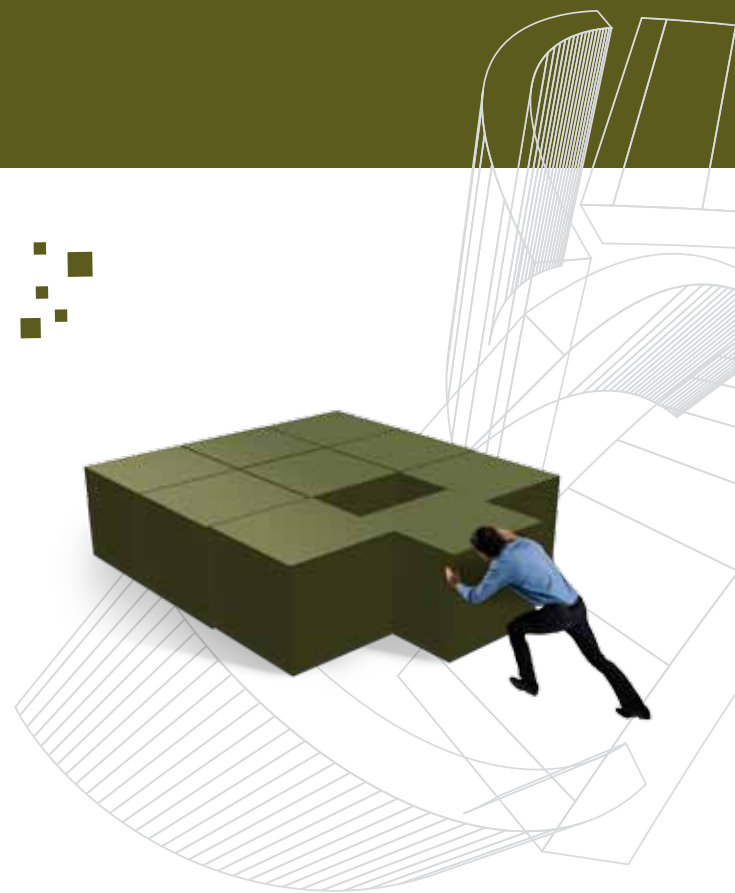




Continuous Surveillance



LS OBSERVER
Fixed Monitoring Unit



Flexible Spectrum Surveillance through LS OBSERVER FMU (Fixed Monitoring Unit)

The LS OBSERVER FMU yield high fidelity spectrum surveillance, especially in urban environments. The unit's small footprint enables it to be fitted effectively and rapidly on any structure. Once fitted its networked capability enables semi or fully-automated control and management locally or remotely. The FMU relatively small size is ruggedized to withstand any environment. The unit internally can integrate one or multiple scanning receivers for surveillance, collection and geo-location.

The FMU advanced surveillance capability can record full spectrum data 24/7 which when networked can be analysed in real or near-time or stored for post mission analysis. The FMU can be left in situ and in-built storage capability allows collection of spectrum surveillance data of up to two years. This collected data can be accessed remotely or locally at any time during that period.

Use LS OBSERVER for the following Measurement Applications

- Continuous monitoring
- Network and area coverage measurements
- Area Frequency Channel Occupancy
- Geo-location to locate hostile, illegal or interfering transmitters
- Electronic environment surveillance for operational areas, border control and VIP / Corporate RF awareness
- Control of critical communications networks
- White Space detection
- EMF measurements



A family of 5 different types of Remote Monitoring Units (RMU) is available with LS OBSERVER de

LS OBSERVER PMU Portable Monitoring Unit

Ideal for handheld, portable and mobile applications; for ad-hoc measurements.



LS OBSERVER TMU Transportable Monitoring Unit

Ideal for temporary mobile and fixed measurements, battery powered.



LS OBSERVER MMU Mobile Monitoring Unit

Ideal for drive-tests and commissioning measurements.



