

Wialon Retranslator 1.0. Protocol description

Incoming data

All incoming data has binary format and is sent via TCP protocol. The packet has the following format:

Size (in bytes)	Field type	Field description
4	Integer	Packet size
-	Char	Controller ID. This field has variable size. Null byte (00) is the end of the string.
4	Integer	Time in seconds (UTC)
4	Integer	<p style="text-align: center;">Message bit flags.</p> <p style="text-align: center;">0×1 – Position information 0×2 – digital inputs information</p> <p style="text-align: center;">0×4 - digital outputs information 0×10 – Alarm bit</p> <p style="text-align: center;">0×20 – Driver's ID information All other bits are reserved or used only by Wialon.</p>
-	-	Data blocks inside the packet, blocks follow one after another

Data block has the following format:

Size (in bytes)	Field type	Field description
2	Integer	Block type
4	Integer	Block size
1	Integer	Visibility attribute (1 – parameter is invisible, 0 - visible)
1	Integer	<p>Block data type</p> <p>0x1 — text</p> <p>0x2 — binary</p> <p>0x3 — Integer(int, 4 bytes)</p> <p>0x4 — floating (double)</p> <p>0x5 — Long int(long, 8 bytes)</p>
-	Char	<p>Block name</p> <p>posinfo - coordinates</p> <p>pwr_ext – power voltage</p> <p>avl_inputs – digital inputs</p> <p>avl_outputs – digital outputs</p> <p>adc1,adc2 – analog sensors</p> <p>gsm – gsm signal level</p>

		ign - ignition can1, can2 – CAN bus values ...
-	-	Block value

Binary block «posinfo» must present inside each packet. “Block value” field structure:

Size (in bytes)	Field type	Field description
8	Float	Lon – longitude
8	Float	Lat - latitude
8	Float	Height
2	Integer	Speed
2	Integer	Course
1	Integer	Number of satellites

Other used blocks has simple structure. They are intuitively understandable.

Outgoing data

For each incoming packet server must receive acknowledgment byte (indicates, that packet was received successfully): **0x11**

Example. Incoming packet structure

Original packet:

```
74000000333533393736303133343435343835004B0BFB70000000030BBB0000002701027
06F73696E666F00A027AFDF5D9848403AC7253383DD4B400000000000805A400036014
60B0BBB0000001200047077725F657874002B8716D9CE973B400BBB0000001101036176
6C5F696E7075747300000000001
```

74000000 — packet size (116)

33353339373630313334343534383500 — controller ID (353976013445485)

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

00000003 — flags (3)

0BBB — block type(3003)

00000027 — block size (39)

01 — visibility attribute(1)

02 — block data type (2)

706F73696E666F00 — Block name (posinfo)

A027AFDF5D984840 — lon (49.1903648)

3AC7253383DD4B40 — lat (55.7305664)

0000000000805A40 — height (106.0)

0036 — speed(54)

0146 — course (326)

0B — number of satellites(11)

0BBB — block type(3003)

00000012 — block size (18)

00 — visibility attribute(0)

04 — block data type (4)

7077725F65787400 — Block name (pwr_ext)

2B8716D9CE973B40 — value (27.593)

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0BBB — block type(3003)

00000011 — block size (17)

01 — visibility attribute (1)

03 — block data type (3)

61766C5F696E7075747300 — Block name (avl_inputs)

00000001 — value (1)