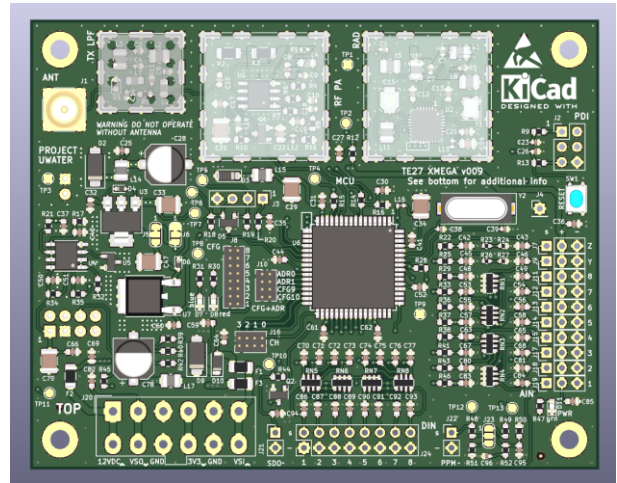


Receiver



Transmitter

General

- Simplex/one-way radio connection.
- Linear/1:1 remote control applications
- Dynamic control of a model submarine equipped with piston tanks.
- Antenna connection: 50 Ohm SMA connector.
- Reset button, optional RF shielding, latency approx. 0.1s
- 27MHz ISM, 5 channels, FSK, BW=10kHz
- Encodes and decodes 7x digital and 7x analogue signal
- F=26.995, 27.045, 27.095, 27.145 or 27.195MHz
- Supports AX5043 or Radiometrix LMT0 based transmitter.

Receiver

- Errors: CRC-timeout, low battery, max depth and water-leakage.
- Dimensions: 57x100mm.
- LNA (compensation filter losses).
- Inputs: 1x RF, 1x error, 4x end-limit switch, 1x serial
- Outputs: 7x servo pulse (buffered), 7x on/off (NPN), 1x error, 1x serial, 2x LED, 1x valid CRC
- Jumpers: 8x CFG, 2x ADR, 2x CH
- Supply voltage: 6...12VDC (battery/regulated).

Transmitter

- Optional Radiometrix LMT0 module on the back of the PCB.
- Dimensions: 75x95mm.
- Inputs: 8x digital, 10x analogue, 1x PPM, 1x serial
- Outputs: 1x serial, 1x RF, 2x LED, 1xPPM
- Jumpers: 10x CFG, 4x CH, 2x ADR
- Supply voltage: 12VDC regulated

Transmitter configuration options

- | | |
|----------------------------|--------------------------------|
| 1 = Dynamic control | 7 = Invert servo pulse 7 |
| 2 = Invert servo pulse 1&2 | 8 = Extended servo pulses |
| 3 = Invert servo pulse 3 | 9 = Speed adjust piston tank 2 |
| 4 = Invert servo pulse 4 | 10 = Continuous auto-ranging |
| 5 = Invert servo pulse 5 | Y = PPM or analogue |
| 6 = Invert servo pulse 6 | Z = Invert PPM |

Protocol (n-bytes)

Header 2x Pre-amble 1x Sync	Payload 1x Configuration 1x Address 14x Servo pulses 1x On/off	Footer 2x CRC (CRC16) 2x No-modulation
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Receiver configuration options

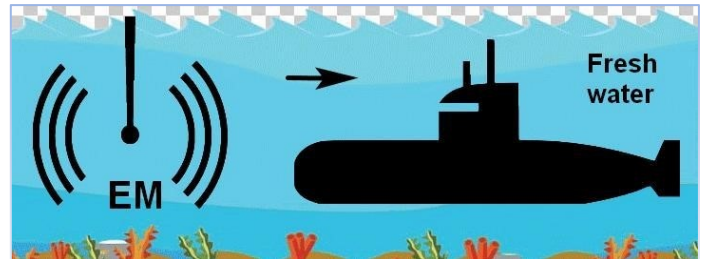
- | | |
|----------------------------|--------------------------------|
| 1 = Dynamic control | 5 = Low battery voltage |
| 2 = Servo test signal | 6 = Extended servo pulses |
| 3 = X-rudder configuration | 7 = Speed adjust piston tank 2 |
| 4 = Low battery voltage | 8 = Continuous auto-ranging |

Antenna

Ashore Aerial	Vessel Preferable a submersed dipole antenna on the outside of the fuselage (see website).
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Application example

Imagine a model submarine with two piston tanks an after dive- and direction rudder and a propeller. The forward dive rudder is fixed. To control such a kind of model submarine would require 5x a servo control signal. Note, the first two servo control signals are assigned to piston tank control purposes. The receiver can be configured such that a control function applies to the first two servo control signals. If dynamic control is selected an active end-limit switch stops the corresponding piston tank (directional). Also with dynamic control enabled, an error will force both piston tanks to be emptied. For more see the user manual.



Abbreviations: ADR = Address, CFG = Configuration, CH = Channel, CRC = Cyclic redundancy check, EM = Electromagnetic wave, FSK = Frequency shift keying, LNA = Low noise amplifier, PPM = Pulse Position Modulation, NPN = Negative positive negative transistor, RC = Radio Control, RF = Radio frequency, TBD = To be determined, TRM = Transmitter, USART = Universal synchronous and asynchronous receiver-transmitter