

# RFeyeSystem

## Stormcase 100-18

### Man-portable spectrum monitoring system



**Mission-ready integrated solution for stand alone spectrum surveillance and mobile monitoring operations.**

The RFeye Stormcase 100-18 is a man-portable integrated system designed for easy mobile spectrum monitoring from a fully autonomous and ruggedized stand alone unit. Built into a tough storm case, the system includes a Node 100-18, internal and external antenna ports, high performance rechargeable battery and integrated SSD memory for high volume data collection during mobile field operations.

Embedded data logging software applications are typically pre-programmed with the required measurement profile prior to deployment, allowing autonomous spectrum surveillance and surveying operations to be performed by non-technical personnel where necessary. Data is visualized and analyzed post-survey using RFeye application software. In addition, any mobile computing device with a web browser can be connected for real-time monitoring of signals during the survey using embedded RFeye Web Apps software.



# RFeyeSystem

## Stormcase 100-18 Specifications

### Receiver

Integrated receiver 1 x Node 100-18

### Frequency

Range 9 kHz to 18 GHz

### Noise figures at maximum sensitivity

9 kHz to 0.12 GHz 12 dB typical

0.12 GHz to 6 GHz 8.5 dB typical

6 GHz to 10 GHz 10.5 dB typical

10 GHz to 18 GHz 13 dB typical

### Phase noise

Receiver input at  $\leq 0.5$  GHz  $\leq -125$  dBc/Hz at 20kHz offset

Receiver input at  $> 1$  GHz  $\leq -115$  dBc/Hz at 20kHz offset

### Signal analysis

Instantaneous bandwidth 100 MHz

Tuning resolution 1 Hz

### Internal frequency reference (pre-calibration)

Initial accuracy  $\pm 1.0$  ppm typ.

Stability  $\pm 1.5$  ppm typ.

Ageing  $\pm 0.5$  ppm per year

### Programmable sweep modes

Sweep speed at 2 MHz RBW 390 GHz/s typical

Sweep speed at 61 kHz RBW 320 GHz/s typical

User programmable modes Continuous, single timed, user trigger and adaptive

Trigger-on-event modes User defined masks, actions and alarms

### Sampling

Resolution 16 bits per channel (I&Q)

Rate 125 MS/s I&Q

### Third order intercept points with AGC

$\leq 1$  GHz + 20 dBm typical

$> 1$  GHz to  $\leq 6$  GHz + 15 dBm typical

$> 6$  GHz to  $\leq 18$  GHz + 20 dBm typical

### Local oscillator

Re-radiation  $\leq -90$  dBm typical

### Frequency references

Selectable Internal, GPS or external

Optional: Synchronization Holdover

External input 10 MHz  $\pm 10$  ppm

Output 10 MHz

### Timing references

Selectable Internal, GPS or external

Optional: Synchronization Holdover

Product code (no Synchronization Holdover): SYS-CAS0006-SD1

Product code (w/ Synchronization Holder): SYS-CAS0006-SD1-SBU

### Processor sub-system

CPU Intel E3845 quad core

Level 2 cache 2 MB

Main memory 8 GB ECC DDR3

System disk 32 GB

### System software

Boot firmware BIOS

Operating system Linux, kernel v 2.6

RFeye Node Control Protocol NCP Server (NCPd)

Node Apps (optional) Logger, Recorder, Threshold, Stations

### Stormcase System

#### I/O

RF input (internal) 2 x N-type, 9 kHz - 18 GHz

RF input (external) 1 x N-type, 9 kHz - 18 GHz

Network 1 x 1 GigE, with PoE

Universal Serial Bus 1 x USB 3.0, 1 x USB 2.0

1 x IEEE1394 expansion port Synclinc, trigger input, external peripheral control

GPS Pre-integrated antenna

Data Logger Internal control switch with status LEDs

#### Data storage

External flash disk via USB interfaces

Internal storage 256 GB SSD (standard)  
Additional 1 TB optional

#### Power

Battery 7.5 Ah lithium-ion, rechargeable, 2hrs nominal operation.

Optional:  $> 6$  hrs operation with +3 batteries, hot-swappable

Charger Universal, 100-240 VAC

#### Power consumption

Typical 40 W

Maximum 55 W

#### Environmental

Operating temperature -30 to +50°C (-22 to 122°F)

Storage temperature -40 to +70°C (-40 to 158°F)

Ingress protection IP67 (RFeye Node)



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