



ECHO

ASSET 2

SUBJECT OF INTEREST

ASSET 1

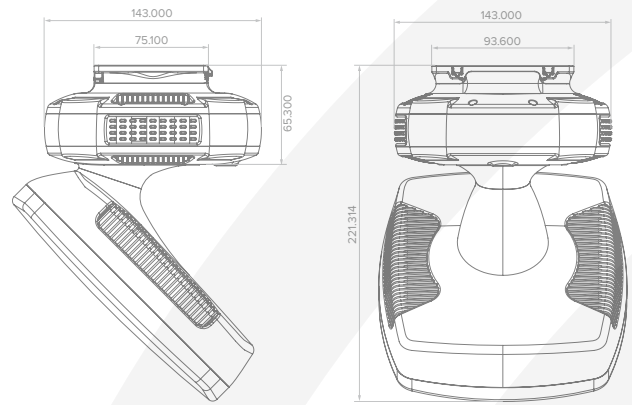
ECHO™

MOBILE PHONE IDENTIFICATION
GEOLOCATION AND INTERROGATION

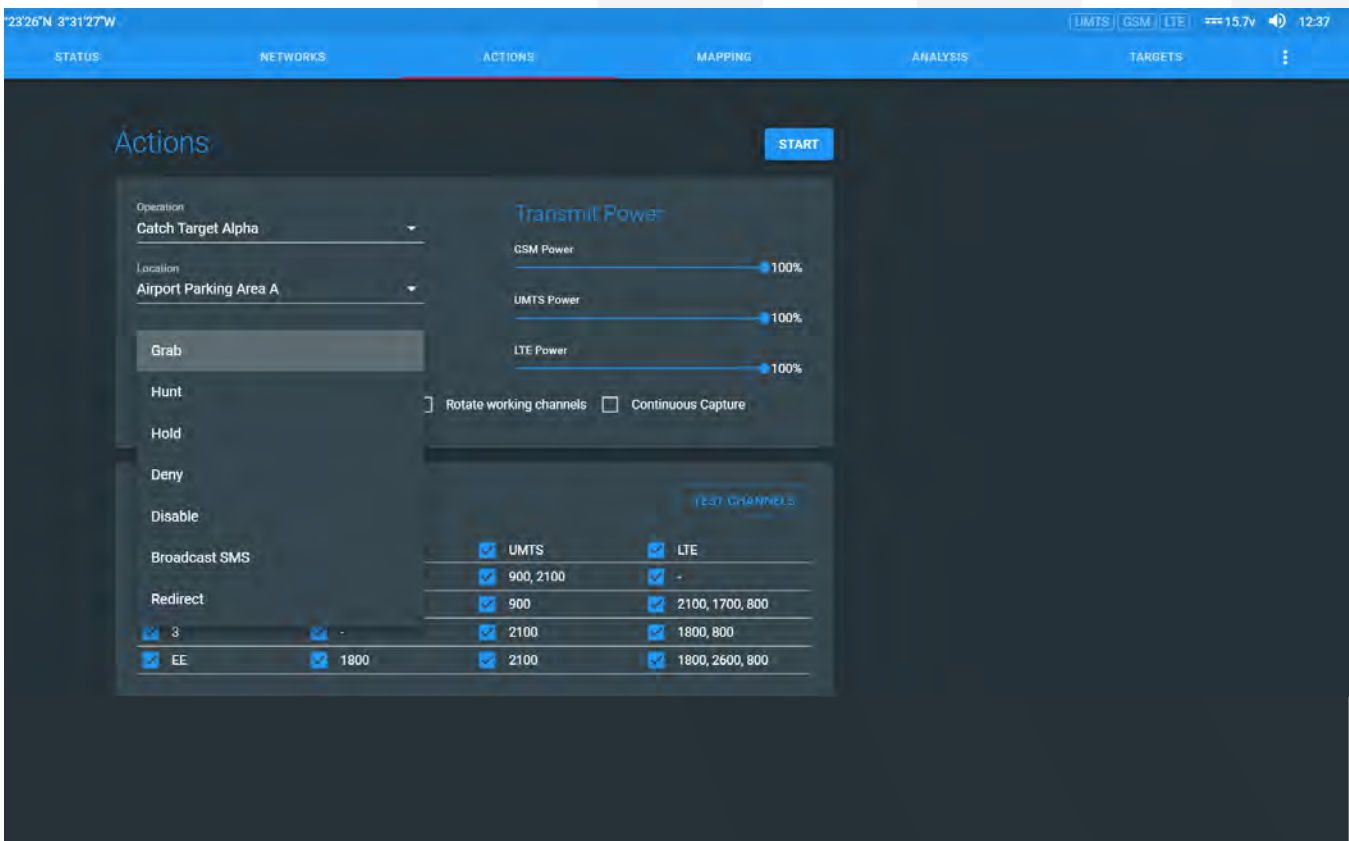
Robotics Centre brings the Smith Myers award winning NESIE™ software suite to the FLIR SkyRanger™ R70 and R80D SkyRaider™ platforms with **ECHO**. ECHO extends the FLIR next generation payload family with a fully integrated low SWaP-C package for the automatic surveying and emulation of real mobile phone networks for the identification, geolocation and interrogation of mobile phone handsets and subscribers.

