

6658001 USER MANUAL

Features

The 6658001 main board provide a totally integrated GPS receiver, color video LCD controller and color fish finder (optional). The GPS receiver tracks up to 13 satellites simultaneously. The optional fish finder presents vivid underwater images on a high quality LCD.

The main features are

- LCD display output (7-inch or 10-inch color LCD) with brilliance control (optional touch screen interface available).
- Internal GPS receiver provides highly accurate position information..
- SD card slot accepts SD and SDHC cards for external storage of data and settings.
- CAN bus interface.
- USB 2.0 optional connection (OTG).
- Integrated Bluetooth & WiFi module with internal antenna.
- External BT & WIFI antenna connection available. Only one antenna works at time (internal or external) due to integrated antenna switch.
- SPI keyboard connector.
- Ethernet interface connector (optional).
- Audio output (optional).
- Video-in and video-out option.
- 2Gbyte NAND memory.
- 512Mbyte DDR memory.
- 10-35VDC power supply.

LCD display connector

The LCD display has to be connected to P402 connector present on the bottom of the board.

You can connect a 7 inch LCD display model DSN7061007-2A. It is also available a 10 inch LCD display.

As option it is possible to connect a capacitive touch screen.

GPS receiver

The GPS receiver is based on the NEO-6Q UBLOX module.

The internal active antenna has to be connected to P1 connector.

Remember to put the internal antenna not very close to the mainboard to improve the GPS signal receiver quality.

SD card and USB connector

Connecting the BKE13 interface to the P51 connector it is possible to have the SD card and USB connections.

SD card slot accepts SD and SDHC cards.

The USB connector uses the micro USB device standard (OTG as option).

CAN BUS interface

The CAN bus interface complies with the NMEA-2000 standard.

On this interface you can connect GPS Receiver, Weather Station, FI-50 (instrument series), Satellite Compass, etc.

Connect the Can Bus cable to P740 connector.

BT & WIFI Interface

The circuit is a full featured WiFi 802.11b/g/n single system module based that includes support for IEEE 802.11i security and IEEE 802.11e QoS. It integrates the WiFi technology into the system making possible data exchange with WiFi Access Points and Hot Spots.

Also a Bluetooth feature is available.

For detailed specification of the BT & WIFI module used, please refer to the APM6658 data-sheet.

The internal antenna has to be connected to P911 MHF connector. The internal antenna gain is 5dBi. It is available the TAOGLAS model WLP2450 antenna that can be supplied separately (max gain 5dBi).

The external antenna has to be connected to P910 MHF connector. The external antenna gain is 5dBi. It is available the INTELLINET model I-WL2-ANT3 (max gain 5dBi) that can be supplied separately. Only this external antenna or similar type with a maximum gain of 5dBi shall be used with this device.

The system uses a single antenna output at a particular time (by a RF switch), so the two antennas cannot work together.

SPI keyboard

On the P51 connector you can connect an SPI keyboard (i.e. board BKE11).

In this way the user interface can use some keys to select the proper operation.

System memory

The 6658001 main board has inside 2 Gbytes of NAND memory and 512Mbyte of DDR memory (volatile).

Power supply

The module is powered using a 10-35VDC voltage. The max power consumption depends on the option installed and it can be up to 15W.

