

Datasheet

Communications Hub Cellular + Mesh

SMIP Central / South Region

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Revision History

Revision Date	Revision Number	Summary of Changes	Changes Marked
28 Jan 2014	0.1	Draft	N/A
28 Jan 2014	0.2	Manufacturer Update	N/A
28 Jan 2014	0.3	Minor changes	N/A

**Datasheet – Communications Hub TEF-CM (Cellular + Mesh)
SMIP Central / South Region – Telefonica**

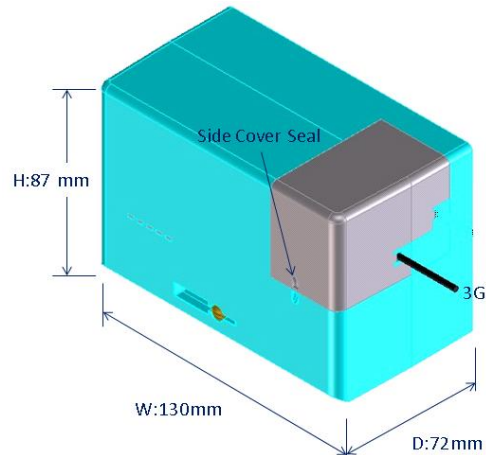
The SMIP-ready Communications Hub TEF-CM has the following key features

- Communications Hub with integrated, logically separated, Gas Proxy according to CHTS
- WAN: Cellular communication module
 - Single Band GSM/GPRS/EDGE: 900 MHz (2G)
 - Dual Band HSPA: 900/2100 MHz (3G)
 - Soldered VQFN8 chip SIM
 - Built-in antennae + external SMA antenna port (automatic detection and switching)
- NAN: RF Mesh extension of WAN
 - IEEE 802.15.4g RF Mesh networking at 869MHz
 - Built-in antenna
- HAN: IEEE 802.15.4 - 2.4GHz (ZigBee)
 - Built-in antenna
- Protocol stack according to GBCS
 - ZigBee, SmartEnergy Profile 1.2
 - IEC 62056-42 /-47 (DLMS Green Book v7), IEC 62056-53 / -61 / -62 (DLMS Blue Book v10)
 - Ready for ZigBee InterPAN
- Additional supported functions in conjunction with TEF network and Device Management platform
 - DNS support and dynamic IP allocation (IPv6) + 6LoWPAN for RF Mesh WAN extension
 - Additional 2G authentication layer
 - Time synchronization via WAN, RF Mesh, and distribution via ZigBee Time Cluster
 - Secure firmware download from file store (TFTP) and distribution via RF Mesh WAN extensions, and ZigBee OTA
 - Power outage detection and last gasp functionality
- ICHIS-compliant intimate host interface
 - Can be mounted on ESME, cradle, or hot shoe
 - Power input rated DC12V +/- 25%, max power draw average 1W, peak 6W
 - Electronic tamper detection
 - CSP pins interface for dedicated TEF test bench (sanitisation, triage & diagnostics in supply chain)
- Watchdog & safe mode recovery

Standards Compliance

- CE certified
- RoHS 2, WEEE, REACH compliant
- Low radio emissions within limits set for close proximity to human body
- Compliant with all SMIP-relevant security standards

Mechanics & Physical Dimensions



The dimensions of the TEF-CM are in line with MID requirements for smart meters:

- Dimensions 130 x 72 x 87mm (w x d x h) – TBC
- Weight: ~250 g
- ICHIS-compliant interface with sealing screw
- Sealable side cover (in grey) over external antenna connector
- Plastic housing according to SMETS2 meter standard
- Recyclable material and carton packaging

LED interface



5-LED status indicator for ease of installation and maintenance:

- GSM (Cellular WAN connection status)
- HAN (ZigBee connection status)
- MESH (RF Mesh connection status)
- SOFTWARE (CH embedded software status)
- GAS (Gas Proxy status)

Printed GUID (with bar Code 39 or 128) of CH and GP for ease of HAN commissioning

Environmental Conditions

Suitable for indoor installations or in an adequately sealed outdoor cabinet

- Ambient temperature -20°C to +55°C
- Ambient humidity 10% to 95% (non-condensing)
- Ingress protection: Ready for IP53 if mounted on ICHIS-compliant fitting host
- Storage conditions: -25°C to +70°C
- Designed for useful life of at least 15 years