

Holosys HoloSphere HS



- Suitable for AMR fixed networks design and installation
- Up to 10 000 Wireless M-Bus /LoRaWAN™ meters readouts
- Wireless M-Bus OMS/LoRaWAN™ with high sensitivity radio antenna
- Compatible with already implemented Wireless M-Bus OMS systems /LoRaWAN™ networks
- 230V/50Hz power supply with backup battery power supply or 3.6V standalone battery power supply
- Readout data storage up to 4GB
- Periodic meter readout data transfer via FTP/SMTp
- Meter data readout per request

Holosys HoloSphere HS is a compact design gateway device suitable for implementation and integration in various Automatic Meter Reading scenarios. Battery powered version of the device provides easy installation on the field. Transmitted meter readout data are received by embedded Wireless M-Bus OMS receiver or LoRaWAN™ modules and stored in the local device memory. Meter readout data can be sent periodically to a central server location or meter readout data transfer can be achieved from a central server location per request.

DATA COLLECTION

- Wireless M-Bus OMS devices readout according to EN13757-4, Wireless M-Bus T1/C1 Mode, 868.95 MHz
- Radio telegram AES128-bit decryption feature by user setting the telegram decryption key
- Meter readout data processing and storage into non-volatile memory
- Up to 10000 Wireless M-Bus OMS meters readouts stored

RECORDING OF RECEIVED METER READOUT DATA

- Periodical data readout with adjustable time period
- Recording of readout data into embedded non-volatile NAND Flash memory up to 4GB with at least one year readout data storage time with one hour data readout time period
- XML readout data storage file format for easy data processing and integration in various information systems
- Configurable alarms and alerts for system parameters, system logs storage to non-volatile memory, alarms and alerts transmission using SMS, SMTP or FTP protocols
- Meter readout data transfer to one or multiple FTP servers
- 15 minutes minimum readout data transfer period resolution

- Resend or delayed readout data transfer option due to potential connection or data transfer issues or potential system failure

EMBEDDED GPRS MODEM

- Standard Micro SIM card holder for mobile network provider Micro SIM card installation or eSIM embedded IC
- GPRS/GSM parameters setup
- Periodical GPRS connection checking/restoring

ADDITIONAL FEATURES

- Public and private IP network address
- Remote firmware upgrade
- Remote device commands execution (Reset)
- Device configuration data stored in non-volatile memory
- Embedded Web server (HTTP) for device monitoring, control and parameters setting using standard Web browser
- Remote direct device access using unique IP address
- Embedded battery powered Real-Time Clock (RTC)
- LED flashing device operation modes
- SMS alarm messaging options with customizable SMS message content based on different alarm type

LORAWAN™ FEATURES

- Class A and Class C LoRaWAN™ v1.0.2 communication protocol
- Cellular, WLAN and Ethernet connection options
- In accordance with radio standards: EN 300-220, EN 301-489-1, EN 301-489-9, EN 60 950-1
- AES-128 data encryption
- Transmission cycles defined by network

TECHNICAL CHARACTERISTICS		
System specifications		
Modem	GSM standard SMS, Fax, GPRS Class 12, support for PB-CCH support for 850, 900, 1800, 1900 MHz GSM band	
Supported network services and protocols	IP v4, TCP, UDP, DNS (client), PING, POP3 (client), SMTP (client), FTP (server, client), HTTP (server)	
FLASH RAM module	Embedded NAND Flash up to 4GB or micro SD card (up to 4 GB)	
Processor module (MPU)	Remote firmware update and remote software installation are available.	
Wireless M-Bus radio interface		
Frequency	868.95 MHz	
Data transfer rate	100 Kchips	
Standard	EN 13757-4:2005, mode T1/C1	
Radio antenna	868.95 MHz Built-in On-Board antennas	
	Optional external antenna 868.95 MHz, 50 Ω, vertical polarization, omnidirectional, 10 dBi min gain, IP67 rating	
LoRaWAN™ radio interface		
RF(TX) power	14 dBm (25 mW)	
RF(RX) sensitivity	up to -140 dBm	
Range	up to 15 km	
Communication protocol	LoRaWAN™ v1.0.2	
Standards	EN 300-220, EN 301-489-1, EN 301-489-3, EN 60 950-1	
General		
Power supply	AC	100-240V AC, 50/60Hz, 0.35A; P=15W max (+5V DC, 3A)
	Battery	Li-SOCI2 battery packs, 3.6V DC, 76Ah max Five (5) years battery supply autonomy based on device configuration
Standards	CE, EN60950-1:2006/A1:2010, EN13757-4 (mode T1)	
Housing	Material: Thermoplastic Dimensions w×h×d: 200 × 75 × 120 mm Colour: Light gray (RAL7035) Mounting: Bolts on the mountable surface Connector: 2,5mm ² max.	
IP rating	IP67	
Operating temperature range	-20°C ... +50°C	
Humidity	10% ... 70% relative humidity	
Weight	1.4 kg	