



Meter2SCADA



electricity, water, gas, heat,

Metering Systems

Protocols

- „1107“, VDEW (IEC 62056-21)
- DLMS (IEC 62056-46-53-61-62)
- ModBus RTU
- MBus (EN 13757-3)
- SCTM
- manufacturer specific



Meter2SCADA

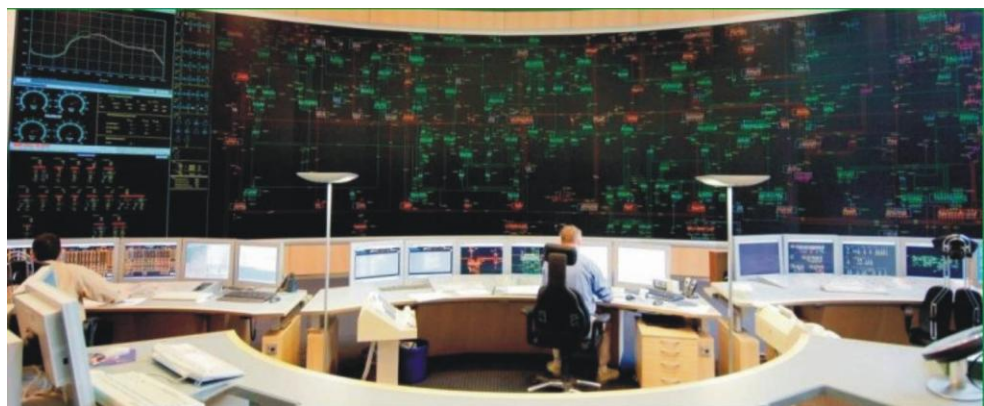


grid-, power plant-, facility-

SCADA Systems

Protocols

- IEC 60870-5-101
- IEC 60870-5-104
- OPC-DA
- ModBus RTU
- File / FTP
- SQL database



Meter2SCADA

Gateway for **metering** devices and systems to **SCADA** systems for easy integration of metering data in control and process automation systems

Available as **device** with high available hardware or as **software** (service) for MS Windows Operation systems



Information collection

- Cyclic acquisition of metering and field devices
- Cyclic loading of files and SQL-database access
- Target for IP-Telemetry push-messages



Information processing

- Live-table with process variables
- Calculation of new process variables via formulas
- Generation and transmission of change notifications

1	ACTIVE ENERGY IMPORT	1-1.1.8.0	11.01.2010 10:22:32.275	0,044	VALID	kWh
2	ACTIVE ENERGY EXPORT	1-1.2.8.0	11.01.2010 10:22:32.275	1253,473	VALID	kWh
3	REACTIVE ENERGY IMPORT	1-1.3.8.0	11.01.2010 10:22:32.275	32,609	VALID	kvarh
4	REACTIVE ENERGY EXPORT	1-1.4.8.0	11.01.2010 10:22:32.275	0,005	VALID	kvarh
5	ACTIVE POWER	1-1.16.7.0	11.01.2010 10:22:33.806	0,022	VALID	kW
6	REACTIVE POWER	1-1.131.7.0	11.01.2010 10:22:32.275	0,010	VALID	kvar
7	VOLTAGE L1	1-1.32.7.0	11.01.2010 10:22:32.275	0,0	VALID	V
8	VOLTAGE L2	1-1.52.7.0	11.01.2010 10:22:32.275	0,0	VALID	V
9	VOLTAGE L3	1-1.72.7.0	11.01.2010 10:22:33.806	228,1	VALID	V
10	CURRENT L1	1-1.31.7.0	11.01.2010 10:22:32.275	0,000	VALID	A
11	CURRENT L2	1-1.51.7.0	11.01.2010 10:22:32.275	0,000	VALID	A
12	CURRENT L3	1-1.71.7.0	11.01.2010 10:22:38.570	0,201	VALID	A
13	FREQUENCY	1-1.14.7.0	11.01.2010 10:22:32.275	49,99	VALID	Hz
14	COUNTER DISTURBED	0.0.F.F	11.01.2010 10:22:32.275	OFF	VALID	
15	COMMUNICATION DISTURBED		11.01.2010 10:22:32.275	OFF	VALID	



Information output

- Protocol specific transmission of notifications (e.g. IEC 60870-5)
- Protocol specific providing of informations (e.g. ModBus RTU)
- File export and SQL-database insertions



