

# MCU+

Master Controller Unit  
with Linux OS



## Device Description

MCU+ series is an advanced compact industrial controller based on a 32-bit 454 MHz ARM CPU. With the power of Linux OS, 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, WiFi and Bluetooth, and datalogger in a single device. MCU+ has ethernet and serial communication ports for flexible connectivity to SCADA, field devices and remote control systems.

Device Specifications	
Supply Voltage Range	18 - 36 V <sub>dc</sub>
Nominal Supply Voltage	24 V <sub>dc</sub>
CPU	ARM 926 EJ-S 32 Bit 454 Mhz
Flash	32 mB
RAM	64 mB
Watchdog Timer	System Reset / 5 sec
Power Consumption	8W @ 24 V
Real Time Clock	Available
Configuration	MCU+
Data Logging	Yes
Storage	8 mB (Up to 32 GB with SD Card)
Over The Air	Available
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

Bluetooth Specifications	
Bluetooth Radio	NZIF Receiver with -97 dBm sensitivity
Bluetooth Protocols	Bluetooth v4.2 BR/EDR and BLE specification
Features	Class 1, 2 and 3 transmitter with Advanced Frequency Hopping
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
IP Protocols	TCP / UDP / HTTP / HTTPS / FTP / SFTP / TFTP / NTP / SNMP / SSH / DHCP and IPSEC VPN
IOT Protocols	Secure MQTT
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
IP Filter	Available
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	250gr