# LT-3100 Accredited Solution
## GNSS/GPS NMEA 0183 Output Data

The LT-3100 Satellite Communications System is delivering the Iridium 'classic' services: Voice, Voicemail, SMS, Short Burst Data (SBD), Modem Data, and Windows Dial-up Networkig (IP-data connection) with 100% global coverage. The LT-3100 System is supporting GNSS/GPS NMEA 0183 output data via the Aux interface (RS-422), the connector is available on the back side of the LT-3110 Control Unit. The GNSS/GPS NMEA 0183 output data can be delivered on 4800 or 38400 baud. The GNSS receiver (built-in to the LT-3130 Antenna Unit) can be configured to output position data on the following GNSS satellites: GPS, SBAS, GLONASS, BeiDou. The horizontal position accuracy in default configuration (GPS, SBAS, GLONASS) is better than 2 meters in 95% of the time.

NMEA 0183 (RS-422)

- VHF/DSC Radio
- MFD Display / Navigational Equipment
- Position Back-up Information

## Features of GNSS/GPS NMEA 0183 Output

- 72-ch. GNSS (GPS/GLONASS/BeiDou) satellite receiver with SBAS correction
- The position accuracy of the GNSS receiver is better than 2 meters in 95% of the time
- The GNSS receiver NMEA 0183 output data can be configured to 4800 and 38400 baud
- The following NMEA 0183 sentences are supported: DTM, GGA, GLL, GSA, GSV, RMC, VTG, ZDA
- The NMEA 0183 sentences are outputted with 1 Hz
- The GNSS receiver module is built-in the LT-3130 Antenna Unit, given ideal satellite reception conditions
- The NMEA 0183 output data is provided via the LT-3110 Control Unit Aux interface (available on the back side of the control unit)
- A 3 meter Aux cable can be ordered from Lars Thrane. The Aux cable (NMEA 0183) wire designation and color: TxD+ (orange), TxD- (red), RxD+ (yellow), RxD- (green), RS-422 GND (white)

## How to make it work

- Make sure that the LT-3100 System is updated with the minimum required software (see info below)
- Log into the LT-3110 Control Unit (CU) web server (login: admin, password: admin). The IP address can be read from the display
- In the LT-3110 CU web server, Configuration - GNSS and NMEA Output: the GNSS receiver and NMEA 0183 output sentences can be individual configured
- The GNSS receiver can be configured to the following settings: GPS, SBAS, GLONASS, and BeiDou (not all combinations possible). The GNSS receiver satellite configuration will affect the 'talker ID' of the NMEA 0183 sentences ('GN', 'GP', 'GL', and 'BD')
- Select the checkbox 'Enable' under Configuration - NMEA Output, Port configuration to allow NMEA 0183 sentences to be outputted
- Select the baud rate: 4800 or 38400 baud
- Select the NMEA 0183 sentences: DTM, GGA, GLL, GSA, GSV, RMC, VTG, ZDA
- Press the 'Apply' button to save the configuration

## Required Hardware

LT-3100 Satellite Communications System (LT-3100)

## Minimum required software

LT-3100-v1.09R-00XX.lti (target XX-Mar-19)
*Note: software will shortly be released*