



OTT Hydromet GmbH
Business Unit Adcon Telemetry
Industraße 24
3400 Klosterneuburg, Austria

Tel.: +43 2243/38280-58

Mob.: +43 664 85 474 55

Fax: +43 2243/38280-6

g.chvatal@ott.com

www.adcon.com

A432 RADIO MODULE

User Manual

Date: 2017/10/13

ABOUT THE A431 RADIO MODULE

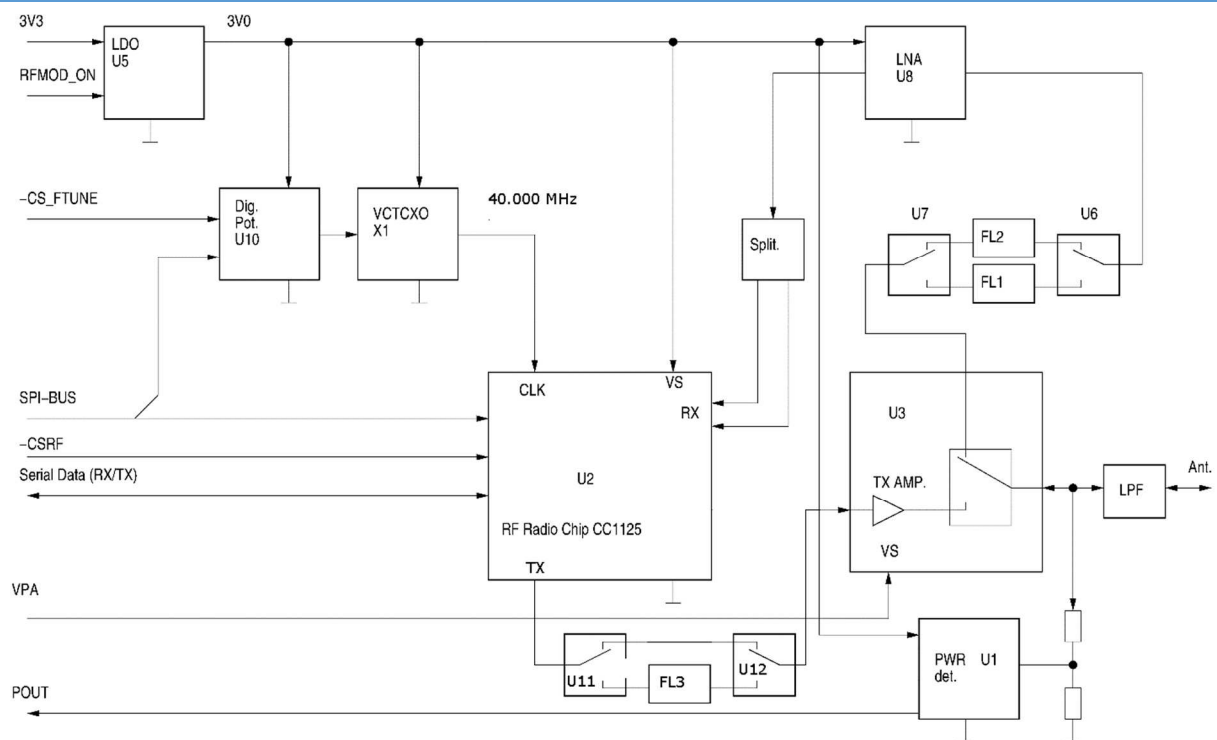
The A431 was specially designed for narrow-band FM data communication. The complete transceiver is enclosed in a screening shield.

The radio module A432 mainly consists of:

- CC1125 Ultra High Performance RF Narrowband Transceiver (U2), Texas Instruments
- RF Front End Module RF6504 (TX amplifier and antenna switch) (U3), RFMD
- Low Noise, Low Current Amplifier (LNA)(U8), Skyworks
- LTC5507 RF Power Detector (U1), Linear Technology
- SAW RX Filter (FL1, FL2)(for low and high band selection)
- SAW TX Filter for EN300 220 operation (FL3)

The module operates in the 430 to 470 MHz range, making it compatible with most radio communication regulations in the world. The output power is 0.5 W, while the modulation is narrow-band FM (12.5, 20 or 25 kHz channel spacing). The power consumption in receive mode is remarkably low (under 42 mA).

BLOCK DIAGRAM



THE MODULE CONNECTOR

All control signals and supply voltages are accessible via the 24 pin connector P2.