Device drivers and protocols

- „1107“, VDEW (IEC 62056-21) (e.g. EMH LZQJ; Elster Axxxx; Landis+Gyr ZxD; Baer DLM6)
- DLMS (IEC 62056-46-53-61-62) (e.g. EMH LZQJ; Landis+Gyr ZxD, ZxQ)
- ModBus RTU Master (e.g. Schneider ION7xxx; ABB RTU8)
- MBus (EN 13757-3) (many electricity, gas ,water, heat and other devices)
- SCTM (e.g. Baer DLX, DataFW, 7FMS1; Landis+Gyr FAG)
- manufacturer specific protocols (e.g. Baer FCS; CEWE Prometer)

Communication lines to metering devices

- Point-to-point leased line (e.g. RS232/RS485/RS422/FO/MBus)
- Point-to-multipoint leased line (e.g. RS485/RS422/MBus)
- Serial over TCP/IP (LAN and GRRS fixed IP)
- LAN and GRRS dynamic IP with IP-Telemetry (DIN 43863-4)
- Push Target for IP-Telemetry (DIN 43863-4)

Interfaces (up-stream)

- IEC 60870-5-101 Slave (also multiple)
- IEC 60870-5-104 Server (also as Multi-Client-Service)
- ModBus RTU Slave (serial and over TCP/IP)
- OPC DA Server
- M2S Link (cascading)
- SQL Database Push
- File export (optional with FTP automation)

Interfaces (down-stream)

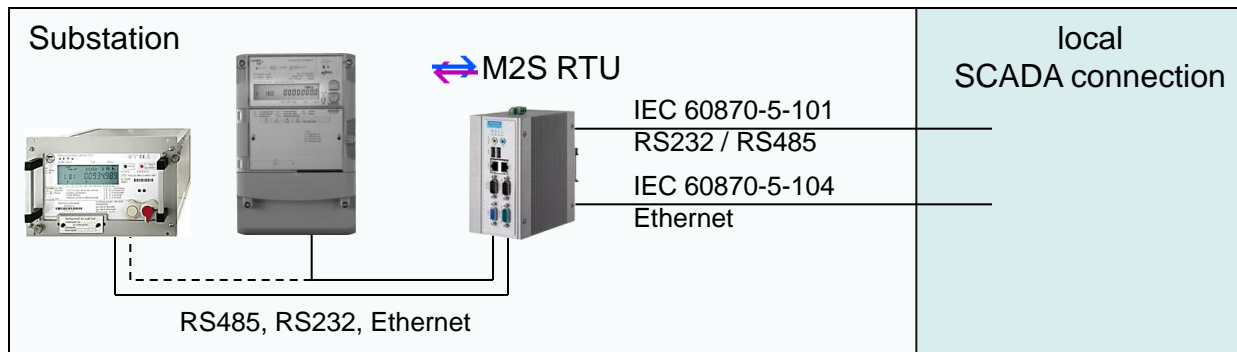
- OPC DA Client
- M2S Link (cascading)
- SQL Database Pull
- File import (optional with FTP automation)

Service-Interfaces

- parameterizing interface (serial and over TCP/IP)
- Web-Interface
- Interface for communication monitoring (ComLog – TCP/IP)

