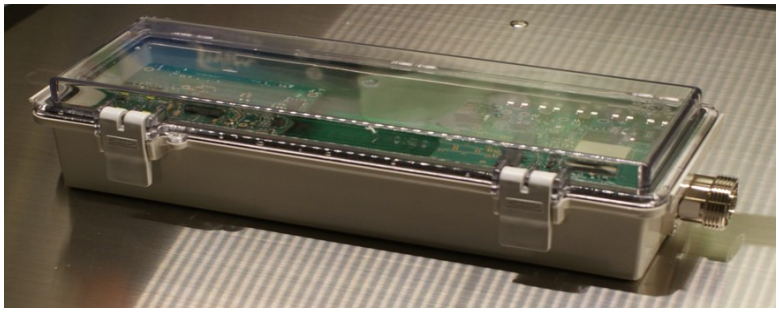
UG23-009 *Smart Digital BDA*



This VHF/UHF BDA is built on cutting edge SDR technology and provides a quantum leap in performance and features compared to legacy BDA designs, and can support both analog and digital modes 2 way radio modes, FM broadcast radio , as well as LTE modulation up to 30 MHz wide .

It can improve traditional leaky feeder communications by means of channel regeneration, noise floor suppression, distance to fault, and advanced remote diagnostics such as spectrum analysis

In addition to regeneration, noise floor blanking and audio/signal insertion , the device supports frequency/channel translation.

The VHF BDAs can be spaced 1000 meters per amplifier with the –DX option.

Access to the maintenance functions are via head end modem or by Bluetooth connection when in close proximity. Web-browser control and configuration, as well as SNMP management is provided for

7-16 DIN connectors are used which are robust, tolerant to dirt and water, large and so can be assembled with gloves on, virtually pull-out proof and best of all a standard communications connector. UHF systems will use native 7-16 DIN while VHF systems will generally use our easy-clamp yellow VHF leaky connector which the cable will stretch before the connector lets go.

A unit to unit over-the-cable maintenance network provides means to segment the leaky feeder, and carry traffic simultaneously with comms traffic.

These units can be mixed with existing BDAs of all types as a means to improve existing system performance and reliability.

An SFP ethernet interface is an available option to augment insertion.

These BDAs are designed and build in Australia at our facility. Both electronics and metalwork are fabricated locally providing complete control over software and hardware, and a high Australian content . All parts used are sourced from official licensed distributors.

Specifications UG20-009 Smart Digital BDA

External :
RF Interface : 7-16DIN
Power requirement : 11 to 36 V input
Power consumption : Typical 9 Watts (std) 15 watts (DX)
Enclosure : Polycarbonate
Weight : approx 700 g
Normal operating ambient temperature : -20 to +55 C
Startup boot time : Less than 3 seconds.

RF performance, typical deployed configuration :

Radio frequency range
- 150/170 or 445/470 std underground mining ,
- other bands and splits on request.
Bandwidth : Up to 30 MHz TX or RX
Dynamic Range , 12.5kHz communications grade, > 90dB
Maximum RX Input : +10dBm (limiter)
TX output power : +20dBm standard, +30dBm –DX

Interaction interfaces :

Bluetooth local and up-the-cable telemetry, Ethernet SFP (option)

Options : -HPA, -SFP

Sold and supported by Strata Products Worldwide

Designed and Manufactured in Australia