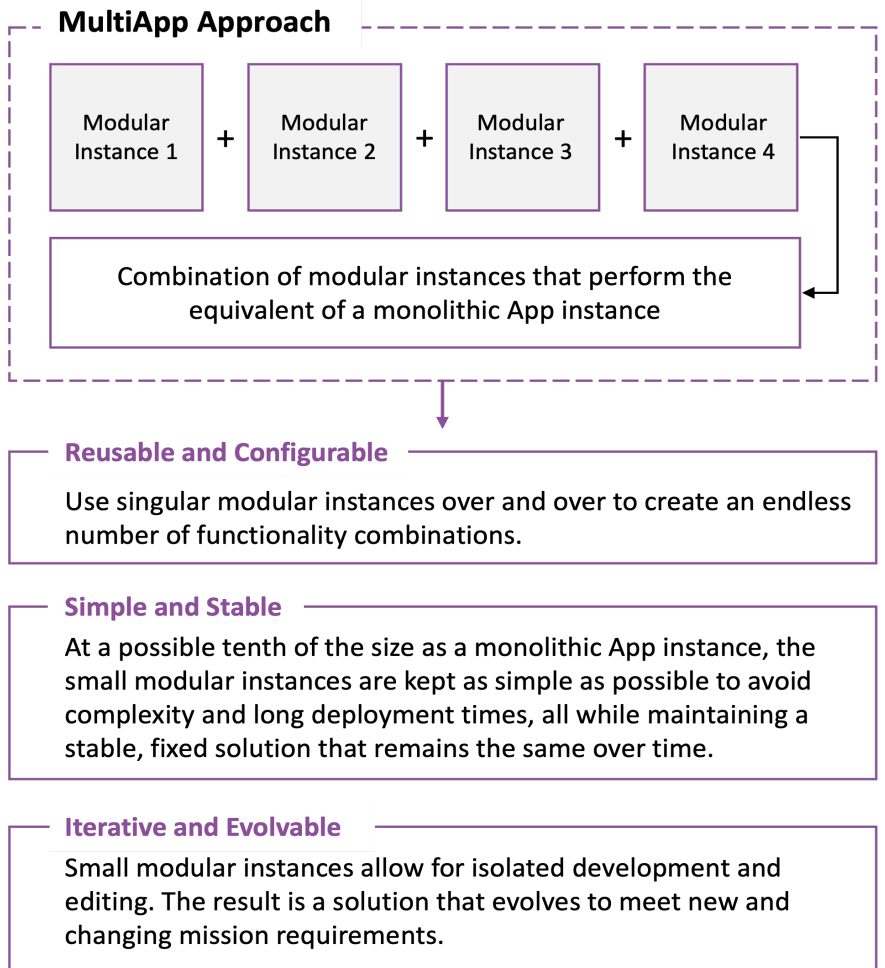# MULTIAPP MODEM

THE MULTIAPP MODEM IMPROVES YOUR SYSTEM'S RESPONSE TIME

MultiApp modem developed by ARKA, is a highly customizable, evolvable modulation and demodulation solution built using our flexible SOFTLINK® framework. In comparison to the traditional monolithic application (App) structure in which the framework is built on layered dependencies that require an increased number of resources, additional testing, and longer integration and turnaround times, the MultiApp structure breaks Apps into smaller, pre-developed modular solution instances. The MultiApp instances are a tenth of the size of a traditional monolithic App, resulting in a dramatically reduced time for application start up and transition as well as a quicker turnaround time and rapid deployment.

Our set of pre-developed Apps are operationally proven—we support Telemetry, Tracking, and Commanding (TT&C), in-band telemetry and commanding, and payload processing—with the capability to continue enhancement as needs evolve. Each modular App instance is delivered with complete documentation, testing, and user interface functionality for a stable, accessible, and powerful solution.

MultiApp Approach

Modular Instance 1 **+** Modular Instance 2 **+** Modular Instance 3 **+** Modular Instance 4

Combination of modular instances that perform the equivalent of a monolithic App instance

Reusable and Configurable

Use singular modular instances over and over to create an endless number of functionality combinations.

Simple and Stable

At a possible tenth of the size as a monolithic App instance, the small modular instances are kept as simple as possible to avoid complexity and long deployment times, all while maintaining a stable, fixed solution that remains the same over time.

Iterative and Evolvable

Small modular instances allow for isolated development and editing. The result is a solution that evolves to meet new and changing mission requirements.

satTRAC CHASSIS:	satTRAC 70	satTRAC S/L	satTRAC S/L WIDE	satTRAC 1200	satTRAC S/L + 1200
Frequency	70 MHz	S/L	S/L	1200 MHz	S/L up S/L down 1200 down
Uplink Outputs	1	1	1	1	1
Downlink Inputs	1 or 2	1 or 2	1 or 2	1 or 2	2
Channels Per Input	1 or 2	1 or 2	1 or 2	1 or 2	1
Downlink Bandwidth	12 MHz	12 MHz	12 MHz, 24 MHz, 30 MHz	12 MHz, 24 MHz, 30 MHz, 60 MHz, 123 MHz	S/L: 12 MHz, 24 MHz, 30 MHz 1200: 12 MHz, 24 MHz, 30 MHz, 60 MHz, 123 MHz
Low/High Rate	Low	Low	Low	One High Rate Channel in 2 Channel Systems Only	Low on S/L and High on the 1200

View our Modem and Cloud Datasheets for more information.

WAVEFORMS:

- BPSK Direct
- BPSK Subcarrier
- GMSK
- MPSK High Rate - BPSK, QPSK, 8PSK
- PCM / FM
- PCM / PM
- QPSK
- QPSK Subcarrier
- SGLS
- SOQPSK
- TDRSS
- UAQPSK
- UAQPSK Subcarrier
- USB

BASEBAND COMMANDS:

- Basic Binary CMD
- Basic Ternary CMD
- Innoflight HDLC CMD
- TC Transfer Frame CMD
- TC Sync & Coding CMD

BASEBAND TELEMETRY SIMULATIONS:

- Basic TLM Sim
- CCSDS AOS Transfer Frame TLM Sim
- CCSDS LDPC TLM Sim
- SCN TLM Sim
- TM Transfer Frame TLM Sim
- Viterbi PCM TLM Sim

BASEBAND COMMAND ECHO APPS:

- Basic Binary CMD Echo
- Basic Ternary CMD Echo
- Innoflight HDLC CMD Echo
- TC Sync & Coding CMD Echo
- TC Transfer Frame CMD Echo

RANGING:

- CCSDS PN Ranging
- SGLS Ranging
- Tone Ranging

BASEBAND TELEMETRY:

- Basic TLM
- CCSDS AOS Transfer TLM
- CCSDS TLM
- Innoflight HDLC TLM
- SCN TLM
- TM Transfer Frame TLM
- Viterbi PCM TLM

MIXER:

- Carrier Mixer
- Carrier Mixer Channel Emulator
- Carrier Mixer Channel Sim
- Carrier Mixer Doppler Compensation
- Carrier Mixer TDRSS

SERIAL INTERFACE:

- MFDM Gateway
- MFDM2 Gateway

RECORDER:

- Five Channel Recorder
- Sample Recorder & Player

FOR ADDITIONAL INFORMATION:

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