MPC-730

Main features:

- Freely chosen interfaces: up to 4 interfaces.
- Wireless M-bus. Modes S, T, R, C. OMS (Open metering system) supported.
- Supported interfaces: RS485, RS232, Data/Req (Kamstrup), Mbus, Current loop, GSM/GPRS, WCDMA/HSPA and LAN.
- Supported protocols: Modbus RTU, Modbus TCP/IP, IP, ICMP, UDP, TCP, DHCP, PPP, ARP, SNTP, IEC60870-5-104:200 and transparent, DynDNS, DNS(client), FTP(server&client).
- Routing: GSM - Ethernet routing
- Special: transparent non-standart protocol data transfer
- Memory expansion: up to 8GB using micros SD card
- Power: 9-36 VDC (10VA)
- Power for external devices: 3,7; 5; 6; 8 or 10 VDC (20mA)

First interface	
RS232	distance up to 15m, speed up to 19,2Kbit/s, GSM modem support
GSM/GPRS	4 band 850/900/1800/1900 MHz
Second interface (galvanically isolated)	
RS485	distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s
RS232	distance up to 15m, speed up to 19,2Kbit/s
Opto	(Kamstrup) data transfer interface
MBus	up to 8 devices
2 wire active Current Loop	25-27V, 14-20mA, up to 6km, speed up to 19,2Kbit/s
Third interface (galvanically isolated)	
RS485	distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s
RS232	distance up to 15m, speed up to 19,2Kbit/s
Opto	(Kamstrup) data transfer interface
MBus	up to 8 devices
2 wire active Current Loop	25-27V, 14-20mA, up to 6km, speed up to 19,2Kbit/s
Fourth interface	
RS485	distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s
RS232	distance up to 15m, speed up to 19,2Kbit/s
Fifth interface	
Wireless M–bus	T, S, R, C modes (433 MHz or 868 MHz, depending on market)
Protocols	
	Modbus RTU Modbus TCP/IP IP ICMP

	UDP TCP DHCP PPP ARP SNTP IEC60870-5-104:2000 DynDNS FTP server FTP client DNS client	

General		
Power	9-36 VDC	
Galvanic isolation	>1000V	
Capacity	300mA max	
Power for external devices	3,7/5/6/8/10 VDC (20mA)	

Regulatory approvals		

Specification		
CPU	ARM7	
SD card support	micro SD card up to 8GB	
Memory	archive storage 1-8 MB, independant data storage without power about 5 years	

LED indication		
Power	+	
Serial ports read/write for each port	+	
GSM/GPRS modem status	+	
Ethernet status	+	

Programing and updating		
Remote	GSM/GPRS, Ethernet (RJ45)	
Locally	USB, RS232, RS485	

Physical characteristics		
Dimmensions	147x128x50 mm	
Weight	400 g	
Mounting type	on DIN35 rail	
Safety class	IP20	

Climate conditions		
Operating temperature	-25..+60 °C	
Storage temperature	-40..+60 °C	
Humidity range	5-95%, non-condensing	

Other fuetures		
Real time clock	+	
MBus auto setup	+	
24 months warranty period	+	

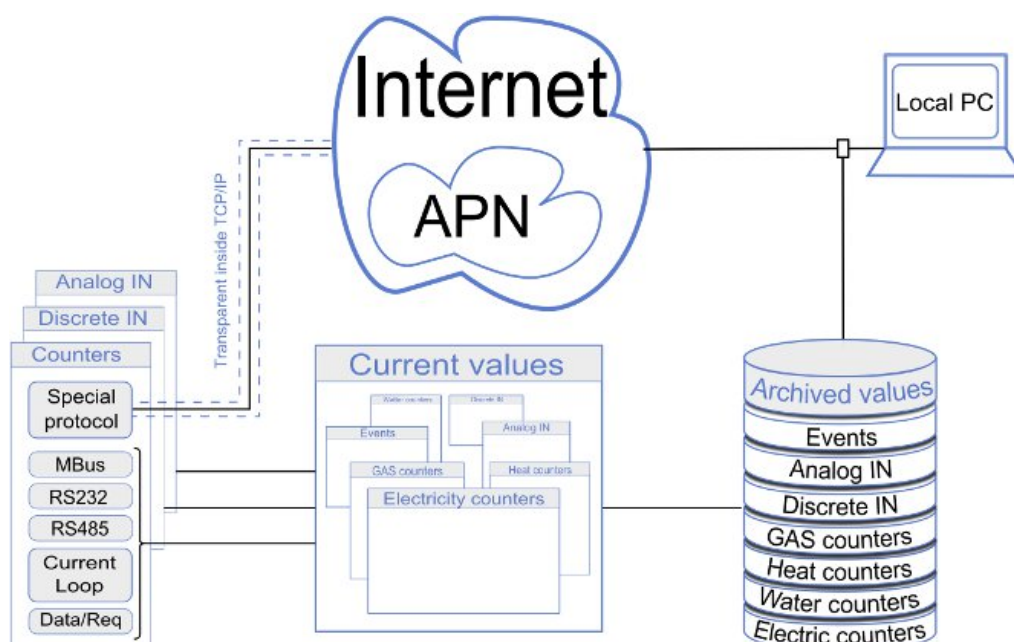| **MAX number of interfaces (for filter)**		
Number of supported interfaces	5	
RS485	+	distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s
RS232	+	distance up to 15m, speed up to 19,2Kbit/s
Opto	+	(Kamstrup) data transfer interface
MBus	+	up to 8 devices
Current Loop	+	Active or Pasive, 2 or 4 wire
Ethernet	+	twisted pair, 10/100 Mbps, distance up to 100m
USB (device)	+	Type B, ver. 2,0
Power for exteranl devices	+	3,7/5/6/8/10 V
Universal	-	Jumper switchable
GSM/GPRS	+	4 band 850/900/1800/1900 MHz
UMTS/HSPA+	+	2 band depending on market 850/1900MHz, 900/2100MHz or 800(850)/2100MHz
SD card slot	+	microSD card up to 8GB

