RF**eye**System

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 with thermostatically-controlled fans, 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.

RFeyeSystem

Stormcase 100-18 Specifications

Receiver

Integrated receiver	1 x Node 100-18

Frequency

Range	9kHz to 18GHz

Noise figures at maximum sensitivity

9kHz to 0.12GHz	12dB typical
0.12GHz to 6GHz	8.5dB typical
6GHz to 10GHz	10.5dB typical
10GHz to 18GHz	13dB typical

Phase noise

Receiver input at ≤ 0.5GHz	≤ -125dBc/Hz at 20kHz offset
Receiver input at > 1GHz	≤ -115dBc/Hz at 20kHz offset

Signal analysis

Instantaneous bandwidth	100MHz
Tuning resolution	1Hz

Internal frequency reference

Initial accuracy @ 25°C	±0.1ppm typical
Stability over temperature	±0.3ppm typical
Ageing	±0.04ppm per day

Programmable sweep modes

Sweep speed at 2MHz RBW	390GHz/s typical
Sweep speed at 61kHz RBW	320GHz/s typical
User programmable modes	Continuous, single timed, user trigger and adaptive
Trigger-on-event modes	User defined masks, actions and alarms

Sampling

Resolution	16bits per channel (I&Q)
Rate	125MS/s I&Q

Third order intercept points with AGC

≤ 1GHz	+ 20dBm typical
> 1GHz to ≤ 6GHz	+ 15dBm typical
> 6GHz to ≤ 18GHz	+ 20dBm typical

Local oscillator

Re-radiation	≤ -90dBm typical

Frequency references

Selectable	GPS Internal or external
Optional:	*GPS Holdover Reference*
Internal input	10MHz ±10ppm

Processor sub-system

CPU	Intel E3845 quad core

System software

Boot firmware	BIOS
Operating system	Linux, kernel v2.6

Data storage

Removable SSD	512GB (1TB option)

I/O Ports

RF input (External)	3 x N-type, 9kHz - 18GHz
GPS (External)	N-type (by-passable with internal antenna via Int/Ext patch)
DC Power (External Input)	1 x 4-pin Amphenol MS 3102 series
Network (External)	1 x 1 GigE
Universal Serial Bus (Internal)	1 x USB 2.0
Data Logger	Internal control switch and status LEDs

Power

Power Adapter 65W (External)	90-264VAC input, 24VDC 2.7A output
Battery Charger (External)	Universal, 100-240VAC
Battery (Internal)	9Ah Lithium-ion, rechargeable 5hrs nominal operation.
Optional: *High Capacity Battery Pack*	*>10hrs operation with ext. Hot-swappable batteries*

Power consumption

Nominal @ 20°C	50W
Maximum	65W

Environmental

Operating temperature	-30 to +50°C (-22 to 122°F)
Storage temperature	-40 to +71°C (-40 to 160°F)
Ingress protection	IP55 minimum

Mechanical

Dimensions	490 x 390 x 230mm (19.3 x 15.4 x 9.1inches)
Weight (Case only - no battery)	14kg (31lbs)
Weight (Single 9.5Ah battery)	1.5kg (3.3lbs)

CRFS

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ISO 9001:2015
Quality Management

FS 576625