

**HEAD OFFICE** :1-7, YUKIGAYA OTSUKA-CHO, OTA-KU, TOKYO, 145-8501 JAPAN  
 PHONE:(03)3726-1211 FACSIMILE:(03)3728-1812

**COMMUNICATION DEVICES DIVISION, SOMA PLANT**

1-2-1, OKINOUCHI, SOMA-CITY, FUKUSHIMA-PREF., 976-8501, JAPAN  
 PHONE:+81-244-35-1207 FACSIMILE:+81-244-35-1602

**User Guide Information for ALPS CDMA Data Module****Model UGEA3A****1. Introduction:**

The ALPS, CDMA data module, UGEA3A with Tri mode (AMPS/CDMA/PCS) wireless technology is a radio module that transmits and receives radio signals in accordance with the spectrum regulations for the frequency range of 824 - 849MHz and 1850 -1990MHz

The module is intended to be integrated in end-use product, only. For example, Car Navigation systems, such Telematics..

Our customer for end-user shall be instructed in this guide and ALPS O E M installation manual issued by separately.

**2. Features**

- 1) High density loading of components gives a compact package measuring 75×50×11mm
- 2) Designed for the Cellular/PCS network in the North American Market
- 3) High data rate 153.6kbps(Service Option)
- 4) Single supply voltage 3.6V
- 5) Interface to host UART serial (40pin)
- 6) Comply with TIA/EIA/IS-2000.1-1

The following table shows a major function.

Model number	Major Function	Remarks
UGEA3A	1. Frequency bands; 1) AMPS (FM) : 824 - 849MHz 2) CDMA : 824 - 849MHz 3) PCS : 1850 - 1990MHz 2. Output power at antenna terminal: 1) Cellular-CDMA : 22.5dBm +0.5 -2.5 2) PCS -CDMA : 22.5dBm +0.5 -2.5 3) Cellular- AMPS : 25.5dBm +0.5 -2.5 3. External antenna : Maximum Gain : AMPS/CDMA 3.5dBi, PCS 4.5dBi, Impedance : 50 <Alternative> Maximum Gain : AMPS/CDMA 0.3dBi, PCS -0.9dBi Impedance : 50 4. Two Input voltages required. 1) +3.6Vdc +/-0.1V (internal Voltage regulator built in) 2) +3.6Vdc +/-0.1V (requires to stability voltage from outside for cellular and pcs Power Amplifier) 5. Flash memory built in and reference oscillator built in 6. Interface: UART serial connection (40 pins) 1) UART 1 (Data): 115.2 kbps (default )/230.4kbps(max) 2) UART 2 (Monitor): 115.2 kbps (fixed) 7. Forward Data Rate of Air Link: 153.6 +9.6 kbps (max) 8. Reverse Data Rate of Air Link: 76.8 + 9.6 kbps (max) 9. CDMA Voice rate: 9600,4800,2400,1200 bps 10. Control command: AT command 11. Conform to TIA/EIA-98E. TIA/EIA/IS-2000.1-1	

### 3. Eligibility requirements for regulatory approval:

As a part of regulatory certification, ALPS will provide an approval for the United States of America in the form of module.

For regulatory certification for Canada, ALPS UGEA3A has not been certified.

Therefore, our customer could not sell the entire product providing ALPS UGEA3A in Canada.

The regulatory approval is required for the end-product, where end-user integrates ALPS UGEA3A into entire product in non-compliance to FCC certification conditions of ALPS UGEA3A.

The conditions for the certification of ALPS UGEA3A and related information are described below.

ALPS wishes that our customer for the end product would contact with us about what conditions of UGEA3A have been certified by FCC.

#### 3.1 Compliance statement to FCC

This module complies with part 15 of the FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

#### 3.2 RF exposure compliance

This module, UGEA3A will be applied as "mobile device".

Because the external antenna of the module is intended to be placed on the location like that persons body (excluding extremities: hands, wrists, feet and legs) be a faraway from the antenna.

For example of the location: a top of the roof of an automobile.

This equipment complies with FCC radiation exposure limits set forth for at uncontrolled exposure as "mobile device".

Therefore, this module should be installed and operated with minimum distance at least 20cm between the radiator and persons body (excluding extremities: hands, wrists, feet and legs) and must not be co-located or co-operated with any other antenna or transmitter.

#### 3.3 Requirements to end product

The following provisions for end product will be required on the FCC regulation.

(1) RF exposure compliance

ALPS wishes that our customer will instruct to the end user for RF exposure compliance as stated below.

**This equipment should be installed and operated with minimum distance at least 20cm between the radiator and persons body (excluding extremities: hands, wrists, feet and legs) and must not be co-located or operated with any other antenna or transmitter.**

(2) External regulator

The regulated voltage of 3.6V dc +0.1/-0.1V shall be supplied to cellular Power Amplifier and pcs Power Amplifier equipped within the UGEA3A module through the external regulator which our customer be required to provide into end product.

(3) Antenna

ALPS wishes that our customer shall use the UGEA3A module without any modifications including antenna.

Please refer to table of major function of prior page for the antenna specifications.

If customer use a unique antenna, the FCC certification is required for the end product.

(4) Markings

To satisfy FCC exterior labeling requirements, the following text must be placed on the exterior of the end product.

**Contains Transmitter Module FCC ID: CWTUGEA3A**

Any similar wording that expresses the same meaning may be used.

(4) Caution to user for modification

The following caution is expressed on the user's instruction manual.

**The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the device.**

, or

**The product may cause TV or radio interference, if used in close proximity to receiving equipment. The FCC can require you to stop using the product, if such interference cannot be eliminated.**

Any similar wording that expresses the same meaning may be used.