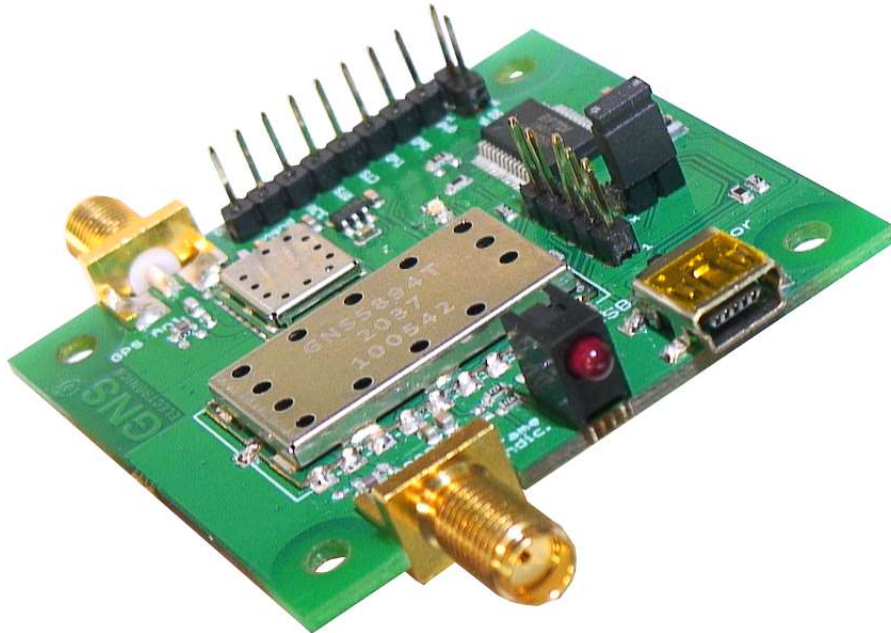




The GNS 5894TAC StarterKit has been designed to support developers during design-in of the GNS 5894T & GNS 5894TAC stand alone module solution.

Introduction

This Quick Guide is a short summary of the most important features of the GNS5894TAC StarterKit. The complete User Guide is currently not yet available and will be completed shortly.

This manual shows how to connect the GNS5894TAC StarterKit to a PC in order to verify GNS 5894TAC **Mode-S-A-C** all-in-one module performance and test supported features.

For technical specification, please refer to the **GNS5894T_ADSBModul_datasheet**.

The GNS5894TAC is a software extension of the GNS5894T, which is additionally able to receive Mode A/C data. The hardware of the GNS5894T**AC** is unchanged. For this reason the GNS5894T_ADSBModul_datasheet can be used as long as no description of the Mode A/C extension is available.

Connected to a PC, all Mode-S & Mode-A/C Data is routed to the miniUSB port.