Key Features

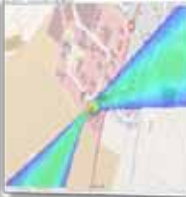


Continuous Monitoring

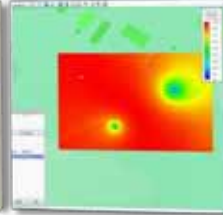


Recording Monitoring Data

Geolocation with TDoA



Geolocation with PDoA



Options & Accessories



Multiple Receivers



Monitoring Antennas

Signal Analysis



Automated Data Processing



Why the LS OBSERVER FMU?

- Real or near-real time indications and warnings (I&W)
- Real, near-real time or post mission measurement analysis of data
- Tactical to strategic system capability
- Enables comparison of live and archived data for electromagnetic 'trend analysis'
- Scalable capability - Tactical to strategic capable systems, operationally networked or part of a strategic system



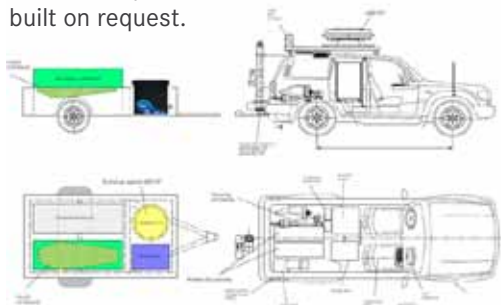
Photo: Department of Defense

pending on your needs - for flexible use and a wide range of applications



LS OBSERVER System Integration

Customer specific solutions, built on request.



Airborne Measurement Service Using Remotely Piloted Aircraft (RPA)

RF & antenna pattern measurements, site inspection and very mobile monitoring.



Service offered by **Colibrex**
Member of the LS telecom Group

Technical Details LS OBSERVER FMU

		FMU 306	FMU 312	FMU 318
RF Characteristics				
RF Characteristics	Frequency range	9 kHz to 6 GHz	100 kHz to 12.4 GHz	10 MHz to 18 GHz
	Scanning speed	up to 24 GHz/s	up to 140 MHz/s	up to 2 GHz/s
	Max. input level	+20 dBm, 0 VDC	+20 dBm / 0 VDC	+15 dBm, 15 VDC
	IQ bandwidth	up to 27 MHz	up to 240 kHz	up to 20 MHz
	Frequency accuracy	1.10 ⁻⁹ unlocked 1.10 ⁻¹¹ GPS locked	1 ppm	1 ppm
Connectivity				
Connectivity	RF antenna inputs	1x N-Type	1x N-Type	2x N-Type
	External GPS antenna input	yes		
	Wired networking	1 x Gigabit-Ethernet		
	Wireless networking	opt. UMTS, opt. LTE, opt. WiMax		
	Wireless local networking	opt. WiFi (802.11 b/g/n)		
Geolocation				
Geo-location	Direction Finding (DF)	available on a project basis		
	Power Difference of Arrival (PDoA)	yes		
	Time Difference of Arrival (TDoA)	yes	no	yes
	GPS receiver	yes, high accuracy	yes	yes
Storage				
Storage	Storage time of raw data	up to 30 days	up to 30 days	up to 30 days
	Storage time of statistic data	up to 2 years	up to 2 years	up to 2 years
Environmental Parameters				
Environmental Parameters	Ruggedised	yes		
	Temperature range	-30°C* to +55°C	-30°C* to +55°C	-10°C** to +45°C
	Power supply	0-32V DC or 100-240V, 50-60Hz with external PSU		
	Power consumption	max. 110 VA typ. 45 VA	max. 105 VA typ. 42 VA	max. 150 VA typ. 75 VA
	Weight (system unit with mast clamp)	24.5 kg	24.5 kg	27.5 kg
	Dimensions in mm (W/H/D)	370x522x210 370x522x280 with mast clamp	370x522x210 370x522x280 with mast clamp	370x522x210 370x522x280 with mast clamp
	Humidity (non condensing)	5% - 95%	5% - 95%	15% - 95%
	Protection	IP 65	IP 65	IP 65
	Colour	White***	White***	White***

*: startup temp. -20°C

** : startup temp. 0°C

***: specific colour available on request

For further information, please visit our website: www.LStelcom.com
or contact us: Info@LStelcom.com.