The connection of the power supply is been done using the P801 connector

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

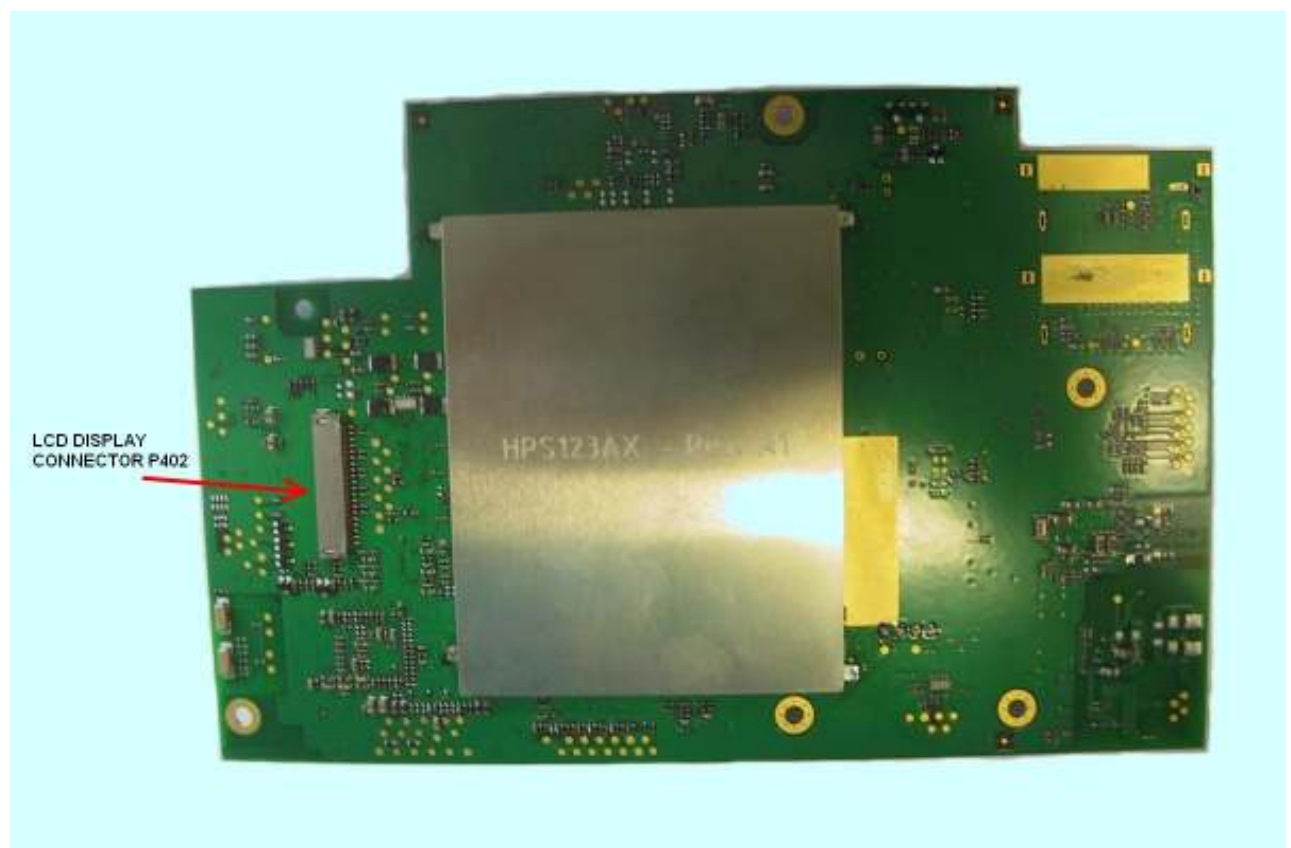
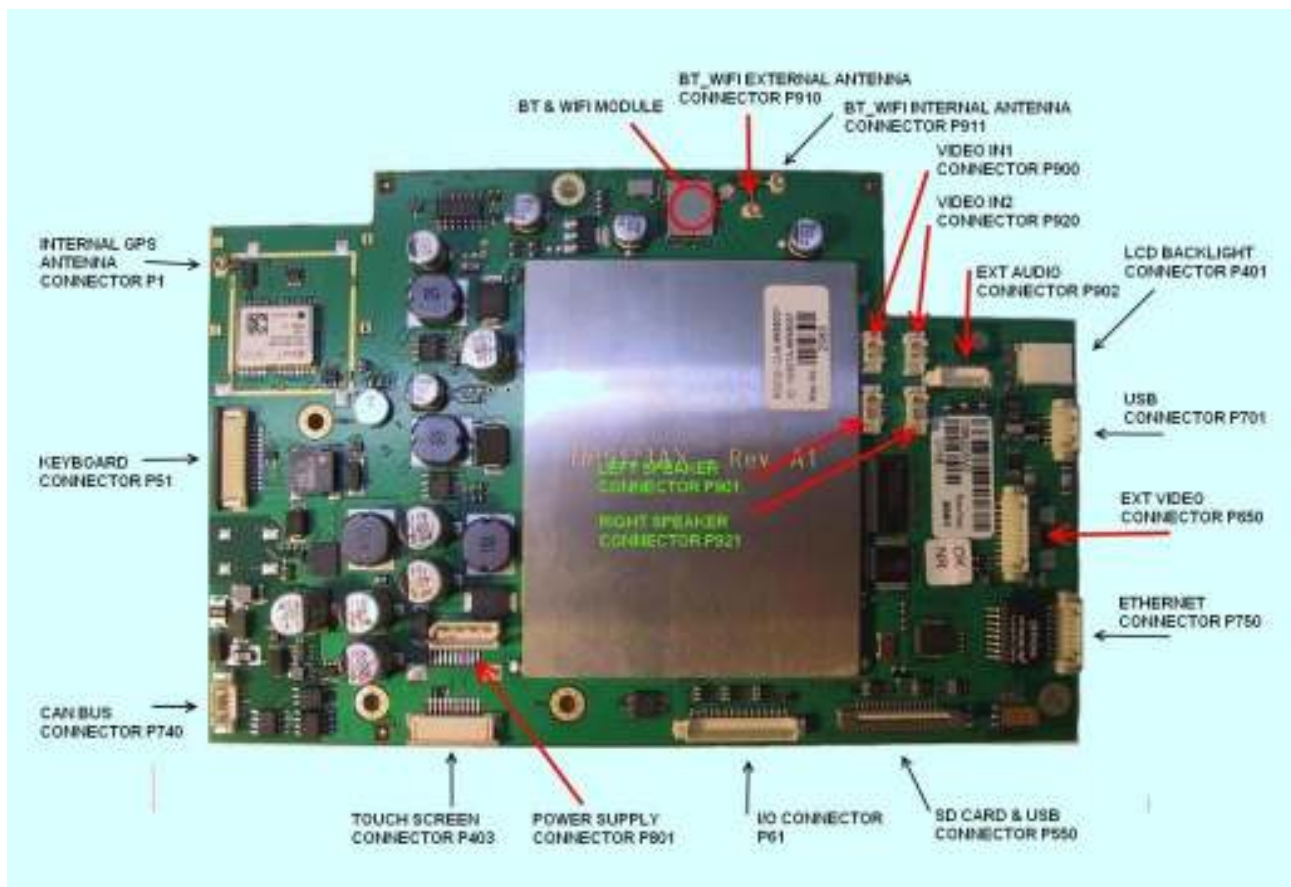
1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated with minimum distance 20cm between the radiator and your body.