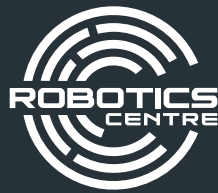
ECHO is comprised of a Software Defined Radio coupled with proprietary 2G, 3G, and 4G (5G in development) Macro-Cell Protocol Stacks covering all global cellular frequencies.

ECHO can be used as a stand-alone system or in combination with other Smith Myers supported platforms (e.g body-worn, backpack, vehicle mounted, and fixed and rotary wing manned aircraft) networked together to a central command centre for full situation awareness.



ECHO supports Smith Myers' common web-based multiplatform user interface with no requirement for re-training between platforms. Hosted on the **ECHO**, there is no need for any specialist software on the control laptop/tablet/phone. The user interface is accessed by Ethernet and/or Wi-Fi and can be displayed on any screen that can host a web browser.





ECHO features **ECHO CNX™** a FLIR Mission Control System (MCS) plugin designed to provide SkyRanger R70 and R80D SkyRaider pilots enhanced target discovery, acquisition, and geolocation during **ECHO** missions.



Quick and Automatic

*R800 SKYRAIDER™
R70 SKYRANGER™*

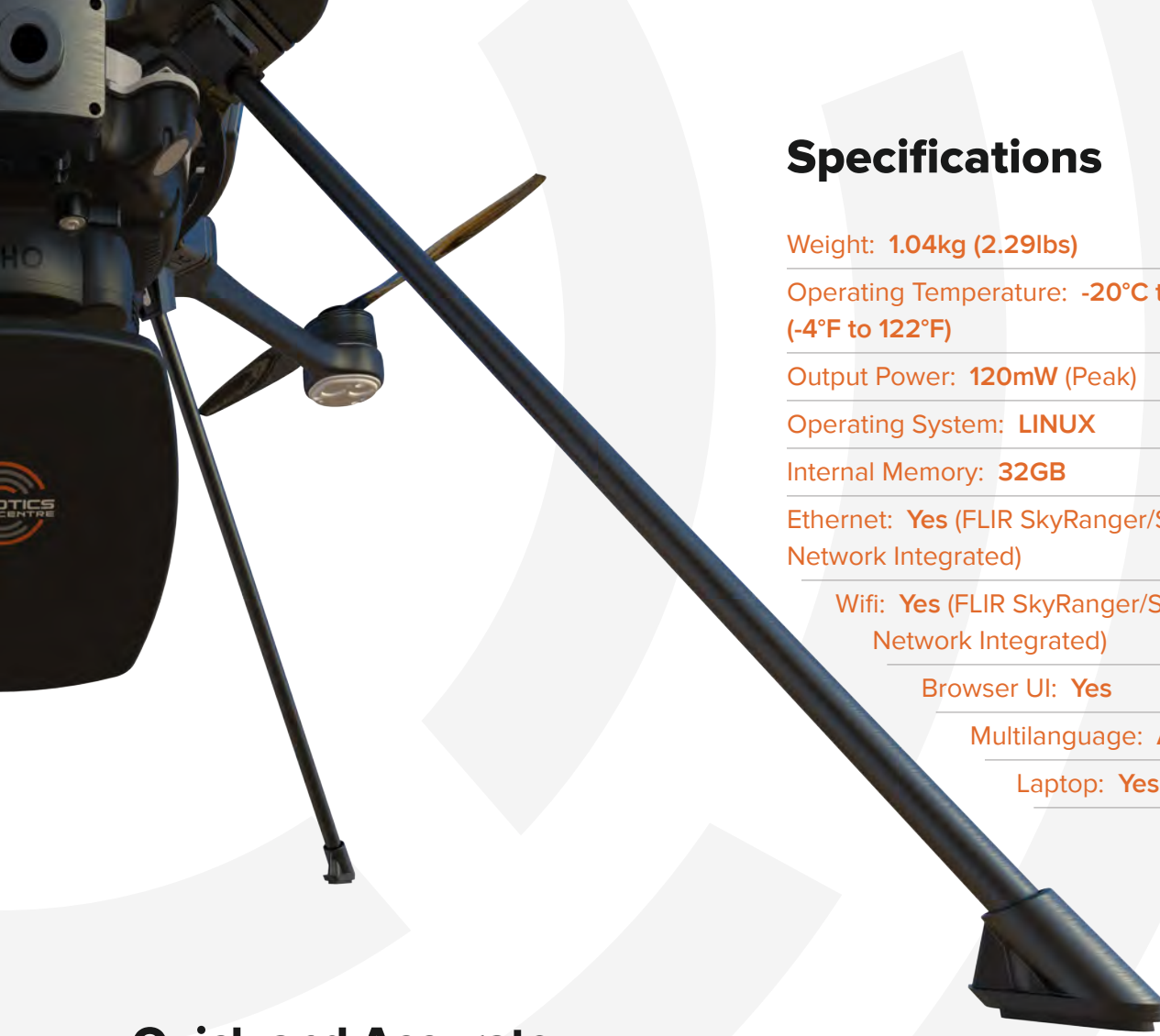


Automatic Configuration and Transmit

Using the Smith Myers SDR, **ECHO** is designed to act like a cellular handset and a base station in one. This negates the need for an additional receiver, and integrates the survey data with the required transmit parameters. Using live or historical survey information, **ECHO** is able to emulate the real network, effectively turning the system into a base station that is able to interact with cellular handsets in the same way as the real mobile network operator.

Survey and analyse the real cellular network quickly and automatically

ECHO offers users the ability to receive clear data transmitted by 2G (GSM), 3G (UMTS), and 4G (LTE) cellular networks (5G in development) in the area of operation. This survey data is in-turn used to emulate the real network automatically without the need for any operator analysis or intervention. Or, if required, the network survey data can be analysed and modified with full manual configuration in real-time. All survey data can be stored for future use or analysis and **ECHO** allows for the import/export of survey data across equipment.