GNS5894TAC StarterKit Features

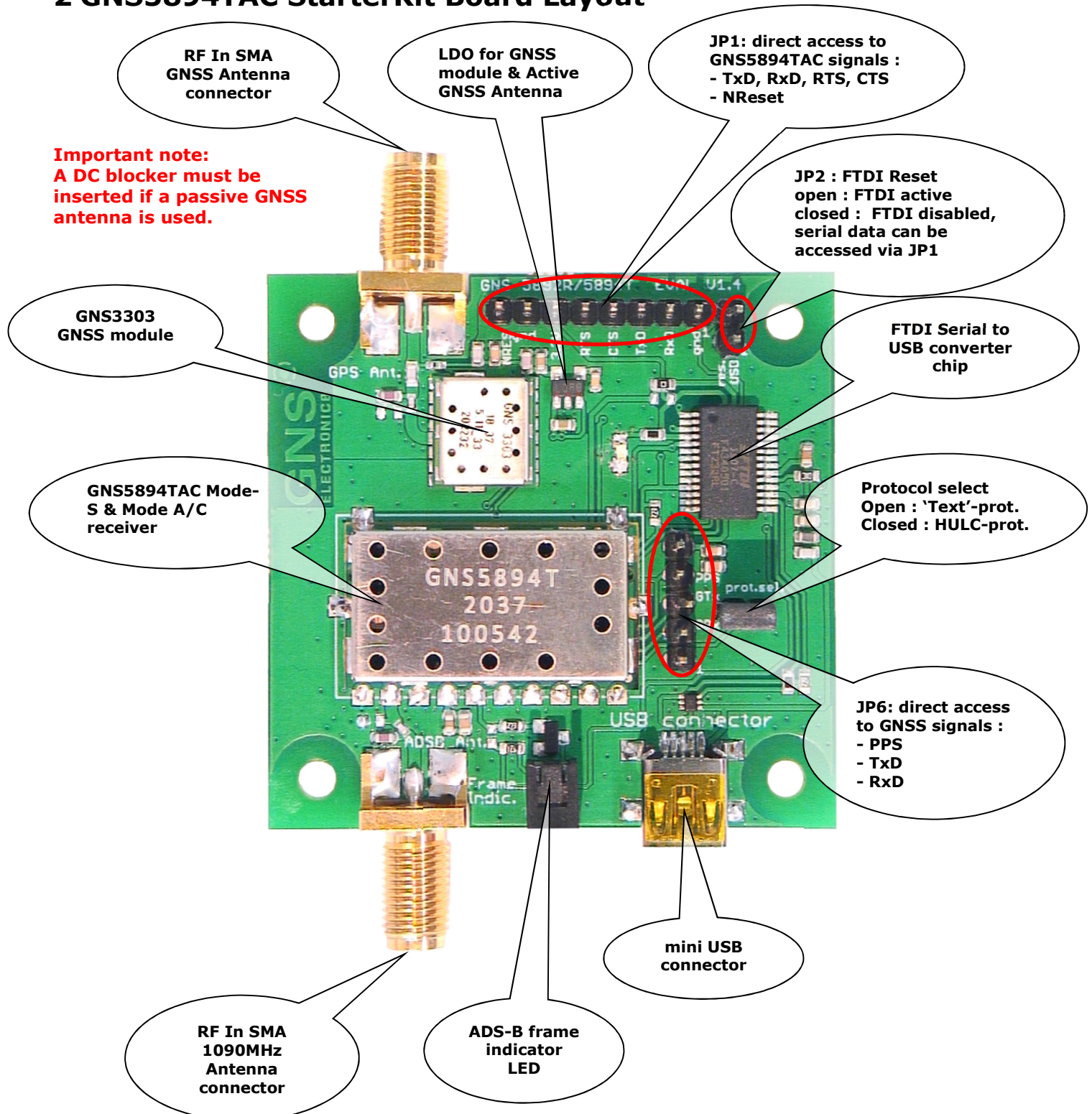
- Power supply via Mini-USB socket
- Access to all signals of the GNS5894TAC via pin header contacts.
- PC data connection via the integrated USB to UART converter or direct access to the serial interface (3.3V) of the GNS5894TAC for connection to other data processing devices.
- 5V DC input via mini USB
- 2 SMA antenna connectors for 1090MHz and GNSS RF In
- GNSS active antenna, DC supply (3.3V)
- ADS-B "frame indicator"

Introduction	2
1 Description of the GNS 5894TAC StarterKit Hardware.....	4
2 GNS5894TAC StarterKit Board Layout	5
3 GNS5894TAC StarterKit Board Block Diagram	7
3.1 Getting started	7
4 GNS5894TAC StarterKit Hardware	8
4.1 Assembly Drawing Top Side (with dimensions)	8
4.2 GNS 5894TAC StarterKit Schematic.....	9
4.3 PCB Layout	10
5 ORDERING INFORMATION	11
6 RELATED DOCUMENTS.....	11
7 DOCUMENT REVISION HISTORY.....	11

