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Standard Terminal

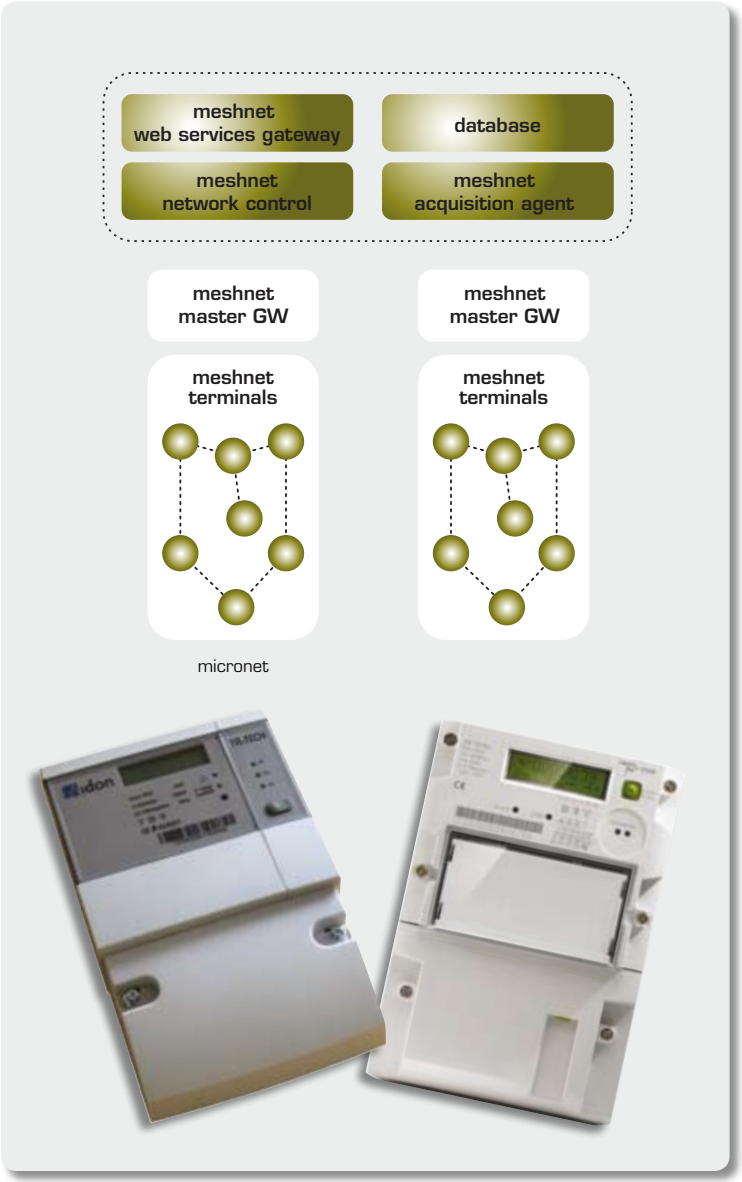
General description

Meshnet Standard Terminal is an advanced communication platform with self configuring and self healing capabilities. Meshnet is designed for complex and large scale deployment of data collection and device control applications. The Mesh routing algorithm used is AODV (Ad hoc On Demand Distance Vector) developed by IETF (Internet Engineering Task Force) and others.
The terminal is well equipped for AMR applications with both hardware and software support for reliable communication and support for remote application upgrade.

Meshnet Standard Terminal hardware is typically customized to customer requirements. Support for a number of electricity meters is available.

Special features

- Supports true Mesh network topology
- Automatic redundancy in networks
- Over The Air Provisioning (OTAP)
- Extended range with power amplifier
- SAW filter to reduce interference (now and in the future)
- Several antenna options
- Integrated 1 or 3 phase power supply
- Real time clock
- Real time clock backup (powerfail)
- 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



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Product data

Property/function/ components	Value	Comment

GENERAL

Meter support	Customization	Landis + Gyr, Aidon
CPU	Renesas M16C	
Flash	512K onboard + 1024kB serial data flash	
RAM	32K	
E^2	32K	
RTC	Dallas	
Power backup	SuperCap	RTC 7 days

I/O

GSM-modem	N/A	
Relay Out	6A 230VAC	
Antenna interface	SMB	
Wireless MBUS	EN 13757-4	Optional

RADIO / MESH

Radio transceiver	Chipcon CC1021	
PA	50 mW	
Filter	SAW	
Radio frequency	869.400 - 869.650 MHz	50 kHz channel width (5 virtual channels)
Modulation technique	(G)FSK/NRZ/Manchester	
Link bandwith	4800 bits/s (datarate)	9600 bits/s OTA
Range, free sight (antenna height 2m) (20% PER) (pifa antenna)	Up to 1800 m	A network should be planned with a maximum distance of 400 m between nodes
Routing	AODV	IETF RFC 3561
Link layer	LBT, ALL	Link Quality, algorithm for quality evaluation of link over time based on link budget and TX/RX statistics

POWER SUPPLY & POWER CONSUMPTION

Power	1-3x230VAC/DC/	
Power consumption (Rx mode)*	~ 0,5W primary side	Note value is approximation
Power consumption (Tx mode)*	~ 1,0W primary side	Note value is approximation
Output power radio	Max 50 mW	

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	

MMI

LED	1 green, 1 yellow	

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Meshnetbytritech Meshnet is the result of more than 10 years of development and deployment of large-scale wireless mesh networks. In close cooperation with power network operators and electricity utilities, we have developed the concept of mesh networking into a quality solution for smart metering. Meshnet is a brand owned by Tritech Technology AB, a Swedish research and engineering company founded in 1991, with over 150 employees. Tritech's head office is located in Stockholm.

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