Specifications

Weight: 1.04kg (2.29lbs)

Operating Temperature: -20°C to 50°C
(-4°F to 122°F)

Output Power: 120mW (Peak)

Operating System: LINUX

Internal Memory: 32GB

Ethernet: Yes (FLIR SkyRanger/SkyRaider
Network Integrated)

Wifi: Yes (FLIR SkyRanger/SkyRaider
Network Integrated)

Browser UI: Yes

Multilanguage: Available

Laptop: Yes

Quick and Accurate Handset Geolocation

While interacting with the handset, **ECHO** offers the ability to accurately geolocate the handset using a number of different geolocation techniques. Three separate geolocation techniques are available to offer greater redundancy and allows the operator to select the technique that best suits the operational location and scenario quickly and automatically. Geolocated handsets are shown on the map in real-time and the operator can quickly choose whether to map single or multiple handsets using our mass-mapping algorithm. It is even possible to draw a geofence over an area of specific interest thus ignoring handsets outside the geofence.

Quickly and automatically identify cellular handset(s) of interest

ECHO can quickly identify and locate cellular handsets with industry leading speed. The system offers our users a full suite of interrogation and analysis tools that are available for use in real-time as the system is in full operation concurrently. Results can be cross-referenced in real time during an operation and **ECHO** automatically compares live results to those from past operations highlighting any pertinent information to the operator automatically.

Robotics Centre

works hand-in-hand with government and industry to deliver custom high-quality unmanned system integrations and bespoke payload solutions pushing the boundaries of possibility in solving customer challenges.

In partnership with Smith Myers, Robotics Centre leverages over 30-years of specialisation in design, development, manufacturing and support of application specific cellular network and handset exploitation capabilities for Government Agencies, Law Enforcement, Military, and Search and Rescue operations.

Robotics Centre

225 Marché Way, Suite 205
Ottawa, Ontario K1S 5J3
Canada

sales@robotics-centre.com
+1.613.755.2280
robotics-centre.com



Available only to select government agencies

