ADS-B receiver

User manual

Version 1.00

1   Important Notices

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A Yellow triangle is shown for parts of the manual which should be read very carefully and are important for operating the ADSB receiver.

Notes with a red triangle describe procedures which are critical and may result in loss of data or any other critical situation.

A bulb icon is shown when a useful hint is provided to the reader.

1.1   Limited Warranty

This RPM flap product is warranted to be free from defects in materials or workmanship for two years from the date of purchase. Within this period, LXNAV will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts and labour, provided that the customer pays for shipping costs. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alterations or repairs.

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To obtain warranty service, contacts your local LXNAV dealer or contact LXNAV directly.

Packing Lists

- ADSB receiver
- 1x FLARMVIEWPF-CA
- 1x ADSB antena

2   Technical Data

2.1   Power and Consumption

Table 1: Absolute maximum ratings

Parameter	Symbol	Rating	Units
Power Supply	Power	36.0	V
Power Consumption	I_1	85	mA

Table 2: Electrical characteristics

Parameter	Symbol	Min	Typ	Max	Units
Power Supply	Power	8.0	12.0	36.0	V

2.2   Size and Weight

Size: 55mm x 90mm x 25mm
Weight: 160g

3 System description

3.1 Switching on the Unit

ADSB receiver is switched on automatically, when it gets enough power supply from either PORT In or PORT OUT RJ45 connector.

3.2 Normal operation

ADSB receiver goes into normal operating mode, when it receives signals from enough GPS satellites.

3.3 How the system works

ADSB receiver can listen on 10990MHz transponder data Mode S and ES. Received data will be transmitted to the output port in Flarm standard NMEA format.
ADSB receiver will operating only if we feed it with gps data to input port. GPS data must be standard NMEA format. ADSB receiver will automatically detect baudrate on input port and transmit NMEA data on output port at the same baudrate.

4   Installation

ADSB receiver has typically connected to the input port a GPS source. This is normally flarm device with NMEA output or classic GPS with standard NMEA output.
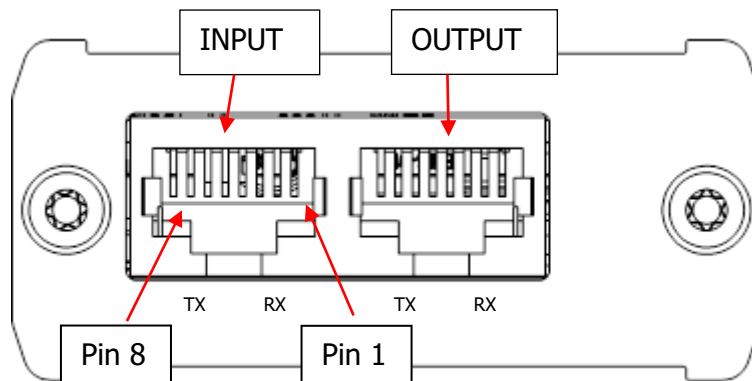

At the other side is SMA connector for ADSB antenna.   Red LED indicates receiving ADSB traffic.

5   Wiring

5.1   ADSB receiver PORT1 and PORT2 pinout (RJ45)

| Pin number	Description
1	+ Power input
2	+ Power input
3	n.c.
4	Ground
5	Data output (TX)
6	Data input (RX)
7	- Power input
8	- Power input

Underneath each port there are TX (transmit-green) and RX (receive-red) status LEDs that flash when that port is receiving or transmitting data.

5.1.1   ADSB receiver RF connector side description

In the line with ADSB antenna SMA connector is red LED, which blinks, when ADSB traffic is present.