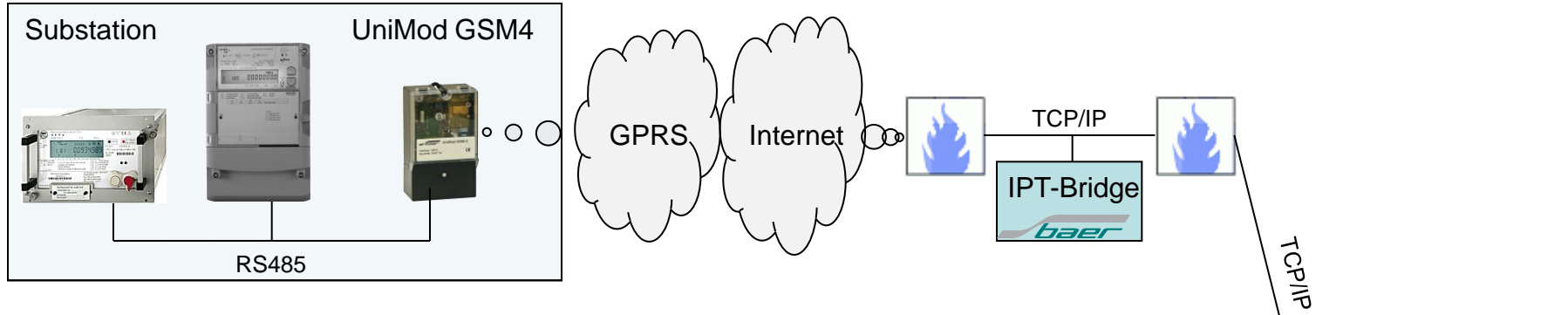
System structure - local

Not centered solution with local SCADA connection

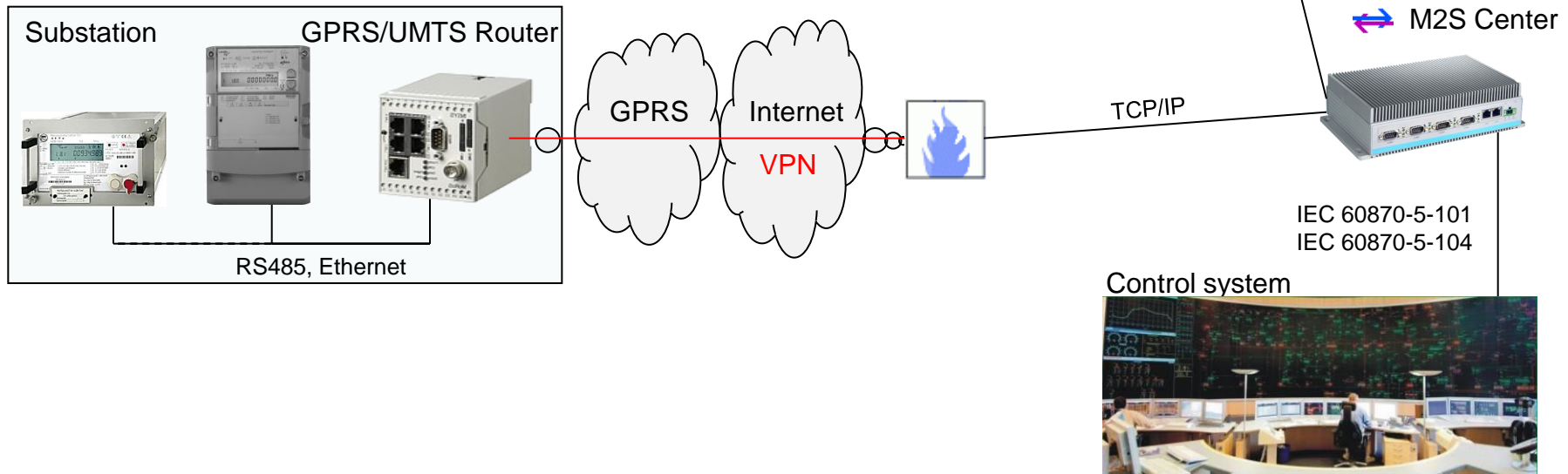


