UDP ASCII

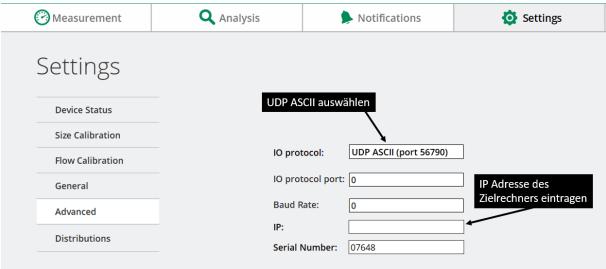
Short description

User Datagram Protocol is a simple transfer protocol. Data is sent every second to a specified IP address. There is no check whether the data has been received by the destination computer.

Activation of UDP ASCII data transfer

Do as follows to activate the data transfer:

- 1. Menu path: Settings > Advanced (required password is given to you on request)
- 2. Select "UDP ASCII (port 56790)" in the "IO protocol" dropdown menu
- 3. Enter the IP address of the destination computer in the "IP" text field. You need a USB keyboard or Windows' on-screen keyboard (Application list/Windows Ease of Access/On-screen Keyboard). Initially the on-screen keyboard may fill the whole screen; there is a "size" command in it's menu which creates a small floating keyboard.
- --> Fidas Frog sends data every second to the destination computer. Data will be received at the destination through port 56790.



Content of the data packets

The example below shows the content of the data packets transmitted:

Serial number<sendVal $0=X_0;1=X_1;...204=X_{204}$ >Checksum (X_i : measurement value of data channel i)

Checksum is calculated by adding the results of the byte-to-byte XOR checks along the whole string.

Data channels Fidas® Frog

60	Cn [P/cm³]
61	PM1 [μg/m³]
62	PM2.5 [μg/m³]
63	PM4 [μg/m³]
64	PM10 [μg/m³]
65	PMtotal [μg/m³]
110 - 204	Particle size distribution (size intervals see section Particle size distribution)

Particle size distribution

To get a complete particle size distribution the data of channels (110-204) must be related to the interval limits.

Data channel	X _{lower} [μm]	X _{upper} [μm]
110	0,100000	0,107461
111	0,107461	0,115478
112	0,115478	0,124094
113	0,124094	0,133352
114	0,133352	0,143301
115	0,143301	0,153993
116	0,153993	0,165482
117	0,165482	0,177828
118	0,177828	0,191095
119	0,191095	0,205353
120	0,205353	0,220673
121	0,220673	0,237137
122	0,237137	0,254830
123	0,254830	0,273842
124	0,273842	0,294273
125	0,294273	0,316228
126	0,316228	0,339821
127	0,339821	0,365174
128	0,365174	0,392419
129	0,392419	0,421697
130	0,421697	0,453158
131	0,453158	0,486968
132	0,486968	0,523299
133	0,523299	0,562341
134	0,562341	0,604296
135	0,604296	0,649382
136	0,649382	0,697831
137	0,697831	0,749894
138	0,749894	0,805842
139	0,805842	0,865964
140	0,865964	0,930572
141	0,930572	1,000000
142	1,000000	1,074608
143	1,074608	1,154782
144	1,154782	1,240938
145	1,240938	1,333521
146	1,333521	1,433013
147	1,433013	1,539927
148	1,539927	1,654817
149	1,654817	1,778279
150	1,778279	1,910953
151	1,910953	2,053525
152	2,053525	2,206734
153	2,206734	2,371374
154	2,371374	2,548297
155	2,548297	2,738420
156	2,738420	2,942727
157	2,942727	3,162278
158	3,162278	3,398208
159	3,398208	3,651741
160	3,651741	3,924190
161	3,924190	4,216965
162	4,216965	4,531584
163	4,531584	4,869675
164	4,869675	5,232991

Data channel	X _{lower} [μm]	X _{upper} [μm]
165	5,232991	5,623413
166	5,623413	6,042964
167	6,042964	6,493816
168	6,493816	6,978306
169	6,978306	7,498942
170	7,498942	8,058422
171	8,058422	8,659643
172	8,659643	9,305720
173	9,305720	10,000000
174	10,000000	10,746078
175	10,746078	11,547820
176	11,547820	12,409378
177	12,409378	13,335215
178	13,335215	14,330126
179	14,330126	15,399265
180	15,399265	16,548170
181	16,548170	17,782795
182	17,782795	19,109529
183	19,109529	20,535250
184	20,535250	22,067341
185	22,067341	23,713737
186	23,713737	25,482967
187	25,482967	27,384197
188	27,384197	29,427271
189	29,427271	31,622776
190	31,622776	33,982082
191	33,982082	36,517414
192	36,517414	39,241898
193	39,241898	42,169651
194	42,169651	45,315838
195	45,315838	48,696751
196	48,696751	52,329910
197	52,329910	56,234131
198	56,234131	60,429638
199	60,429638	64,938164
200	64,938164	69,783058
201	69,783058	74,989418
202	74,989418	80,584221
203	80,584221	86,596436
204	86,596436	93,057205