5.1.2   Installation examples

5.1.2.1 ADSB – LX80xx/Lx90xx

Flarm port on LXxxxx
(FlarmView Cable)

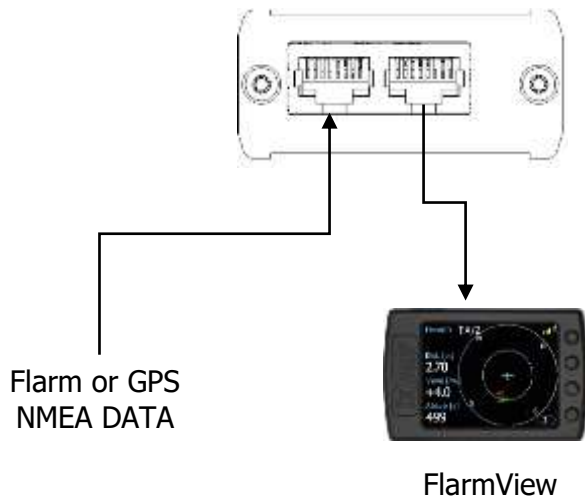LXxxxx PC port –
round connector
(LX5PF cable)
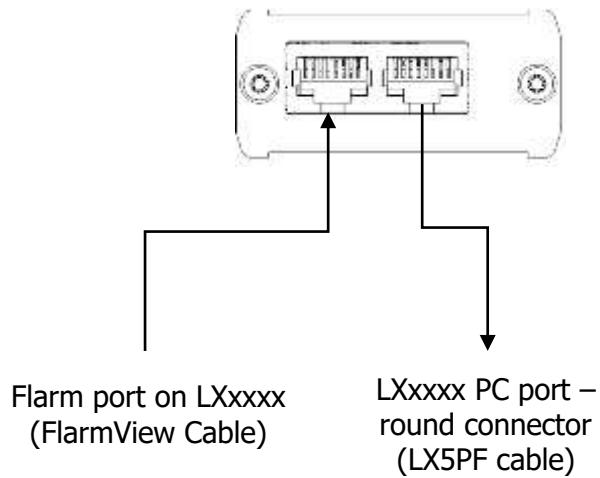
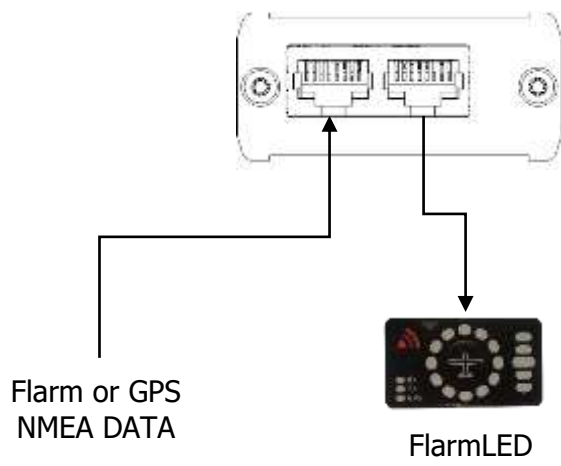On the main display unit go to the setup menu and choose the Hardware->Flarm menu item. Change mode to Ext. (PC).

If you wish to connect additionally flarm display, you must use flarm splitter on ADS-B output.

5.1.2.2 Flarm - ADSB - FlarmView

Flarm or GPS
NMEA DATA

FlarmView

5.1.2.3 Flarm - ADSB - FlarmLED

Flarm or GPS
NMEA DATA

FlarmLED

6   Firmware Update

Firmware can be updated via special "**flarm update cable"**, connected to PC through serial interface.

You can get flash loader at: https://gliding.lxnav.com/lxdownloads/firmware/ (S7 PC update tool)

For the update you need file named _x**.lxfw** (x= version nr.) on your computer.

Update procedure:
- Connect ADSB receiver FW update port (OUT) to the update cable to PC and power supply
- On Tool select communication port to which your ADSB receiver is connected to
- Select baudrate 57600
- Select .lxfw file
- Press Flash
- Apply power to ADSB receiver

⚠️ To update ADSB receiver, a Flarm update cable with 12V DC and a COM port on PC is required.

7 Revision History

May 2022	Rev0	Initial release version 1.00
March 2023	Rev1	Added chapter 5.1.2.1