1 Description of the GNS 5894TAC StarterKit Hardware



2 GNS5894TAC StarterKit Board Layout



JUMPER AND CONNECTOR DESCRIPTION

CONNECTOR	PIN	SIGNAL	DESCRIPTION
JP1		1: GND 2: RxD (GNS5894TAC ser. input) 3: TxD (GNS5894TAC ser. output) 4: CTS (H/W handshake CTS input) 5: RTS (H/W handshake RTS output) 6: 3.3V 7: GND 8: \RESET GNS5894TAC, active LOW	Direct access to GNS5894TAC UART. UART I/O Voltage is 3.3V.
JP2		1: GND 2: \RESET FTDI, active LOW	Open : Operation via USB Port Close : USB to serial converter is disabled, ser. Port (JP1) can be accessed.
JP6		1: GND 2: RxD2 (ser. data from GNSS module) 3: TxD2 (ser. data to GNSS module) 4: PPS (PPS pulse from GNSS module) 5: 3.3V	Serial data connection with GNSS module. I/O voltage is 3.3V.
PROT.SEL.		1: PS input (pulled up internally) 2: GND	Open : 'Text' protocol (AVR mode) Closed : 'HULC' protocol

Description of ADS-B frame indicator:

ADS-B frame indicator

blinking

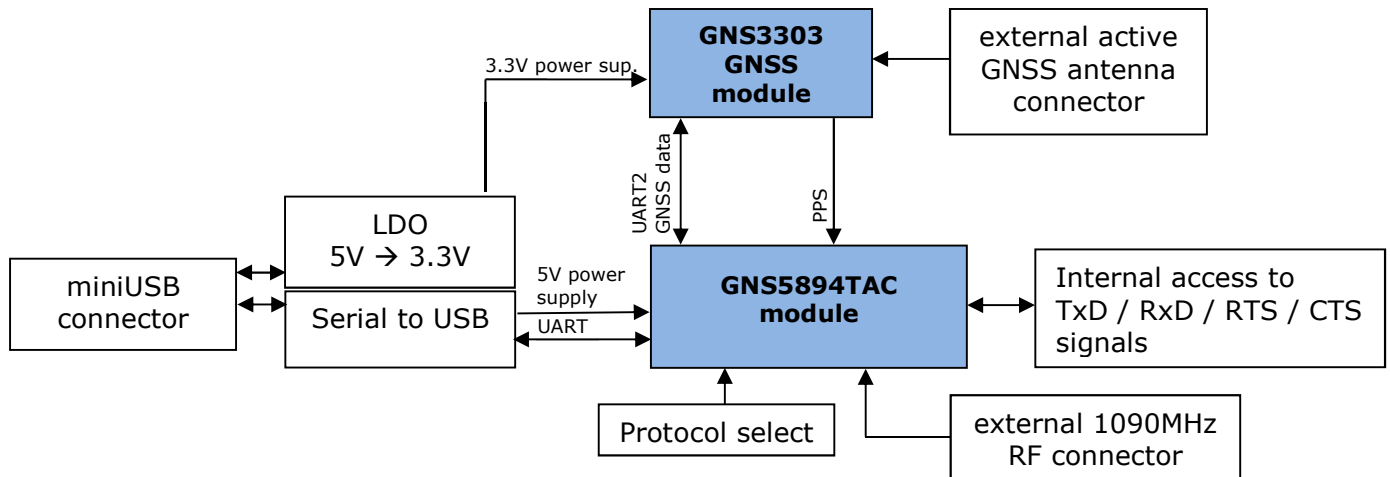
Off

Comment

Mode-S and/or Mode-A/C frames are received and output via the serial interface.

No data is received (or the h/w handshake of the serial interface is not active).

3 GNS5894TAC StarterKit Board Block Diagram



3.1 Getting started

1. Connect the TEN-90 and the GNSS active antenna to the GNS 5894TAC StarterKit
2. Connect the GNS 5894TAC StarterKit via USB to a Windows PC
3. After a few seconds the device is ready for use and is displayed in the device manager as "USB Serial Port" under the category "Ports".

