



meshnet⁺ 4.0

General description

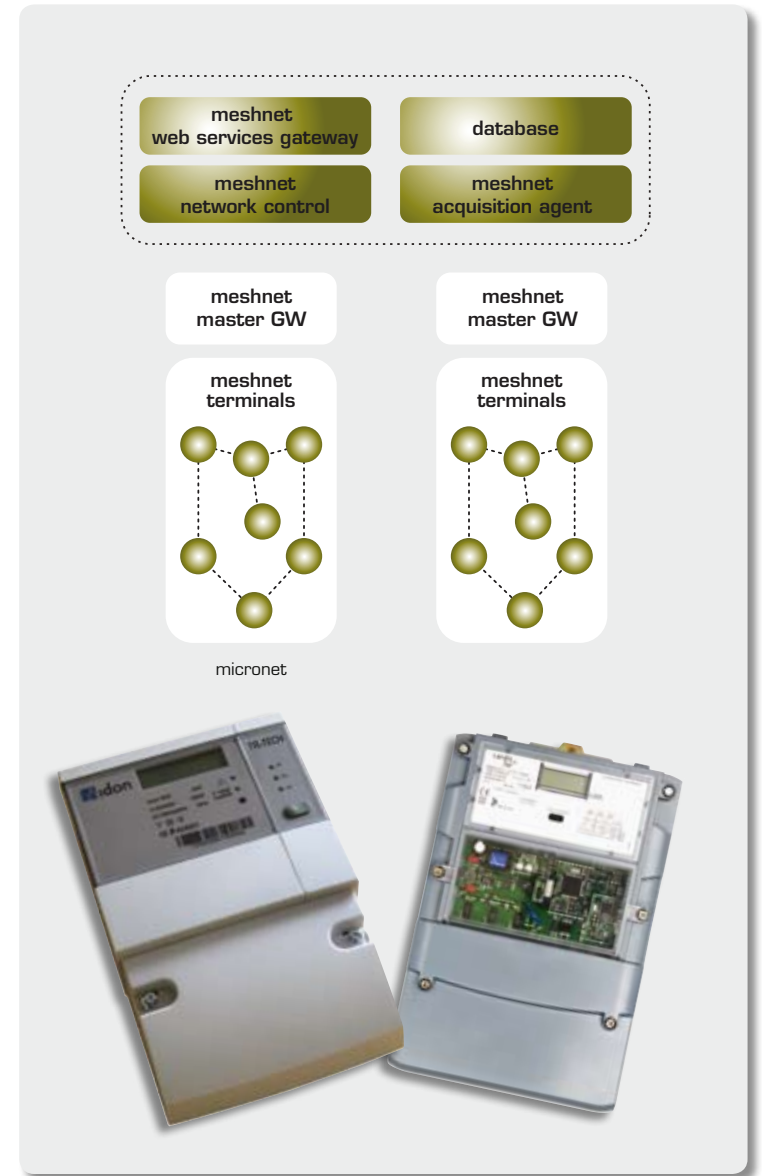
Meshnet 4.0 is an advanced communication subsystem with self configuring and self healing capabilities. Meshnet is designed for complex and large scale deployment of smart metering devices for various types of energy such as electricity, gas and water. Meshnet 4.0 is in all aspects based on open internet standards providing support for various existing and future smart metering applications by support for remote application upgrades.

Meshnet 4.0 also supports relevant parts of the DLMS/COSEM standard with features such as push of bulk meter data to a central database providing immediate response to DLMS queries from the acquisition system or agent.

Meshnet 4.0 hardware is based on state of the art technology and is powered by a 32-bit ARM microcontroller.

Special features

- Supports IP version 6
- Compliant with the 6LoWPAN protocol suit
- Over The Air Provisioning (OTAP)
- DLMS/COSEM interface
- Several antenna options
- Support for local storage of multiple data reading series
- Support for events (application and/or network)
- Easy to integrate in legacy systems
- Multiutility, Wireless MBUS support



Product data

Property/function/components	Value	Comment
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GENERAL

Meter support	Any	Subject for integration
CPU	ARM 32 bit	
Flash	256kB +1024kB serial data flash	
RAM	64K	
E ²	32K	
RTC	Optional	
Power backup	Optional	

I/O

WAN/LAN support	GPRS/3G/ETHERNET	
Meter protocol	DLMS/COSEM	Relevant parts
Antenna interface	SMB	
Wireless MBUS	EN 13757-4	Optional

RADIO / MESH

Radio transceiver	TI CC1101/1190	
Filters	SAW	
Oscillator	TCXO	
Radio frequency	869.400 - 869.650 MHz	
Modulation technique	(G)FSK/NRZ	
Link speed	50kbits	9600 bits/s OTA
Range, free sight (antenna height 2m) (20% PER) (pifa antenna)	>2000 meters	A network should be planned with a maximum distance of 400 m between nodes
Routing	ROLL	IETF RFC 5548 (requirements)
Link layer	IEEE 802.15.4b with extended frame size	Pending 802.15.4g

POWER SUPPLY & POWER CONSUMPTION

Power	1-3x230VAC/DC/	
Battery operation	N/A	
Power consumption (Rx mode)	~ 0,5W primary side	230VAC
Power consumption (Tx mode)	~ 1,0W primary side	230VAC

COMPLIANCE

Compliance radio	EN 300 220 - 3	
Compliance EMC; Emission	EN 301 489 - 3	
Compliance EMC; Immunity	EN 301 489 - 3	
Compliance LVD	EN 61010 - 1	

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