

RFEYE GUARD

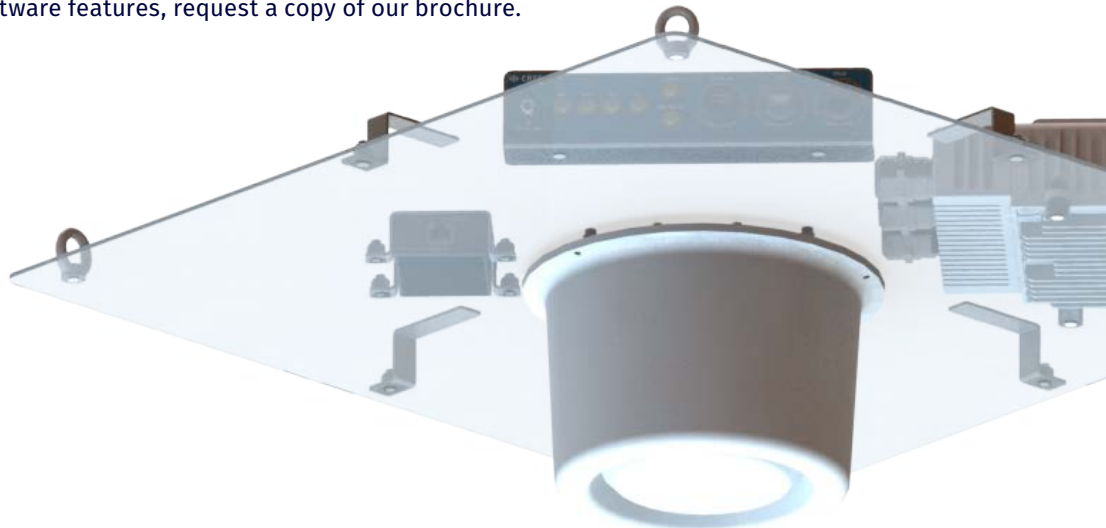
IN-PLACE MONITORING SYSTEM FOR TECHNICAL SURVEILLANCE COUNTER MEASURES

Continuous real-time TSCM and in-place monitoring system for sensitive buildings and secure facilities.

RFeye Guard is CRFS's solution for continuous TSCM (Technical Surveillance Countermeasures) in secure buildings and facilities. It is deployed as a network of synchronized indoor and outdoor sensors to detect suspect signals, locate and alarm in real time. This allows our security customers to achieve the true peace of mind they require 24 hours, 365 days a year.

The system is discreet, cost effective, scalable, easy to deploy and easy to operate. Once installed, RFeye Guard autonomously monitors spectrum in real time to provide instant alert and locations to security guards on detection of suspect signals. Exceptional RF characteristics ensure even the lowest power and shortest duration signals can be detected, while indoor / outdoor signal discrimination minimizes false alarms.

There's no need to settle for partial assurance when you can achieve complete assurance with RFeye Guard. Our sensor specifications are detailed overleaf. For full details of system and software features, request a copy of our brochure.



GUARD SPECIFICATIONS



RF Specifications

Switchable RF inputs	4 x SMA connectors
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Frequency

Range	10 MHz to 6 GHz
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Noise figures at maximum sensitivity

10 MHz to 3 GHz	8 dB typical
3 GHz to 6 GHz	11 dB typical

Phase noise

Receiver input at 2 GHz	-91 dBc/Hz at 20 kHz offset, typ.
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Signal analysis

Instantaneous bandwidth	20 MHz
Tuning resolution	1 Hz

Internal frequency reference (pre-calibration)

Initial accuracy	better than ± 2 ppm typ.
Stability	better than ± 1 ppm typ.
Ageing	better than ± 2 ppm per year

Programmable sweep modes

Sweep speed - fast synth	45 GHz/s @ 1.2 MHz RBW
Sweep speed - high quality synth	18 GHz/s @ 1.2 MHz RBW
User programmable modes	free run continuous, single timed, user trigger and adaptive
Trigger-on-event modes	user defined masks, actions and alarms

Sampling

Resolution	12 bits per channel (I&Q)
Rate	40 MS/s I&Q

Third order intercept points with AGC

< 1 GHz	+21 dBm typical
1 GHz to 6 GHz	+22 dBm typical

Local oscillator

Re-radiation	-90 dBm typical
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Frequency references

Selectable	Internal, GPS or external
External input	10 MHz ± 1 kHz
Output	10 MHz

Processor sub-system

CPU	Marvell 88F6281 @ 1 GHz
Main memory	512 MB DDR2
System disk	512 MB

I/O

Network	1 x 1 GigE, with PoNE
Universal Serial Bus	2 x USB 2.0
2 x IEEE1394 expansion ports configurable as:	2 x SyncLinc, trigger input, external peripheral control
GPS antenna input	1 x SMA passive or active (3.3 VDC)

Data storage

External flash disk	via USB interfaces
Optional internal storage	512 GB SSD option

System software

Boot firmware	U-Boot
Operating system	Linux, kernel v 2.6
RFeye Node Control Protocol	NCP Server (NCPd)
Node Apps (optional)	Logger, Recorder

Size & weight (Sensor)

Dimensions (w, h, d)	170 x 60 x 125 mm (6.7 x 2.4 x 4.9 inches)
Weight with IP67 end plate	2 kg (4.4 lbs)

Size & weight (Ceiling tile)

Dimensions (w, h, d)	600 x 600 x 130 mm (23.6 x 23.6 x 5.5 inches)
Dimensions (w, h, d) (US)	610 x 610 x 130 mm (24 x 24 x 5.5 inches)
Weight	6 kg (13.2 lbs)

Size & weight (Outdoor)

Dimensions (w, h, d)	320 x 360 x 170 mm (12.6 x 14.2 x 6.7 inches)
Weight	10 kg (22 lbs)

Power

DC power or PoNE	10 to 48 VDC
Typical	15 W
Maximum	25 W

Environmental

Operating temperature	-30 to +55 °C (-22 to 131 °F)
Storage temperature	-40 to +70 °C (-40 to 158 °F)
Sensor Ingress protection	IP67 (with end plate)



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