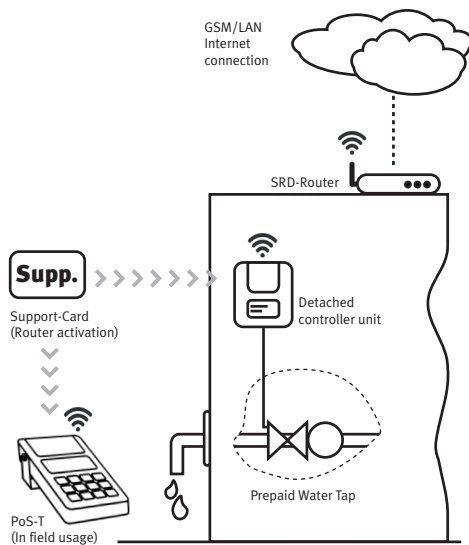# Prepaid Meter Router

Prepaid Meter — Router

The optional iSAtech router is obtainable in the configuration GSM/UMTS, WiFi or LAN. The communication to the Dispensing Units and the Point of Sale-Terminal is realized by 433MHz, 868MHz or 2,4GHz. With this the linking of up to 50 devices in a radius of up to 1 km is possible. The connection to the server is done via Internet and depending on configuration, mobile network, WiFi or LAN. The GSM/UMTS configuration is designed redundantly and allows the use of two different mobile network providers.

GSM/LAN Internet connection

SRD-Router

Supp.

Support-Card (Router activation)

PoS-T (In field usage)
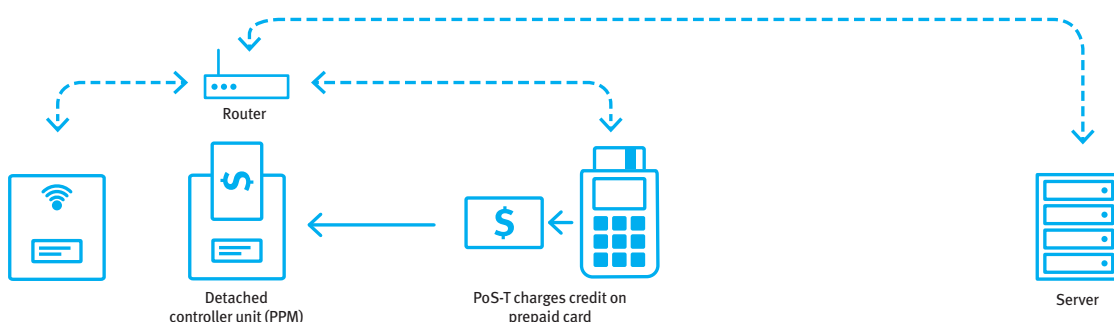
Detached controller unit

Prepaid Water Tap

Synchronization

The synchronization interval can be configured to the customers' needs, therefore allowing for balance between fast data transfer and cost effectiveness. The power supply is realized externally by battery or solar plant.
If a firmware update for the router is necessary it is automatically downloaded during the synchronization process and afterwards installed.

Data transfer and provision

The router is synchronizing itself periodically with the server. The data is stored at the router and the systems in the field like the Dispensing Units and Point of Sale-Terminals retrieve the data and transfer their logs respectively.

Router

Detached controller unit (PPM)

PoS-T charges credit on prepaid card

Server

Prepaid Meter Router

Technical Data

Controller	Powerfull Linux-ARM architecture	**Display**	LCD/LED
Connection local	433MHz ISM band up to 0,5 km		Status display,
	868 MHz ISM band up to 0,5 km		Configuration display
	2.4 GHz ISM band	**Conformity**	CE-Sign
	encrypted two-way-communication		R&TTE-Directive 1999/5/EG
Connection server	GSM Quad-band 850/ 900/ 1800/ 1900MHz		
	GPRS class 12/10	**Power**	14-32 VDC max. 1 Ampere
	2 SIM (redundant)	**Protection**	up to IP66
	WLAN IEEE 802.11b/g*	**Temperature**	5 to 55° Degrees Celsius
	LAN (100-Mbit/s-Ethernet)*	**Humidity**	0 to 95%
Functions	Receiving and storing of logs of all systems in reach	**Dimensions**	100mm x 100mm x 50mm
			* optional
	Transferral of logs by mobile network or WiFi		
	Synchronization of virtual credit (charging over Internet) with the server		
	Provision of the virtual credit for all assigned PPW in range		
	Blacklist for PoS-T		
	Update-over-air		
	Fallback to a second GSM modem if mobile network is not available		
	Configuration automatically via server		
Syncronization	Configurable: 1 min up to 24h		
Security	AES-256		

Contact
water.isatech.de
zentrale@isatech.de

phone +49 (30) 36437545
fax +49 (30) 36437544

iSAtech water GmbH
Alt-Moabit 59-61
10555 Berlin Germany