



# Data Collection Platform

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## DESCRIPTION

The Data Collection Platform (DCP) is used with Automated Weather Observing Systems (AWOS) to collect, process, and log sensor information. The data logger uses a removeable 32GB memory card that is capable storing several years of data. The standard configuration is 25 general-purpose I/O and 8 analog inputs. Additional digital I/O and analog inputs can be configured on request.

The DCP is located at the sensor station, and collects data from the sensors, performs error detection on the received information, converts the sensors' data into engineering units, and transmits message packets containing sensor data and status information to the Central Data Platform (CDP). The DCP can communicate with the CDP using one of several available methods: RS-232, RS-485, Ethernet, or wireless data radio. An SDI-12 interface is configurable upon request. The DCP mounts to the sensor tower or a mounting pole with Unistrut brackets. There is room inside the enclosure for the barometric pressure sensor (Model 7150) and radio kits. A keypad and LCD display screen inside the enclosure are used to view sensor information and perform maintenance checks. The DCP has built-in 15 kV ESD and 5 kA Lightning Surge Protection circuitry. The system can be powered by an optional 12 V battery for backup power. Solar power is configurable upon request.

The data logger assembly consists of two parts, the Main Board and the Sensor Interface Board (SIB). The SIB is a removable and field-replaceable piece of equipment that houses all the digital, analog and smart sensor interfaces. In the event of an electrical transient event, such as a lightning strike, the SIB will protect the rest of the DCP from damage and can be replaced if it is damaged. A new SIB board can be created for custom solutions.



An onboard GPS provides time synchronization to an on-board battery-backed Real-Time Clock.

An LCD display provides diagnostic data for the DCP and all connected sensors. The status LEDs provide an indication of the state of the system.

The DCP supports all sensors, their peripherals, and combinations thereof currently offered by All Weather, Inc., as well as meteorological sensors from other suppliers that are standard with AWOS systems.

The DCP complies with all current Federal Aviation Administration (FAA) requirements and International Civil Aviation Organization (ICAO) recommendations.

PROCESSOR

# SPECIFICATIONS

Parameter	Specification
Display	64 × 128 Graphic LCD Display backlit and heated
Keypad	12-character keypad
Connectors	Pluggable Terminal Blocks
GPS	Onboard GPS receiver
Real-Time Clock	32.768 kHz
Processor	32-bit ARM with Real-Time Operating System, 1.5 MB Internal RAM, 400 MHz
External Memory (FAT, FAT32, and exFAT file systems supported)	µSD Card or USB Flash Drive up to 64 GB

## Electrical

AC Supply Voltage	108–132 V AC, 2.5 A 55–65 Hz	216–264 V AC, 1.25 A 55–65 Hz
	Protected by 15 A circuit breaker	
External Supply Voltage (optional)	24 V AC	
	12–48 V DC	
	Battery	
Backup Battery	12 V DC, 5 A•h	
	Protected by 25 A mini ATC/ATO fuse	

## Individually Configurable Serial Ports

Serial Ports	13 (10 available for Sensor Interface Board)
Serial Protocols	RS-485 (half duplex) RS-485 (full duplex) 3-wire RS-232 (no flow control)
Serial Baud Rates	300 to 115200 bps

## Other I/O

General Purpose I/O	25
Analog Inputs	Eight 16-bit oversampled channels tailored to the sensors supported, 24-bit channels available on request (Optional: module with eight additional analog inputs to increase total analog inputs)

## Ethernet Port

TCP/IP	10/100 Base-T
Connector	RJ-45 Jack

## Environmental

Operating Temperature	-40 to +70°C
Storage Temperature	-40 to +85°C
Humidity	0–100% (noncondensing)

## Compliance

EMI/RFI	MIL-STD-461G
ESD/Surge/Overvoltage Protection	IEC 61000-4-2, IEC 61000-4-4, IEC 61000-4-5

## Mechanical

Mounting	Tower/Pole Mount (2" to 3" O.D.)
Enclosure	NEMA 4X (IP 66)

# ORDERING INFORMATION

There are 120 V and 240 V versions of the DCP with three enclosure options.

Part Number	Description
1192	Data Collection Platform for Nonfederal AWOS
1192-120 1192-240	Data Collection Platform in Polyester/Polycarbonate Hybrid Enclosure
1192-120-AL 1192-240-AL	Data Collection Platform in Aluminum Enclosure
1192-120-SS 1192-240-SS	Data Collection Platform in 304 SS Stainless Steel Enclosure
M438130-00	Backup Battery
11906-01	BP Sensor Kit for 1192 DCP with 7150 and Quad Plate Pressure Port
M488119-01	Mounting Kit (tower legs and pole)
M488679-01	UHF Data Radio Kit

# DIMENSIONS

## Enclosure

1192 1192-120/1192-240	41 cm × 51 cm × 30 cm (16" × 20" × 8")
1192-120-AL/1192-240-AL 1192-120-SS/1192-240-SS	51 cm × 51 cm × 30 cm (20" × 20" × 8")



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