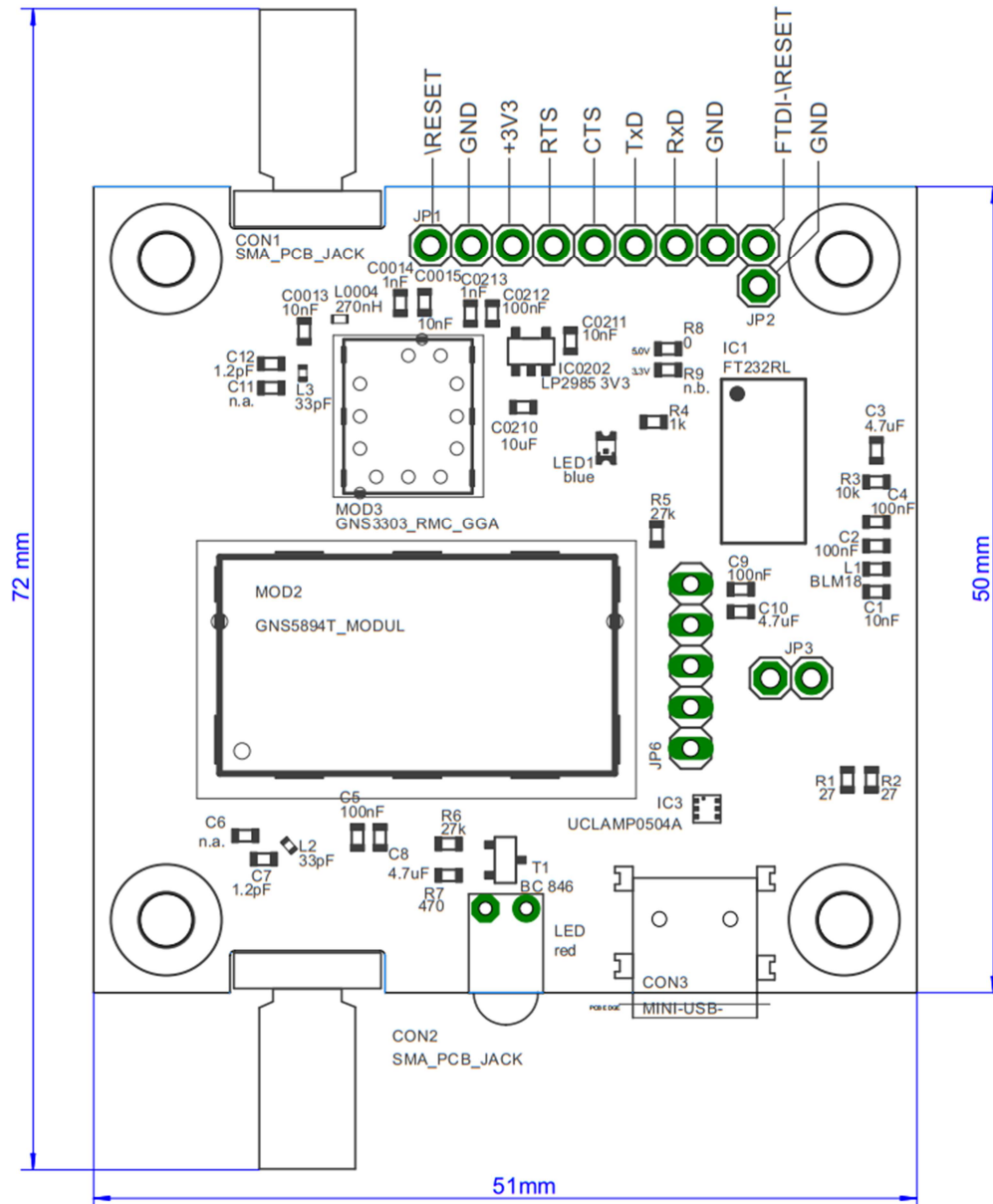
GNS 5894TAC StarterKit

Quick guide

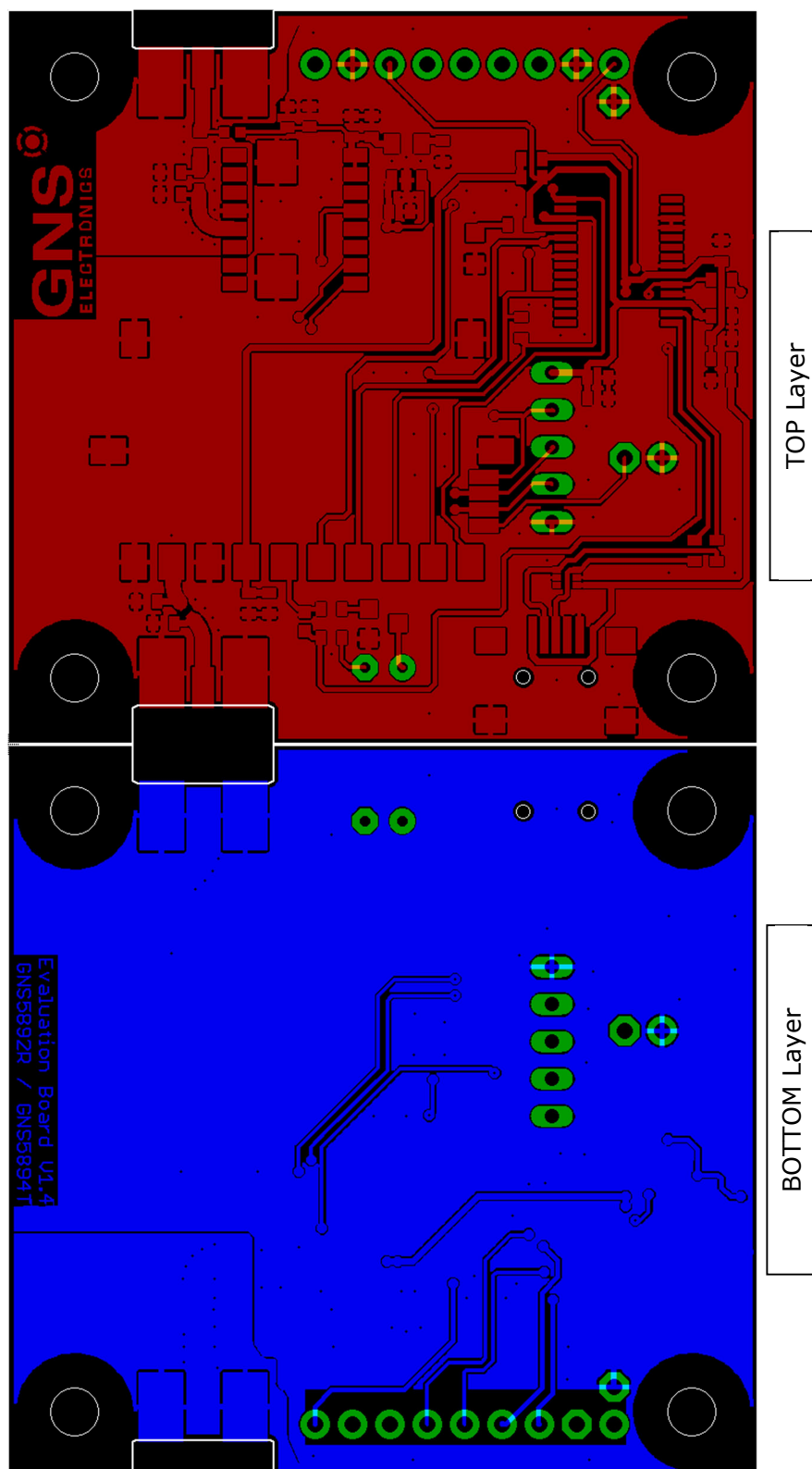
confidential information manual

4 GNS5894TAC StarterKit Hardware

4.1 Assembly Drawing Top Side (with dimensions)



4.3 PCB Layout



5 ORDERING INFORMATION

Ordering information			
Type	Part#		Description
GNS 5894TAC Starter Kit	4037735105485		

6 RELATED DOCUMENTS

Type	description	Available from
GNS5894T_ADSBModul_datasheet_V1.2.pdf		www.gns-electronics.de
GNS5894TAC_ADSBModul_datasheet_V1.3.pdf		www.gns-electronics.de

7 DOCUMENT REVISION HISTORY

V0.9	10/05/2020	M.Heinzel	initial document
V0.91	10/06/2020	M.Heinzel	Chapt.1 - incorrect entries were removed
V0.92	10/22/2020	M.Heinzel	Chapt.4.1 – pcb dimensions added
V0.93	05/17/2021	N.Schmitz	Revision and Corrections