SMART WATER APPLICATION TECHNOLOGIES

Smartphone-friendly irrigation controllers

SEPTEMBER 2021





SWAT is a collaborative effort between water providers and the irrigation industry.





SMARTPHONE-	FRIENDLY IRRIGATION	CONTR	OLLE	RS															
Manufacturer	Model name(s)	EPA WaterSense certified	Maximum stations	Weather data source	Rain data source	Rain delay?	Subscription fee for weather data?	Automatic scheduling interval capable	Guest access (contractor)	Home automation?	Connectivity	Other product information	Sensor capabilities	Run time input	Watering restrictions	Predictive scheduling (rain, freeze)	Zone customization	Cycle and soak (custom or calculated)	Operation without internet connection
Aeon Matrix	Yardian Pro Smart Irrigation Controller	✓	12	Aerisweather, PWS	Aerisweather, PWS	auto.		√	✓	✓	Wi-Fi, Ethernet	zone scanning and diagnosis, automatic weather adjustments, customizable zone settings, smart watering time/intervals, conditional program, water restriction	rain, flow	✓	✓	√	✓	✓	✓
Aifro	Water Eco and Water Eco Lite		36	real-time local weather data, uses OpenWeatherMap	real-time local weather data, uses OpenWeatherMap	auto.		√	√		Wi-Fi	pause feature, winter dormancy, AiCan smart plug to operate house appliances, manually water more than one zone at a time, Aifro Cloud accessible via app	built-in tem- perature sensor, optional rain sensor	√	√	√	✓	√	
Asante	Asante Irrigation Controller Kit		6						✓		Wi-Fi plus	rain forecast feature	rain, freeze	✓	✓	✓			
Blossom	Blossom, Scotts Gro Controller	✓	12	current local weather and forecasts from multiple weather services	current local weather and forecasts from mul- tiple weather services	auto.		✓	✓	√	Wi-Fi	only for indoor installation	rain, freeze	√	√	✓	√	✓	
BlueSpray	BlueSpray		64	NOAA	NOAA	auto.			+	✓	Wi-Fi	run time in min/sec, can turn on multiple valves simultaneously, expands up to 64 zones via extension port	rain, freeze, flow	✓	✓	✓		✓	
Galcon	Cyberrain	✓	24	local weather stations					✓		RF, HW	flow monitor, alerts							
Hunter	HC, Pro-HC, HPC-FP, Pro-C Hydrawise, HCC	✓	54	Weather Underground and The Weather Channel; local airport weather stations, per- sonal weather stations and/or virtual weather station options available	Weather Underground and The Weather Channel forecasts, weather station data and/or on-site rain shut- off sensor	user conf.	*	1	√	√	Wi-Fi	automatic weather adjustments customizable by zone, contrac- tor portal for multi-site man- agement, real-time alerts and notifications, built-in milliamp sensor, event logs and reports	rain, freeze, soil moisture, flow	√	√	√		√	√
HydroPoint	WeatherTRAK LC+	√	36	proprietary ET Everywhere Weather Data (public and private weather stations, NOAA)	current local weather and forecast from weather stations	✓	✓	✓	✓	√	Cell	centralized cloud control for multisite management, alerts, 30+ customizable reports, over the air updates	rain, flow (with optional key)	✓	✓	✓	✓	✓	*
Hydro-Rain	HRC 400 WiFi	√	16	smart WeatherSense local weather data		user conf.		√	✓	✓	Wi-Fi	optional catch cups and irriga- tion audit input, smart watering options based on site conditions	rain, freeze, flow, soil moisture	✓	√	✓	✓	✓	√
H2OPro	H2OPro		8	local weather stations or user-defined local weather stations	weather station, no sensor	auto.					Wi-Fi	flow monitoring, alerts, restrictions, Watersense used to create auto or manual watering schedules, automatic schedule interval capable	rain, flow	✓	✓	✓		?	✓
Irritrol	Climate Logic pro- prietary plug in for Irritrol Kwik Dial, Rain Dial, Total Control and MC-E Controllers	+	12	on-site sensor	rain sensor, no rainfall measurement	user conf.			√		RF plus	SMRT logic allows auxiliary wireless control up to 250 wireless relays	Climate Logic (rain, freeze)	√	√			√	√

