



Technologies, Inc.

PROVIDING NEXT GENERATION WIRELESS SOLUTIONS



## AERAS 2U

### Mod Payload DPTT/2G-5G Collection Receiver with DPTT/Cellular Discovery and Cellular Network Mapping

#### FEATURES

##### COLLECTION:

- Wireless network collection of GSM, CDMA, UMTS, LTE, 5G NR, DMR, P25, NXDN, AM, FM
- Features 3 x 200Mhz tuners
- Frequency range of 75Mhz – 6GHz
- Supports real-time and post mission data offload
- Automated export

##### SURVEY:

- Simultaneous multi-band, multi-format completely passive machine learning (ML) enabled network survey solution
- Support for GSM, GPRS, EDGE, CDMA2000, 1xRTT, EvDO, WCDMA, HSxPA, LTE, 5G NR, WiMAX, PTT, D-PTT
- Decodes all Broadcast Overhead messages (MIBs, SIBs, etc.)
- Geofence and time-based

#### KIT CONTENTS

- AERAS 2U Receiver
- Mod Payload Compliant omni-directional Cellular Antennas
- Cable assembly to conduct bench testing
- Mission Laptop

#### APPLICATIONS

- Cellular Network Survey and Mapping
- Cellular Collection
- Digital Push-To-Talk (DPTT) Collection
- Local or Remote operations via Networking Kit
- Seamless inter-operability with the SG1550 Family of Systems

## DESCRIPTION

AERAS 2U is the quintessential do-it-all system for small form-factor drive survey and collection. From Phase 0 survey operations for both cellular and DPTT to all formats of cellular and DPTT collection; the AERAS 2U is design to exceedingly perform both tasks. AERAS 2U utilizes G3T's industry proven and USSOCOM Program of Record Tetley Scanner software, paired with G3T designed and in-house built direct conversion tuners to deliver high fidelity cellular survey. AERAS 2U provides coverage from 75MHz to 6GHz with a 3 x 200MHz tuner configuration allowing coverage of multiple bands throughout the spectrum. Data files are outputted in .G3NS and .GNS formats and compatible with both ROVER and RAPTORX. The receiver houses all of the data until offloaded or retrieved by the user or by automated analytics systems.

Wireless technologies include GSM, CDMA, UMTS, LTE, and 5G. AERAS 2U monitors and decodes Uplink (UL) and Downlink (DL) messages simultaneously, providing for soft geo-location of user equipment (UE) operating with. AERAS 2U is interoperable and interchangeable within the G3T Collection & Analytics ecosystem. Additionally, incorporating G3T's Non-Alerting Techniques (NATs) and active network characterization tools (HYDRA/TETLEY HANDY) enables extremely refined UE location.

AERAS 2U is also capable of collecting DPTT (DMR/P25/NXDN/AM/FM) and feeding the data into our Tactalytics data analysis platform. Tactalytics provides precise DMR network link analysis, Pattern Of Life (POL), voice analysis tools and exact metadata to bring the user absolute ground truth on DPTT transmissions and networks. With 3TB of storage the receiver can capture over a billion data records which allows for long term remote or unattended data collection.

## SWaP

<b>Size</b>	4.29"W x 3.04" H x 6.25" D
<b>Weight</b>	2.5 lbs
<b>Power</b>	95W (requires 2 MAIM connections) 18-36 VDC

## Protocol Channel Count

<b>GSM</b>	128 DDC/ 128 Demod
<b>CDMA</b>	FWD Only - 18 Channels, 18 PN's, Max of 6 PN's per Channel FWD/REV - 9 Channels, 18 PN's, Max of 6 PN's per Channel
<b>UMTS</b>	FWD Only - 6 Channels, 9 PSC's, Max of 3 PSC's per Channel FWD/REV - 3 Channels, 6 PN's, Max of 3 PSC's per Channel
<b>LTE</b>	FWD Only - 12 Channels, 12 PCIs, Max of 4 PCIs per Channel FWD/REV - 6 Channels, 8 PCIs, Max of 4 PCIs per Channel
<b>5G NR</b>	FWD Only - 12 Channels, 12 PCIs, Max of 4 PCIs per Channel FWD/REV - 6 Channels, 8 PCIs, Max of 4 PCIs per Channel

## Radio Specifications

<b>Tuners</b>	3 x 200MHz
<b>Freq Range</b>	75 MHz - 6GHz
<b>Storage</b>	3 TB

## BANDS

2G/GSM - 850/900/1800/1900

2G/CDMA - 450/850/1900

3G/UMTS - All commercially available UMTS bands

The screenshot displays the 'UE Activity' window of the G3T software. It features a table with columns for Timestamp, Tech, Band/Description, DownlinkChannelNumber, IMEI, STIM, MTRail, GUTI, Cid, TAC, PCI, TimingAdvance, E-UTRAN, RSRP, RSRQ, and RSRQ-R. The table contains multiple rows of data, including entries for LTE and GSM bands. At the bottom, there is a status bar indicating 'Showing 1 to 100 of 1000 entries' and a 'Refresh' button.

User Interface



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For more details or questions contact: [sales@g3ti.net](mailto:sales@g3ti.net) | +1.410.290.8110

G3 Technologies, Inc. | 10280 Old Columbia Road | Suite 260 | Columbia, MD 21046 | [www.g3ti.net](http://www.g3ti.net)