OVERVIEW

Controller supports most of protocols and interfaces (RS232, RS485, Data/Req, MBus, Current loop), so it can be used with different brands and models of counters. Embedded RF module suitable for automated meter reading applications (AMR) where enhanced RF range is required, Wireless M-Bus modes S,T,R,C. Our special "TRANSPARENT" data transfer protocol enables controllers to use with practically any device.Device supports wide range of protocols (and can be extended by our programmers, if you need some special). For data exchange over GPRS/GSM, WCDMA/HSPA, Ethernet and/or any Serial interfaces, controller uses Modbus TCP/IP, Modbus RTU, IEC60870-5-104:2000, SNTP and other protocols.Our clients – GAS, Heat, Watering suppliers, Industry companies in EU, Ukraine, Central Asia.

DEFAULT FEATURES

- Reading data from energy carrier meters;
- Reading data from Wireless M-bus meters;
- "TRANSPARENT" remote data reading from counters (special manufacturers protocols);
- Independent data log (up to 8MB) with real time stamp;
- Remote configuration and upgrading possibilities over GPRS/GSM, WCDMA/HSPA and Ethernet;
- Wide range of interfaces: GSM/GPRS, WCDMA/HSPA, Ethernet, RS232, RS485, Data/Req, MBus Current Loop, USB;
- Galvanically isolated interfaces and power supply;

BENEFIT TO THE CLIENT

- Economy, because controller does a lot of mechanic work, so your professionals can do more important work;
- Increase efficiency, because the data are sent to a central computer continuously. If connection is lost, data will be safe kept in controllers memory, until connection will be reestablished;
- Increases security, because the relevant information is rapidly shorten response time;
- Versatile, because this controller can retrieve data from different manufacturers and even different types of meters;
- Simplicity, because of intuitive control and optimally assembled LED's it is easy to monitor and maintain equipment;
- A good partner, because we not only help you customize and will make equipment, but also flexibly adapt controller, if your demands will change.

CUSTOMIZING DEVICE

The exceptional feature of this device - a flexible hardware and software configuration, it depends on customer needs, you can choose the desired interface and functionality.

Socket No.	RS232	RS485	Data /Req	MBUS	Current loop	Ethernet	Wireless M-bus	GSM (GPRS)	Ext. power
A	O							O	
B	O*	O*	O*	O*	O*				
C	O*	O*	O*		O*				(+O)
D	O*	O*							
E							O		
F						O			
G									

O-optional one interface per socket; *-galvanically isolated; (+O)-you can choose this interface additionally

Manufacturers code:

702.044. A B C D . E . F . G . H

A:
0 - none
1 - GPRS/GSM
2 - RS232
3 - 3G modem

B:
0 - none
1 - RS485
2 - RS232
3 - Opto
4 - Mbus
5 - Current loop

C:
0 - none
1 - RS485
2 - RS232
3 - Opto
5 - Current loop
6 - CAN

D:
0 - none
1 - RS485
2 - RS232

E:
0 - none
4 - Wireless M-bus (868 MHz)
5 - Wireless M-bus (433 MHz)

F:
0 - none
1 - Ethernet

G:
0 - none
1 - SD card socket

H:
0 - none
1 - Power for external devices

For routing

in complex projects of data collection and processing

GPRS (GSM)

Backbone 1

Model: MPC-374
Name: **Backbone 1**
LAN IP: 192.168.1.10
GPRS IP: 240.10.10.25

GSM IP filter – ENABLE
GSM incoming IP: 240.10.10.20
Ethernet IP filter – ENABLE
Ethernet incoming IP: 192.168.1.11
Ethernet incoming IP: 192.168.1.12

Routing – ENABLED
G>E$_x$ port (IN – 21; OUT – 502); IP 192.168.1.11
G>E$_x$ port (IN – 22; OUT – 502); IP 192.168.1.12

Backbone 2

Model: MPC-374
Name: **Backbone 2**
LAN IP: 10.0.0.10
GPRS IP: 240.10.10.20

GSM IP filter – ENABLE
GSM incoming IP: 240.10.10.25
Ethernet IP filter – ENABLE
Ethernet incoming IP: 10.0.0.60

Routing – ENABLED
E>G$_x$ port (IN –20, OUT – 502); IP 240.10.10.20
E>G$_x$ port (IN – 21; OUT – 21); IP 240.10.10.20
E>G$_x$ port (IN – 22; OUT – 22); IP 240.10.10.20

Ethernet switch

Ethernet switch

Counters

Device 1

Model: any MPC device
Name: **Device 1**
LAN IP: 192.168.1.11

Ethernet IP filter – ENABLE
Ethernet incoming IP: 192.168.1.10
Routing – DISABLE

Device 2

Model: any MPC device
Name: **Device 2**
LAN IP: 192.168.1.12

Ethernet IP filter – ENABLE
Ethernet incoming IP: 192.168.1.10
Routing – DISABLE

Central computer
LAN IP: 10.0.0.60
QUERRY IP address : 240.10.10.25
Port: 502 – [Backbone 2]
Port 20 – [Backbone 1]
Port 21 – Device 1
Port 22 – Device 2

Counters

Counters

Counters