System structure - central

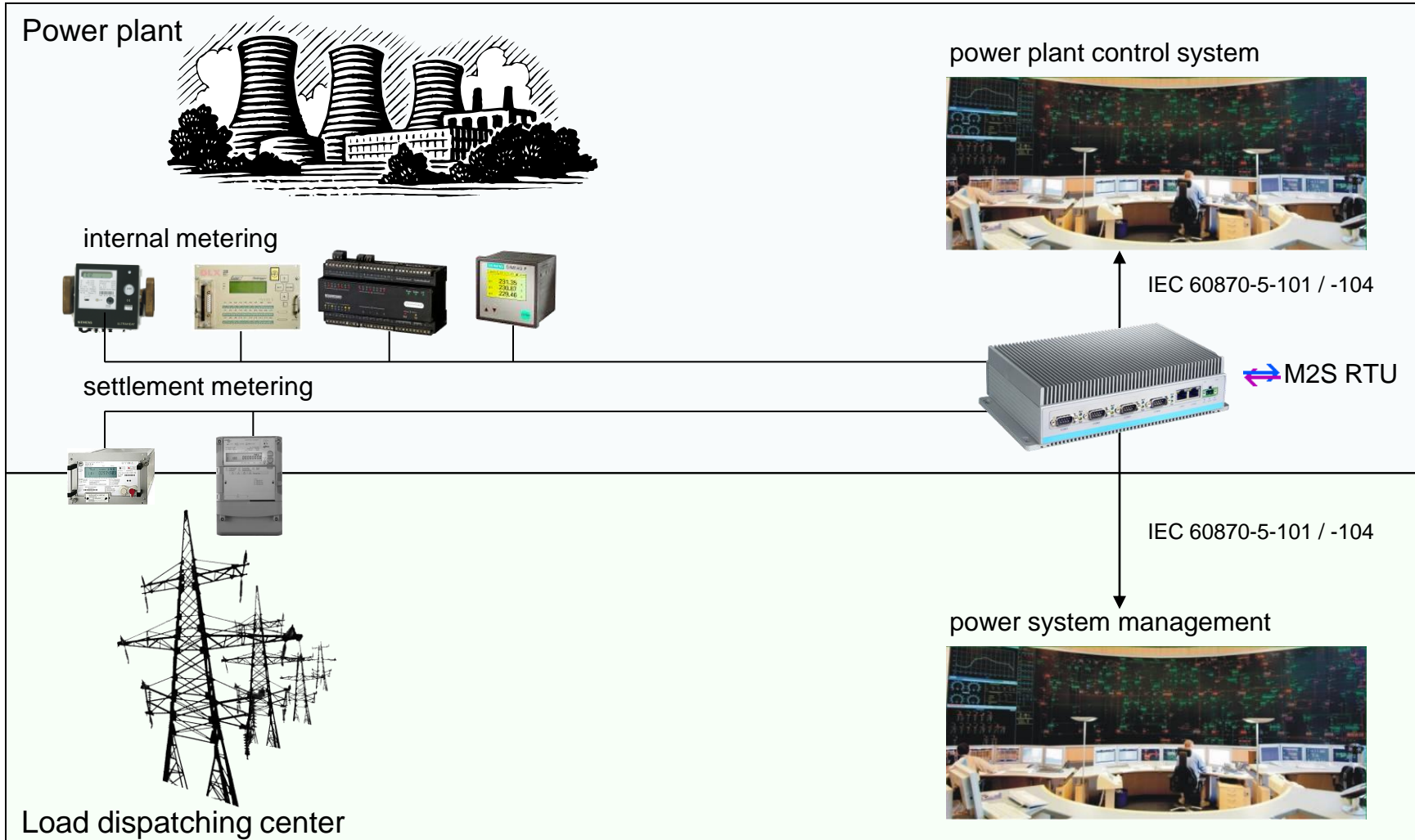
GPRS leased line via IP-Telemetry (DIN 43863-4)



