

Features:

- L-Band, Upper L-Band, S-Band or 400 MHz Band Tuneable Receiver
- Provides a baseband analogue output signal
- Provides an Automatic Gain Control output voltage proportional to the received signal strength
- Programmable Centre Frequency
- Programmable Deviation Sensitivity
- Programmable Baseband Filter
- Programmed through the USB connection to a host Windows PC with the Apollotek GUI software provided
- Settings are stored internally and are automatically loaded when unit is powered
- Can be Powered from an external 5 Volt DC Power supply or from a Host PC through the USB2 port for set-up
- Signal Strength Lock Indicator threshold set to approximately -70 dBm as standard.
- Rugged Flanged Base Construction
- Other modules in the Apollotek USB range include Receivers with integrated Bit Synchronisers and Decommutors, Bit Synchronisers with integrated Decommutors and also stand alone Bit Synchronisers, Demodulators and PCM Simulators



The Apollotek APK8766-I is one of the products in the Apollotek USB range of Telemetry Receivers, PCM Bit Synchronisers, Decommutors and PCM Simulators. The APK8766-I Unit is designed to be powered from a single external 5 Volt power supply.

The APK8766-I provides a tuneable S-Band or L-Band Receiver with a buffered analogue baseband output signal. The unit is designed to operate remotely from the host PC and the buffered analogue output is designed to drive the signal over long distances. As an option, analogue optical fibre transmitters and distant end optical fibre receivers with analogue voltage outputs can be provided.

The programmed settings are stored in non-volatile memory which are automatically loaded when the unit is powered.

The APK8766-I Unit is packaged in an aerospace grade aluminium box which is black anodised for environmental protection.

The APK8766-I uses proprietary Apollotek developed analogue and digital signal processing techniques to extract the baseband analogue signal which is provided as an output from a connector mounted on the side of the unit.

The Receiver centre frequency and deviation sensitivity are programmed through the USB port from a host computer using Apollotek set up software provided with the unit.

Initialisation and receiver status indication is provided on the unit through multicolour LED displays. Status indication is also provided by the set up software supplied with the unit.

USB RECEIVER SPECIFICATIONS

Electrical and Performance Specification

Receiver Tuning Ranges:	Specify: a 200 MHz range in L-Band, Upper L-Band, S-Band, NATO E-Band. Specify a 50 MHz tuning range in the 400 MHz band
Receiver Sensitivity	Better than -75 dBm sensitivity. Red LED indication when the received signal strength drops below approximately -70 dBm
IF Frequency	Single down conversion to a 220 MHz IF which is digitised
Baseband Analogue Output	Output Voltage can be set up to ± 1 Volt peak to peak A baseband Filter cut-off up to 7 MHz can be set
AGC Output Signal	Logarithmic analogue voltage output range of nominal 0 to 1 V
Input and Output Signal Connectors	SMA RF female socket Input Connector. A simple Stub Antenna is provided with the unit. BNC Output Connector for Baseband Analogue Output Circular Hirose type connectors for programming and external power
Software	Supplied with GUI based Set Up Software to enable selection of: Centre Frequency, Deviation Sensitivity, Baseband Filter

System Interface Specification

Interface Type	USB 2 Bus. Backwards compatible with USB 1 ports
Power Requirements	Within USB Bus Hub power output limits

Mechanical Specification

Overall Size	147 mm long (including flanges) by 66 mm wide and 40 mm high
Manufacturing Processes	Surface mount internal PCB technology Flanged Base black anodised aluminium box packaging

Operational Environmental Specification

Temperature	-10 ^o Centigrade to +70 ^o Centigrade
Humidity	0 to 90% non-condensing

Non-operating

Temperature	-25 ^o Centigrade to +90 ^o Centigrade
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