

# TeknoKi ARG-200

## AUTOMATIC TIPPING BUCKET RAIN GAUGE SYSTEM

**GENERAL DESCRIPTION:** THE TEKNOKI ARG-200 AUTOMATIC RAIN GAUGE IS A HIGH-PRECISION TIPPING BUCKET RAIN GAUGE DESIGNED FOR RELIABLE PRECIPITATION MEASUREMENT IN METEOROLOGICAL AND HYDROLOGICAL MONITORING NETWORKS. THE INSTRUMENT UTILIZES A SYPHON-BASED TIPPING BUCKET MECHANISM ENSURING ACCURATE RAINFALL MEASUREMENT ACROSS A WIDE RANGE OF RAINFALL INTENSITIES. THE SYSTEM CAN BE INTEGRATED WITH IOT-ENABLED DATA LOGGERS AND SOLAR POWERED SYSTEMS FOR AUTONOMOUS FIELD DEPLOYMENTS.

### MAIN FEATURES

- HIGH PRECISION TIPPING BUCKET MECHANISM
- 200 MM CATCH DIAMETER
- DUAL REED SWITCH OUTPUT WITH SURGE PROTECTION
- SAPPHIRE PIVOT BEARING FOR STABILITY
- WEATHER RESISTANT OUTDOOR CONSTRUCTION
- LOW MAINTENANCE DESIGN

### APPLICATION

- THE TEKNOKI ARG-200 AUTOMATIC RAIN GAUGE IS SUITABLE FOR A WIDE RANGE OF METEOROLOGICAL AND ENVIRONMENTAL MONITORING APPLICATIONS,



## Technical Specifications:

Parameter	Specification
Sensor Type	Syphon-based tipping bucket
Catch Diameter	200 mm
Measuring Range	0 – 500 mm/hr
Temporal Resolution	1 minute or better
Accuracy	$\leq \pm 3\%$ for rain rate up to 500 mm/hr
Resolution	0.2 mm or better
Signal Output	Dual-output reed switch with varistor surge protection
Levelling	Bubble level on the bucket
Outer Body / Enclosure	FRP
Tipping Bucket Material	Non-hydroscopic ASA material
Pivot Mechanism	Stainless steel axle on sapphire pivots / bearing base
Operating Temperature	0°C to 60°C
Operating Humidity	0 – 100 % RH
Mounting Stand	1 meter height pole – Aluminum 6063 / Stainless Steel SS316 / GI (user selectable)
Mounting Accessories	Non-corrosive coated
Pole Diameter	40 mm
Pole Thickness	$\geq 1.5$ mm
Base Plate	$\geq 300 \times 300 \times 8$ mm with GI foundation bolts
Wind Shield	Stainless Steel (SS-304), non-corrosive

# TeknoKi IOT-100



**GENERAL DESCRIPTION:** THE TEKNOKI IOT-100 DATA LOGGER IS A COMPACT AND ROBUST DATA ACQUISITION SYSTEM DESIGNED FOR CONTINUOUS MONITORING AND LOGGING OF METEOROLOGICAL AND ENVIRONMENTAL PARAMETERS. THE LOGGER SUPPORTS MULTIPLE SENSOR INTERFACES AND ENABLES REAL-TIME DATA TRANSMISSION THROUGH MODERN IOT COMMUNICATION TECHNOLOGIES. THE SYSTEM IS SUITABLE FOR AUTOMATIC WEATHER STATIONS, HYDROLOGICAL MONITORING NETWORKS, ENVIRONMENTAL MONITORING SYSTEMS, AND RESEARCH APPLICATIONS. THE RUGGED IP-RATED ENCLOSURE ENSURES RELIABLE OPERATION IN OUTDOOR ENVIRONMENTS



## MAIN FEATURES

- MULTI-SENSOR DATA ACQUISITION CAPABILITY
- SUPPORT FOR ANALOG AND DIGITAL METEOROLOGICAL SENSORS
- REAL-TIME DATA LOGGING AND STORAGE
- REMOTE TELEMETRY THROUGH CELLULAR COMMUNICATION
- SD CARD BASED DATA STORAGE
- OVER-THE-AIR FIRMWARE UPGRADE CAPABILITY
- LOW POWER CONSUMPTION SUITABLE FOR SOLAR POWERED SYSTEMS
- IP65 RATED OUTDOOR ENCLOSURE

## APPLICATION

- AUTOMATIC WEATHER STATIONS (AWS)
- RAINFALL MONITORING SYSTEMS
- AIR QUALITY MONITORING STATIONS
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## Technical Specifications:

Analog & Digital Ports	<p>4 Analog Channel (16-bit ADC resolution)</p> <p>4 Digital Channel</p> <p>(Can integrate all type of meteorological sensor,</p> <p>More channel can be add, as per costumer requirement)</p>
Communication Ports	USB, RS-232, and RJ-45 (Ethernet)
Real Time Clock	RTC is required to be backed up with a Li-Battery
GSM/ GPRS Module	4G/5G Support
Operating Temperature	0 to 60 deg C
Operating Humidity	0-100% RH
Power requirement	12/24 VDC, 50mA
Storage : SD card base	Internal: 32 GB or more capacity can be provided
Enclosure Box	IP65 Rating with all fitting accessories
Protocol support for telemetry	Enabled and supported all FTP, MQTT, and HTTP protocols
Additional features	<ul style="list-style-type: none"> <li>• Can upgrade the firmware Over-the-air through the internet/ Software/FW / USB pen drive</li> <li>• External watchdog timer</li> </ul>