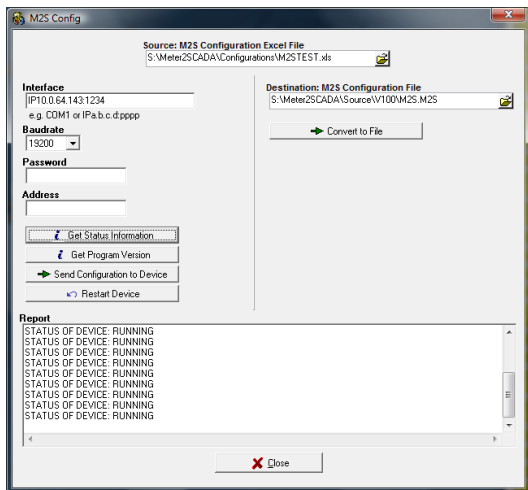
GPRS/TCP-IP leased line via VPN Router



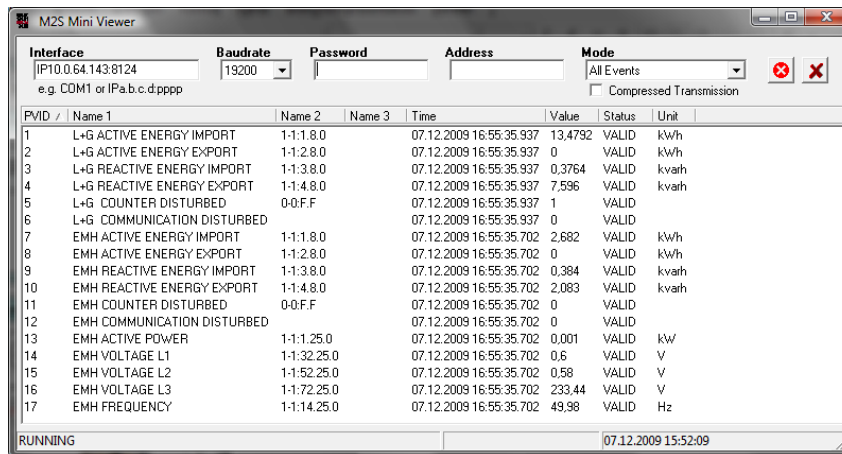
Example of use: power plant



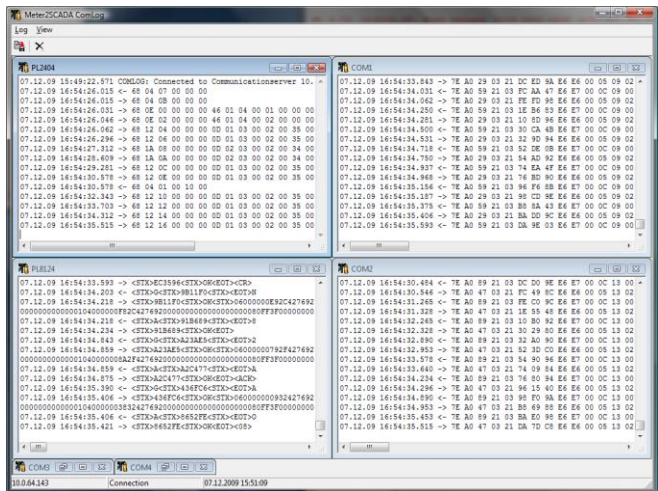
M2S Config: remote configuration (via COM or TCP/IP)



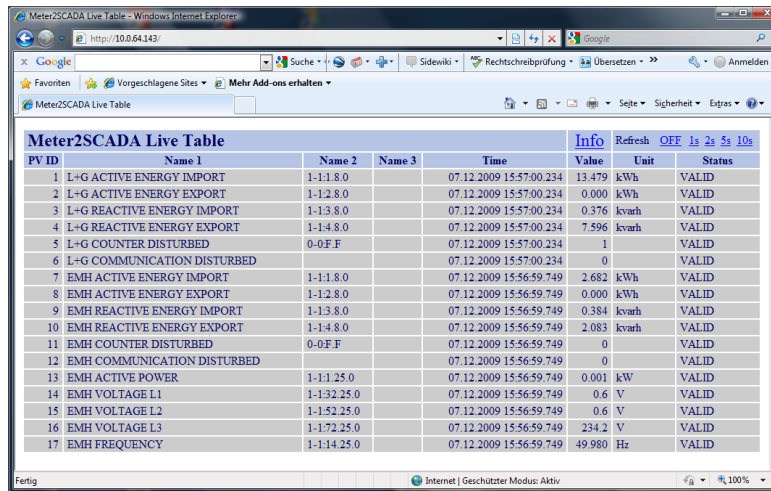
Mini Viewer: real time visualisation of process variables (via COM or TCP/IP)



M2S ComLog: real time trace of data on serial and network interfaces



WEB-Server: Visualisation of process variables and states



Complete system parameterization and (=) documentation using EXCEL document

Microsoft Excel - M2S_TEST_UNO_LG_EMH.xls

Frage hier eingeben

A	B	AM	AN	AO	AP	AQ	AR	AS	AT
1	Identification		IEC870-5 -101 Client / -104 Server						File Export 1
2	Unique Number	Access Right	CAA	IOA	ASDU Type	Spontaneous	Factor	Threshold	PV Name
3	PVID	MBCACRI	IEC8705CAA	IEC8705IOA	IEC8705ASDU	IEC8705SPO	IEC8705FAC	IEC8705THR	FE1PVNAME
4	1	L+G ACTIVE ENERGY IMPORT	1	1	F	2	1		
5	2	L+G ACTIVE ENERGY EXPORT	1	3	F	2	1		
6	3	L+G REACTIVE ENERGY IMPORT	1	2	F	2	1		
7	4	L+G REACTIVE ENERGY EXPORT	1	4	F	2	1		
8	5	L+G COUNTER DISTURBED	1	101	S	2	1		
9	6	L+G COMMUNICATION DISTURBED	1	102	S	2	1		
10	7	EMH ACTIVE ENERGY IMPORT	2	1	F	2	1		
11	8	EMH ACTIVE ENERGY EXPORT	2	3	F	2	1		
12	9	EMH REACTIVE ENERGY IMPORT	2	2	F	2	1		
13	10	EMH REACTIVE ENERGY EXPORT	2	4	F	2	1		
14	11	EMH COUNTER DISTURBED	2	101	S	2	1		
15	12	EMH COMMUNICATION DISTURBED	2	102	S	2	1		
16	13	EMH ACTIVE POWER	2	11	F	2	1		
17	14	EMH VOLTAGE L1	2	51	F	2	1		
18	15	EMH VOLTAGE L2	2	52	F	2	1		
19	16	EMH VOLTAGE L3	2	53	F	2	1		
20	17	EMH FREQUENCY	2	19	F	2	1		
21									
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CONFIG \PV \DEVICE \Help PV \Help DEVICE \Help Timezone /

Bereit