

MCU

Master Controller Unit



Device Description

MCU series is a small and compact industrial controller based on a 32-bit 216 MHz ARM CPU. With user-friendly software and hardware, the user can keep application development quick and simplified. MCU can take almost any role in remote utility applications such as solar power plants and electricity distribution substations. It combines GPRS/GSM modem, digital inputs, outputs and datalogger in a single device. Device with built-in 2 digital inputs and outputs and has ethernet and serial communication ports for flexible connectivity to SCADA, field devices and remote control systems.

Device Specifications	
Supply Voltage Range	9-18/18-36 V _{DC}
Nominal Supply Voltage	12/24 V _{DC}
CPU	ARM Cortex-M7 32 Bit 216 Mhz
Flash	1mB
RAM	320 kB
Watchdog Timer	System Reset / 5 sec
Power Consumption	8W @ 24 V
Real Time Clock	Available
Configuration	MCU
Data Logging	Yes
Storage	8 GB (Up to 32 GB with SD Card)
Ethernet Specifications	
Data Rates	10 / 100 Mbps
Number of Connections	2
Interface	Ethernet (RJ-45)
DHCP Support	Compatible
Ping Blocking	Yes
Wi-Fi Specifications	
Wi-Fi Protocols	802.11 b/g/n
Frequency Range	2.4 GHz ~ 2.5 GHz (2400M ~ 2483.5M)
RF Certification	SRRC, FCC, CE (RED), IC, NCC, KCC, TELEC (MIC)
Wi-Fi Certification	Wi-Fi Alliance
Wi-Fi Mode	Station / SoftAP / SoftAP + Station
Security	WPA / WPA2
Network Protocols	IPv4, TCP / UDP / HTTP / FTP

GSM Specifications	
Embedded GSM	Yes (Optional)
Operating Frequencies	Standard (Quad Band GSM module 850/900/1800/1900 MHz)
Number of Connections	2
GSM Antenna	824-960/1710-2170 MHz 3dbGSM Antenna
Stop Bit and Parity Bit Adjustment	Yes
Dispatch of warnings and alarms from software as text message to administrators possible	Yes
3G / 4G Connection	IPv4, TCP / UDP / HTTP / FTP
Communication Specifications	
Communication Protocols	Modbus-TCP (Master/Slave), Modbus-RTU (Master), IEC60870-5-104 (Server), IEC62056-21
Serial Interfaces	2 x RS-485 (Isolated), Micro USB C Type 2.0
RS-485 BaudRate	1200bps – 115200bps
USB Data Transfer Speed	480 Mbit/s
Digital Input Specifications	
Number of Digital Input Channels	4
Input Channel Voltage Range	0 – 36 V _{DC} / 0 – 150 V _{DC} / 0 – 250 V _{AC} (Should be defined on order)
Input Channel Isolation	Available, Isolated with Optocoupler
Input Current	1.5 mA / Channel
Input Filter	Programmable, Default: 20ms
Input Change Counter	32 Bit
Digital Output Specifications	
Number of Digital Output Channels	2 (Type Dry-Contact)
Output Channel Voltage Range	0 – 36 V _{DC} (Should be defined on order)
Nominal Output Voltage	24 V _{DC} / 110 V _{DC} / 220 V _{AC}
Output Type	Dry-Contact Relay
Max. Output Current	2A
Load Type	Resistive, Inductive
Output Channel Isolation	Magnetically
Environment Conditions	
Standards	IEC 61326-1, EN 301489-1, IEC 61010-1, EN 60950-1
Operating Temperature	-25°C / +70°C
Storage Temperature	-40°C / +70°C
Operating Humidity	25% - 95% RH
Protection Class	IP20
Mechanical Specifications	
Device Dimensions (W x H x D)	35mm x 100mm x 115mm
Weight	210gr

For any application where precise, cost-effective and ICT enabled energy management is required...