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Jain/ET Water	SmartBox, SmartWorks and Hermit Crab 2	✓	48	multiple streaming weather data sources	multiple streaming weather data sources	auto.	✓	✓	✓		Cell	subscription-based product; standalone or add-on to various models of Hunter, Irritrol, Toro, Superior, Weathermatic, Rain Bird and Rain Master controllers	flow, rain	✓	√	1	✓	✓	√
K-Rain	Pro EX 2.0 WiFi		16	WeatherIQ	WeatherIQ	user def.			✓		Wi-Fi	optional long-range antenna, virtual rain sensor, Wi-Fi hub plugs into internet router to use RF connection, increases router to controller distance through RF, can be configured as Wi-Fi/conventional/remote-controlled	rain, freeze	✓	√	√		√	✓
Netro	Netro Sprite and Whisperer		12	local weather data from multiple sources, as well as historical climate data	latitude and longitude,	√		✓		✓	Wi-Fi			✓	✓	√	✓	1	1
Nxeco	Nxeco	✓	36	real-time weather					√	✓	Wi-Fi	24-zone extension module to build 36-zone controller	rain, freeze	✓	✓	√		✓	✓
Orbit	B-Hyve	✓	12	smart WeatherSense local weather data	smart WeatherSense local weather data	user conf.		✓	✓	✓	Wi-Fi			✓	✓	✓	✓	✓	✓
Rachio	Rachio Irrigation Controller	✓	16	NOAA, PWS	NOAA, PWS	user def.		✓	✓	✓	Wi-Fi	current and historic weather data used, real-time notifica- tions	rain and soil, flow with Rachio 3	✓	√	√	√	✓	✓
Rain Bird	Lnk Wi-Fi Module works with ESP-TM2 and ESP-Me Series Controllers and WR2 Series Wire- less Rain/Freeze sensors; ST8-Wi-Fi Controller	√	22	World Weather Online	World Weather Online	user def.			√	√	Wi-Fi	off-site management, real-time alerts and advanced water management tools available	rain, freeze, soil, flow	√	√	√		√	✓
Rain Machine	RainMachine Touch HD	√	16	options include NOAA, MetNo, Weather Underground, DarkSky. net, FAWS and CIMIS (with subscription to CIMIS)	options include NOAA, MetNo, Weather Under- ground, DarkSky.net, FAWS and CIMIS (with subscription to CIMIS)	auto.		√	√	√	Wi-Fi		rain, freeze	✓	√	√	√	√	✓
RainCommander	RainCommander RC1200		12	None		user def.					Wi-Fi		rain sensor	✓	✓			✓	✓
RainPal	RainPal Pro	✓	12					✓		✓	Wi-Fi, cell	optional leak/freeze detection (FL-100), sensitive water leak/ freeze detection, cloud-based server capability	rain, flow, freeze	✓	✓	1	√	1	✓
Signature	EZ Connect and EZ Share series controllers	√	24	integration of weather data feeds from NOAA, Accuweather, weather forecast data and weather alerts	integration of weather data feeds from NOAA, Accuweather, weather forecast data and weather alerts	user def.		√	✓	√	HW, Wi-Fi, cell	programming accessed via the Signature Share app, end-user of contractor web portal	can integrate two sensors, such as flow, rain, pressure, freeze, ET, soil moisture; some models can use DC latching solonoids	✓	√		√	√	1

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Skydrop	Skydrop Halo Controller	✓	16	local weather stations	local weather stations	✓		✓	✓	✓	Wi-Fi			✓	✓	✓	✓	✓	
Smart Rain	ComPro3	✓	48	NOAA/IBM New	NOAA/IBM New	auto.	✓	✓	✓		Wi-Fi, cell		rain, freeze, soil moisture, flow, ET	✓	1	√	✓	✓	✓
Spruce Irrigation	Spruce Controller WiFi	√	16	Darksky.net and option- al soil moisture sensors				✓		✓	Wi-Fi	combines real-time moisture sensor data and weather predictions	rain, flow, spruce soil moistures sensors	✓	✓	√	✓	✓	√
Toro	TMC and Evolution Series Controllers	+	24	on-site sensor and/ or Toro Precision Soil Sensor with Evolution controller	on-site rain sensor, no measurement of rainfall	user def.		√ ©	✓		RF, Wi-Fi plus	grow-in schedule able to control fountains, gates, landscape lighting via a wireless relay	rain, freeze, ET, soil moisture sensor	✓	√		✓	✓	✓
Weathermatic	SL and PL Series with SLW15 weather station	✓	48	on-site sensor	on-site rain sensor, no measurement of rainfall	user def.	✓		✓	✓	RF, cell, Wi-Fi	SmartLine Air Card, no Wi-Fi or router required	rain, freeze, weather sensor, flow	✓	✓		✓	✓	√

^{+ &}quot;discovery" mode | + with Climate Logic | ★ yes, if more than one airport station is to be subscribed | * yes, backup mode from panel | ② with Toro soil moisture sensors

TERMINOLOGY	
automatic scheduling interval	the ability to determine the next watering day when irrigation is needed versus a predetermined interval
connectivity	how the controller connects to a smart device or the cloud that is accessible via a smart device: Wi-Fi, Wi-Fi plus or RF plus = additional proprietary equipment needed, cell = cellular, RF = radio frequency, HW = hard wired to a router or local area network
cycle and soak	capable to determine maximum run time to prevent runoff and soak time before next irrigation event
developer/manufacturer	the creator of the product
EPA WaterSense certified	the controller meets the specifications for labeling as determined by the U.S. EPA WaterSense program
guest access	the ability to allow third-party access for checking or modifying the irrigation program
home automation interface	the product can interface with the "internet of things," such as Amazon Alexa, Google Echo, Nest, IFTTT, API, etc.
operation without internet connection	the ability to continue to irrigate if the internet connection is distrupted
predictive scheduling	ability to use weather forecasts to automatically modify an irrigation schedule
rain data source	indicates if the data comes from a remote or on-site source
rain delay	how rain is managed by the controller to turn off and for how long of a period: auto = automatically, user conf. = user configurable, user def. = user defined
run time	the programmed or calculated number of minutes for irrigation
sensor interface	capability of interfacing with climatic, flow or soil moisture sensors
station/valve/zone	the indicator on the controller that is controlling a specific valve or valves
subscription	a user fee to maintain an ongoing service
unique features	ability to control other devices that are not irrigation (i.e., lighting)
watering restriction	ability to restrict days or times of irrigation
weather data	indicates if the data is historical, from an on-site source or a remote weather data source
zone customization	allows the user to provide detailed information such as soil type, plant type, sprinkler or drip information, sun exposure, etc. directly into the controller or app