PIN	Name	Function
1	VPA	PA power supply, 3.6 V
2	VPA	PA power supply, 3.6 V
3	VDD_IN	Power supply, 3.0 V
4	RFMOD_ON	RF module enable, HIGH = enable
5	SCLK	SPI clock
6	SO	SPI serial data output
7	SI	SPI serial data input
8	-CSRF	SPI chip select, LOW = selected
9	-CCRESET	Reset signal for transceiver chip, LOW = reset
10	RXDATA	Received data output
11	TXDATA	Transmit data input
12	RXTXCLK	Receive/transmit clock
13	RXEN	Receiver enable
14	TXEN	Transmitter enable
15	POUT	Output power measurement
16	-FEEN	Front end enable, LOW = enable
17	VCTCXO_ON	VCTCXO enable input, HIGH = enable
18	LBS	Low band select, 430 – 450 MHz
19	HBS	High band select, 450 – 470 MHz
20	-CSFTUNE	Chip select frequency fine tune
21	CFG0	HW configuration bit 0
22	CFG1	HW configuration bit 1
23	CFG2	HW configuration bit 2
24	GND	Ground connection

3 additional GND connections are made by the module mounting holes.

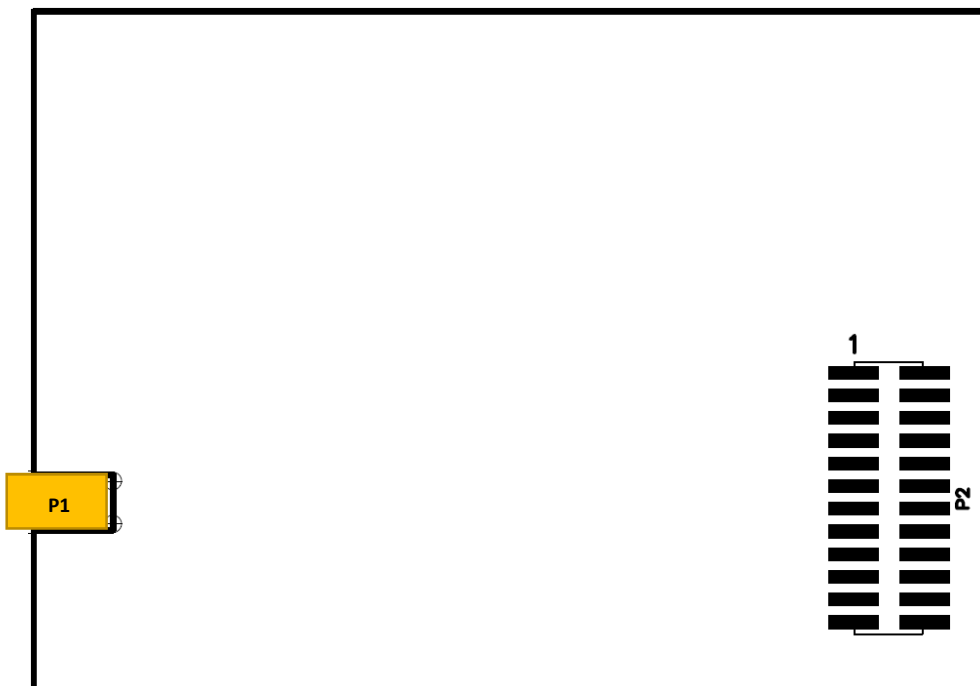


Figure 1, Module Bottom Side

THE ANTENNA CONNECTOR

The antenna is connected to the module via the MMCX connector P1.

A432 MODULES'S PHOTOGRAPHS

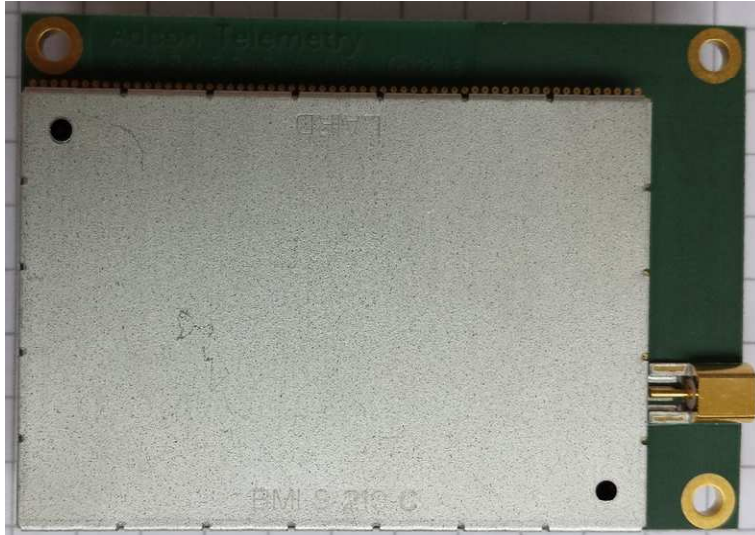


Figure 2, A432 TOP VIEW, closed lid



Figure 3, A432 BOTTOM VIEW

FCC AND IC STATEMENT

FCC PART 15.21 STATEMENT

Changes or modifications not expressly approved by Ott Hydromet GmbH could void the user's authority to operate the equipment.

RSS-GEN, CNR-GEN 8.4

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.