

WialonRetranslator 1.0 protocol description

Incoming data.

All data is received in a binary format via TCP protocol. This data is contained in a package of the following format:

Size (bytes)	Field Type	Field Description
4	Integer value	Package size
-	Text	Controller identifier. Size of this field as well as of the other text fields is not fixed. End-of-line indicator is a 0 byte (00).
4	Integer value	Time in seconds (UTC)
4	Integer value	Bit flags of a message. 0×1 - location information 0×2 - digital inputs information 0×4 - digital outputs information 0×10 - alert bit 0×20 - driver's identifier information All the other bits are reserved or intended for usage in Wialon only.
-	-	Set of data blocks in a package. Possess successive structure

Data block has the following format:

Size (bytes)	Field Type	Field Description
2	Integer value	Block type
4	Integer value	Block size
1	Integer value	Security attribute 1 — parameter hidden 0 — parameter shown
1	Integer value	Data block type 0x1 — text 0x2 — binary 0x3 — integer-valued (int, 4 bytes) 0x4 — fractional (double) 0x5 — integer-valued (long, 8 bytes)
-	Text	Block name posinfo — block with coordinates* pwr_ext — voltage supply avl_inputs — digital inputs value avl_outputs — digital outputs value adc1, adc2 - analog sensor value gsm — gsm signal level ign — ignition can1, can2 ... — can value (bus topology)
-	-	Block value

* — if values of the first 3 parameters of the block are missing, then the whole block doesn't get into the package.

The 'posinfo' binary block has the following structure ('block value' field):

Size (bytes)	Тип поля	Field description
8	Fractional value	Lon - longitude
8	Fractional value	Lat - latitude
8	Fractional value	altitude
2	Integer value	speed
2	Integer value	course
1	Integer value	satellites number

The rest of the blocks are intuitive due to a simple structure.

Outgoing data.

Package receiving confirmation byte (0x11) should be sent to the server for each incoming package.

Example of an incoming package analysis

Source package:

74000000333533393736303133343435343835004B0BFB70000000030BBB000000270102706F73696E666F00A027AFDF5D9848403AC7253383DD4B40000000000805A40003601460B0BBB0000001200047077725F657874002B8716D9CE973B400BBB00000011010361766C5F696E707574730000000001

74000000 — package size (116)

33353339373630313334343534383500 — controller's identifier (353976013445485)

4B0BFB70 — UTC time (1259076464 2009/11/24 17:27:44)

00000003 — flags (3)

0BBB — block type (3003)

00000027 — block size (39)

01 — security attribute (1)

02 — block's data type (2)

706F73696E666F00 — block name

(posinfo) A027AFDF5D984840 — lon

(49.1903648) 3AC7253383DD4B40 — lat

(55.7305664) 0000000000805A40 —

altitude (106.0) 0036 — speed (54)

0146 — course (326)

0B — satellites number (11)

0BBB — block type (3003)

00000012 — block size (18)

00 — security attribute (0)

04 — block's data type (4)

7077725F65787400 — block name

(pwr_ext) 2B8716D9CE973B40 — value

(27.593)

0BBB — block type (3003)

00000011 — block size (17)

01 — security attribute (1)

03 — block's data type (3) 61766C5F696E7075747300

— block name (avl_inputs) 00000001 — value (1)