

## Data sheet

# SKYLINK

SKYLINK is the unique video relay service provided jointly by QinetiQ and Lions Air, which allows transmission of live digital or analogue video to a ground receiver via a PILATUS PC-12 plane, flying at an altitude of up to 10km.



PILATUS PC-12 aircraft

SKYLINK utilises a unique, phased array antenna technology developed by QinetiQ, which automatically acquires and tracks mobile video transmitters.

### SKYLINK Antenna Head Unit (AHU) Specifications

Frequency bandwidth	2.4 to 2.6 GHz
Antenna gain	+13 to +18 dBi (scan angle dependent)
Receiver noise figure	+4 dB
Receiver sensitivity	-108 dBm to 10dB SNR
UHF Output	576 to 776 MHz, -70 to -10 dBm
Size	560 x 380 x 80 mm
Weight	5 kg
Power requirements	+ 5 V supplied by BFU
Environmental	- 40° to + 80° Celsius



Antenna Head Unit

The antenna head unit is housed in a low profile enclosure that fits directly to the underside of the PILATUS PC-12, and has minimal impact on the aerodynamics of the airborne platform.



AHU attached to the underside of a PC-12

The AHU itself is detachable to enable easy implementation of product upgrades and maintenance, and safe storage when not in use.



Quick disconnect panel on underside of PC-12

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## SKYLINK Beamformer Unit (BFU) Specifications

Scanning	2D scan covering $\pm 70^\circ$
Size	4U 19" rack
Weight	8 kg
Power requirements	+ 22 to +30 V DC input 55W (without AHU) 70W (with AHU)
Environmental	- 10° to + 60° Celsius

The beamformer unit is rack mounted, and fitted inside the pressurised cabin.



Beamformer Unit

## SKYLINK Fixed Frequency Source (FFS) Specifications

Frequency	1824 MHz
Size	1U 19" rack
Weight	3 kg
Power requirements	+12V, 35W (powered via one BFU)
Environmental	- 10° to + 60° Celsius

For eight antenna systems, only one fixed frequency source is required to supply an ultra low noise reference signal for frequency conversion.



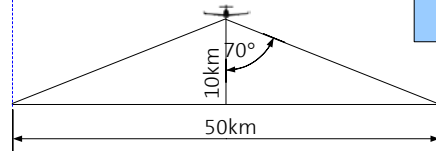
Fixed Frequency Source

## Capabilities of SKYLINK

SKYLINK began its operational use on a PILATUS PC-12 in April 2003. The scanning range of the antenna in both axes is  $\pm 70^\circ$  providing up to 2000km<sup>2</sup> of coverage.



PC-12 @ 10km  
50km circular  
footprint



## Key Benefits of SKYLINK

- Reliable electronic tracking without GPS
- No update delay for fast moving platforms
- Supports analogue and digital video
- No moving parts for high reliability and low maintenance
- Multiple beam upgrade path can support many more links without any increase in external hardware

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