ARKA

DIGITAL / RF DRAWER

2U Drawer for Monitor and Control

Digital / RF

Power

Attenuation

Frequency Conversion

FEATURES

CAPABILITIES:

ARKA's second generation Digital / RF Drawer is a configurable 2U network appliance drawer to monitor and control digital and RF components, including switches, attenuators, frequency synthesizers, amplifiers, and active mixers.

CONFIGURABLE DRAWER AND CUSTOM PANELS:

The drawer features a standard back compartment to house the removable Interface Controller (for Ethernet), Connector Interface Board, and Power Supplies. The front compartment is reserved for customer-specific components. Custom front and back panels are assembled for each configuration.

DIGITAL POWER SUPPLIES:

The Digital Power Supplies are used for RF components where the output signal is not in the RF path (for example, mechanical relay type coaxial switches and attenuators). Three supplies are available: 12V – 12VDC @ 5A maximum, 15V – 15VDC @ 4A maximum, 5V – 5VDC @ 3A maximum.

RF POWER SUPPLIES:

The RF Power Supplies are used for RF components in the direct path of the RF signal. The power supplies have very low noise for sensitive components, such as frequency synthesizers, amplifiers, active mixers, and solid state attenuators. Four supplies are available: 12VRF – 12VDC @ 3A maximum, 8VRF – 8VDC @ 3A maximum, 5VRF – 5VDC @ 1A maximum, 5.5VRF – 5.5VDC @ 1A maximum.

POWER DOMAINS:

Four Power Domains are available to help the Digital Supplies control inductive loads and suppress any back generated electric and magnetic fields. Each can be programmed for 5V, 12V, or 15V

INTERFACE SIGNALS:

78 discrete interface signals are available to control devices: 48 high current digital outputs (source/sink 400 mA each), 32 Digital Inputs (28 V tolerant)/Outputs (5 V), and 4 independent Serial Peripheral Interfaces (SPIs) with 2 CS signals each. A total of 8 SPI devices can be controlled.

REMOVABLE INTERFACE CONTROL PANEL:

A removable Interface Controller is provided for Ethernet; it can be quickly removed for sanitization and replacement.

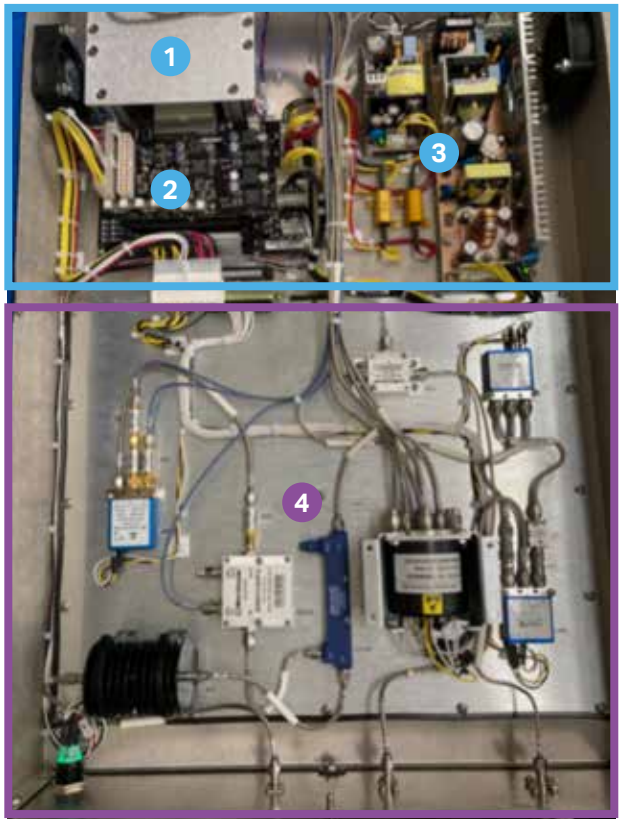
RESTful INTERFACE:

The interface features HTTPS transport for status and updates, simple JSON payloads, and a self-describing API end point for returning static information on available targets / software devices (SwDs), parameter types, descriptions, defaults, and ranges.

TWO-PART API:

A common two-part API is available across all drawers, allowing for a common management schema. The standard system schema defines how to interact with standard SwDs. The drawer-specific schema contains the custom SwDs and targets.

INSIDE THE DRAWER



STANDARD COMPONENTS (BACK)

1. **INTERFACE CONTROLLER:** Connects the Digital/RF Drawer to an Ethernet network to allow the drawer to be connected to (and remotely control and statused by) a server residing elsewhere on the network.
2. **CONNECTOR INTERFACE BOARD:** Link between the Interface Controller, Power supplies, and customer specific components. Supplies power to control and monitor all customer specific components
3. **POWER SUPPLIES:**
   - **THREE (3) Digital Power Supplies are available:** 12V - 12VDC @ 5A maximum, 15V - 15VDC @ 3A maximum.
   - **Four (4) RF Power Supplies are available:** 12VRF - 12VDC @ 3A maximum, 8VRF - 8VDC @ 3A maximum, 5VRF - 5VDC @ 1A maximum, 5.5VRF - 5.5VDC @ 1A maximum

CUSTOMER SPECIFIC COMPONENTS (FRONT)

4. Completely custom; this configuration shows a simple RF drawer. Available plate size 12" depth x 16" width. 1 or 2 layers.

CUSTOM FRONT AND BACK PANELS

SAMPLE FRONT PANEL

SAMPLE BACK PANEL

Custom front and back panels are assembled for your specific configuration.

FOR ADDITIONAL INFORMATION:
2315 Briargate Pkwy., Suite 100
Colorado Springs, CO 80920 USA
Tel: 719-522-2800 | Fax: 719-522-2810
arka-group-technologies www.arka.org

ARKA