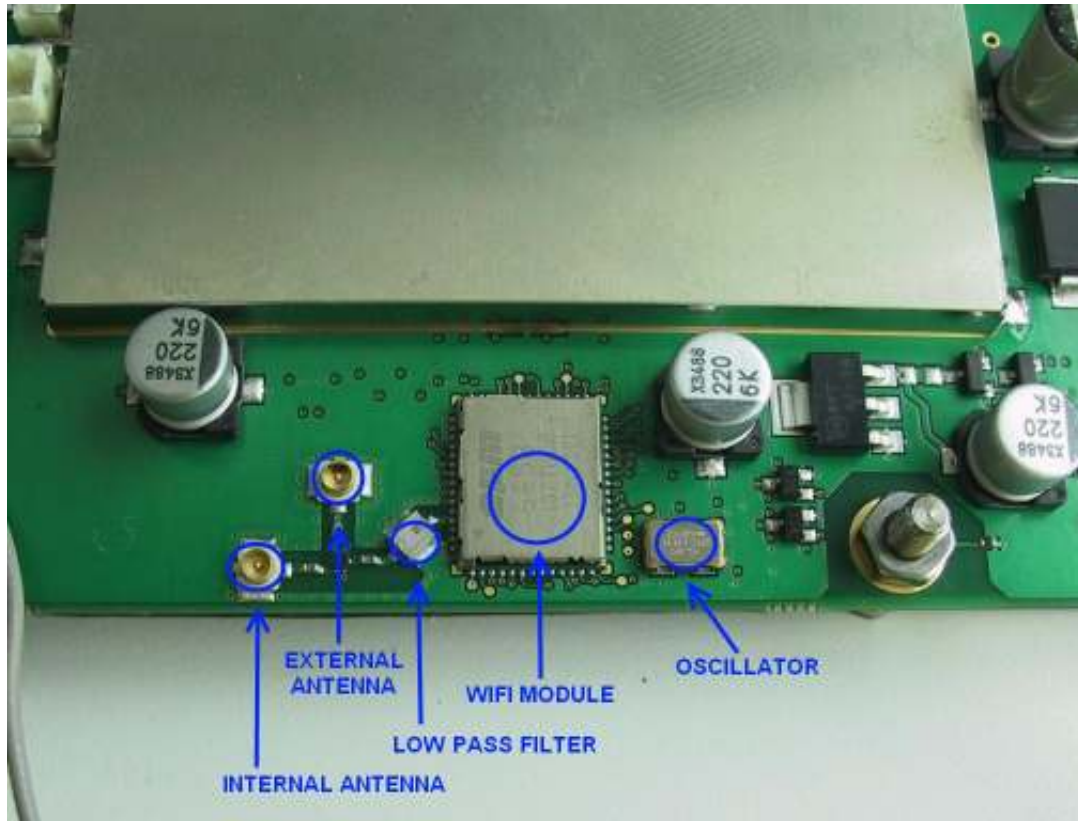
The Federal Communications Commission warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To follows the FCC requirements, the unit that contains the CU9-6658001 module have to be externally labelled with "contains Transmitter Module FCC ID: CU9-6658001". Is there isn't space enough on the label, you can use "contains FCC ID: CU9-6658001".

Module typical connections



WIFI section components location



Installation Note

The mechanical installation of the module is made using the 4 holes that are present on the D86 main board.

The internal GPS antenna, if it is used, has to be located as far as of the main board. This to have better S/N ratio of the GPS signal reception.

The internal BT & WIFI antenna has to be connected to the P911 MHF connector. Using the WLP2450 kit antenna all the connections are already made, you only have to connect the MHF connector to P911.

The External WIFI antenna has to be connected to the P910 MHF connector using the MHF-SMA reverse cable supplied with the board (code CBR5FC0400).