

Air Quality Monitoring Microstation

GF600

Features

- Compact Size, Easy Installation
- Real-time Monitoring, Accurate Data
- Wireless Transmission, Remote Monitoring
- Multi-parameter Monitoring, Powerful Functionality
- Low Power Consumption, Stable Operation
- Data Visualization, Intuitive and Easy to Understand
- High Cost-Effectiveness

Application

- Urban Environmental Monitoring
- Industrial Park Monitoring
- Road Traffic Monitoring
- Campus Environment Monitoring
- Indoor Environment Monitoring
- Meteorology, Flux Stations.

Description

The GF600 Air Quality Monitoring Microstation is an intelligent air quality monitoring device based on IoT technology, designed to provide comprehensive and accurate air quality data support for urban environmental management, industrial enterprise pollution monitoring, regional ecological protection, and other scenarios. By integrating high-precision sensors, the device can monitor the concentration of key pollutants such as PM2.5, PM10, SO₂, NO₂, CO, and O₃ in real-time. It can also be expanded to monitor meteorological parameters like temperature, humidity, wind direction, wind speed, and atmospheric pressure, offering a complete picture of the air quality status in the monitored area.

The Air Quality Monitoring Microstation is a high-precision, intelligent, and compact air quality monitoring device specifically designed to meet the needs of high-resolution urban air quality monitoring. Its small size allows for flexible deployment in various urban locations, such as residential areas, commercial centers, major traffic routes, and industrial parks. This enables comprehensive and detailed monitoring of urban air quality, precise identification of pollution sources, and provides scientific, timely, and reliable data support for targeted air pollution prevention and control measures, effectively enhancing the efficiency and effectiveness of urban air quality management.



1. Selection Guide

Model	Description
GF600-5	Five-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure
GF600-6	Six-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Rainfall
GF600-7	Seven-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Rainfall, Light Intensity
GF600-8	Eight-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Rainfall, Light Intensity, Total Radiation
GF600-10	Ten-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Rainfall, Light Intensity, Total Radiation, Soil Moisture, Soil Temperature
GF600-11	Eleven-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Light Intensity, Total Radiation, PM2.5, PM10, Oxygen Content, Negative Oxygen Ions
GF600-12	Twelve-Parameter: Wind Speed, Wind Direction, Air Temperature, Air Humidity, Atmospheric Pressure, Rainfall, CO, NO ₂ , SO ₂ , O ₃ , PM2.5, PM10

2. Parameter

GF600 System Parameters						
Item		Parameter				
Power Supply		Mains 220V / Solar 12V DC (Solar power supply is standard)				
Voltage Range		220V Mains Power System / 9~30VDC (12VDC recommended)				
Solar Subsystem		Photovoltaic Array 20AH Output 12V, 60W Monocrystalline Silicon Solar Panel				
Wireless Communication		NB-IoT / 4G-CAT1 (Default)				
Wireless Protocol		LWM2M / MQTT (Default)				
Wired Interface		RS485				
Wired Protocol		MODBUS-RTU				
Equipment Mast		3-meter pole, 114mm to 76mm segmented, 2mm wall thickness high-strength pole				
LED (Optional)		Outdoor LED display panel, 960x480mm, 6x3 Chinese character dot matrix display				
Operating Environment		-10~55℃, 0%~95%RH				
GF600 Sensor Parameters						
No.	Category	Technical Parameter	Measurement Range	Resolution	Accuracy	Unit
1	Meteorological	Wind Speed	0-50	0.1	±3%FS	m/s
2		Wind Direction	0-360	1	±3	°
3		Air Temperature	-40-80℃	0.1	±0.5(0-60) ±0.8℃(-40-0,60-80)	℃
4		Air Humidity	0-100%RH	0.1	±3%(20-80)	%RH

					±5%(0-20,80-100)	
5		Atmospheric Pressure	30-110	0.01	±0.15kPa 30kPa~110kPa,0~65℃)	kPa
6		Rainfall	0-4	0.2	±3%	mm/min
7	Environmental	Light Intensity	0-65535	1	±7%(25C)	Lux
8		Total Radiation	0~1242	1	<±3%	W/m²
9		Noise	30-120	0.1	±0.5dB (Ref 94dB@1kHz)	dB
10	Soil	Soil Temperature	-40-80℃	0.1	±0.5	℃
11		Soil Moisture	0-100	0.1	±3%(0-50%RH) ±5%(50-100%RH)	%RH
12		Soil PH	3-9	0.1	±0.3	PH
13	Atmospheric	PM2.5	0-500	1	±10(25℃,<100 ug/m3) ±10%(25℃,≥100ug/m3)	ug/m3
14		PM10	0-500	1	±10(25℃,<100 ug/m3) ±10%(25℃,≥100ug/m3)	ug/m3
15		SO2	0-20	0.1	±3.5%FS(25℃)	ppm
16		NO2	0-20	0.1	±3.5%FS(25℃)	ppm
17		CO	0-100	0.1	±(0.5ppm+3%FS)	Ppm
18		O3	0-10	0.01	±(0.05ppm+5%FS)	ppm
19		CO2	400~5000	1	±50ppm+5% reading	ppm

3. Physical Image



(LED display system is an optional accessory)

4. Accessories

Standard Accessories				
Subsystem Name	System Type	Accessory	Qty	Specification
Pole (incl. mounting accessories)	Universal	Pole Base	1	Diameter 114mm, 1.5m long pole base
		Pole Top Section	1	Diameter 76mm, 1.5m long pole top section
		Lightning Rod	1	
		Ground Cage	1	
		Crossbar	1	Optional, depending on meteorological parameters
Solar Subsystem (incl. mounting accessories)	Solar Optional	Solar Panel	1	60W High-power photovoltaic panel (Default)
		Battery Base	1	20Ah Large capacity lithium battery (Default)
Electrical Control Cabinet	Universal	DIN Rail Breaker	1	
		DIN Rail Power Supply	1	
		DTU	1	Optional, 4G CAT1/NB-IoT DTU
		Antenna	1	Communication pagoda antenna, installed outside
Optional Accessories				
Subsystem Name	System Type	Accessory	Qty	Specification
LED Display Subsystem (incl. mounting accessories)	Mains Power Version Optional	Mains Power Version	1	960mm*480mm LED Screen
Sensors	Universal	Wind Speed & Direction, Radiation Shield, Soil, Other Environmental Monitoring Sensors, etc.	1	Optional, RS485 sensors