IMMS®

Sites: **Up to 100**
Controllers: **Up to 1,000**
Number of Stations: **Up to 990,000**

Hunter's Irrigation Management & Monitoring Software (IMMS) is a PC-based software package that makes central control of large-scale irrigation systems affordable, usable, and comprehensible. IMMS software and hardware have been intensively developed and refined into a graphically based irrigation command and control program. With IMMS, interactive map graphics (to station level) put the irrigation system manager in complete visual control of wide-area watering operations.

Add a visual dimension to central control with background map graphics

FEATURES INCLUDE:

MAPS (Compatible with AutoCAD)

The IMMS® Graphics feature creates map views so you can see all of your irrigated locations and get a more detailed view.

IMMS Graphics simplifies life for busy irrigators with large numbers of assets to control. Use any background image to show the system, site, or controller area, and create control zones and station symbols that link to command functions. You supply the pictures, and IMMS includes all the tools you need to create an interactive map-based system.

PROGRAMMING

Each controller has its own complete setup and operations screens with tools to quickly get the results you want. Easily access every function from simple spreadsheets or by choosing from a menu of common functions and commands. In the case of emergencies, irrigation can be shut off with the click of a mouse.

ALARM MANAGEMENT

With individual date- and time-stamped messages, IMMS Graphics reports all alarms, including over-currents, flow violations, communication issues, and water window violations. No more driving to each individual site; the IMMS Graphics operator understands the condition of all irrigation controllers and valves at a glance. Reports can be exported to additional formats or printed and provided to work crews for investigation.

IMMS-ET (Evapotranspiration)

Take the guesswork out of irrigation amounts and daily adjustments for weather conditions. The optional IMMS-ET software add-on uses cost-effective local sensors, combined with your station database (for plant types, soil, precipitation rate, and more) to create water-saving irrigation programs for your whole system, every day.

IMMS-ET models the moisture level in soil reservoirs (including compensation for natural rainfall) and schedules just enough irrigation to replace what your plants need. IMMS-ET can track climate history according to your own sensors and document how it has responded with irrigation adjustments.

FLOW MONITORING

Track your water usage, and spot plumbing problems a mile away (or several hundred miles away). IMMS is built around the powerful ACC controller platform, which includes real-time flow monitoring. With a flow meter and normally-closed master valves, the ACC detects incorrect flow conditions and moves swiftly to isolate the offending valves. Each flow violation is reported to the central software, after the controller has finished its own diagnostics. Leaks, breaks, and flooding are minimised, and the irrigation manager is the first to know of any issues.

IMMS also tracks total water usage by site, controller, program, and station. Keep detailed historical records, and go home each day with the peace of mind provided by automatic flow monitoring.

IMMS®

FEATURES

- Windows®-based programming and communications software
- Total control of each controller's functions
- Graphical user interface with customisable map-based navigation
- New Map utility allows direct import of linework and layers
- Flow monitoring and reporting with Hunter ACC controllers
- Alarm reporting and detailed irrigation history reports
- Wireless and hardwired communication options, including Ethernet and GPRS
- Controller sharing of communications channels to reduce communications costs
- Compatible with water-saving Hunter Solar Sync® sensors, or optional ET Sensors

KEY SPECIFICATIONS

- Operating system: Microsoft Windows XP, Vista, Windows 7, Windows 8
- Minimum RAM: 512 MB
- Minimum screen resolution: 1,024 x 768
- Storage: At least 100 MB disk space

* Windows is a registered trademark of the Microsoft® Corporation

COMPATIBLE CONTROLLERS

- IMMS is optimised for the Hunter ACC controller and accessories (including decoder controllers)

COMPATIBLE SENSORS

- **Flow-Sync®:** Hunter Flow-Sync sensor for ACC controllers (one per controller). Provides flow total reporting and flow alarm monitoring with diagnostic shutdowns in real time.
- **Clik Sensors**: Each controller requires its own rain sensor for fast rain shutdowns. All Hunter Clik sensors are compatible with ACC and other Hunter controllers.
- **ET Sensor**: ET Sensor platform is for use with IMMS-ET software. ET Sensor is added to selected ACC controllers, to report local conditions. This local ET data has no additional monthly charges and can be shared through the software to create schedules for other controllers in the same micro-climate (including ICC or Pro-C controllers). Add as many ET Sensors as needed to sample all micro-climates.
- **Solar Sync Sensor** (wired or wireless): Each controller can use its own SOLARSYNCSEN or WSS-SEN for smart, water-saving self-adjustment. Solar Sync sensors also provide rain and freeze shutoff functions. Solar Sync compatibility is included with the basic IMMS4CD software.

IMMS SOFTWARE	
Model	**Description**
IMMS4CD	IMMS Graphics central control software
IMMS-ET-CD	Optional ET automatic weather adjustment software *(requires IMMS4CD base model)*

Track flow and other vital statistics in both charts and spreadsheets

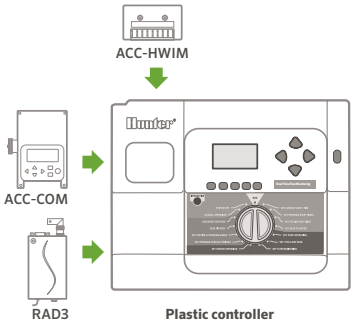
Station level symbols can be positioned over background images from any source

ET Sensor
Height: 27 cm
Width: 18 cm
Depth: 31 cm

COMMUNICATION OPTIONS FOR ACC INTERFACE

Model	Purpose
ACC-COM-HWR = Hardwire/radio module*	Supports hardwire and radio communication options
ACC-COM-POTS = Dial-up modem module*	Supports dial-up analog telephone line input in addition to hardwire and radio communication sharing (not for use with VoIP lines)
ACC-COM-LAN = Ethernet module*	Supports TCP/IP in Ethernet networks in addition to hardwire and radio sharing with local controllers
ACC-COM-GPRS-E = GPRS cellular data module*	Supports mobile data connection via GPRS phone in addition to hardwire and radio sharing with local controllers

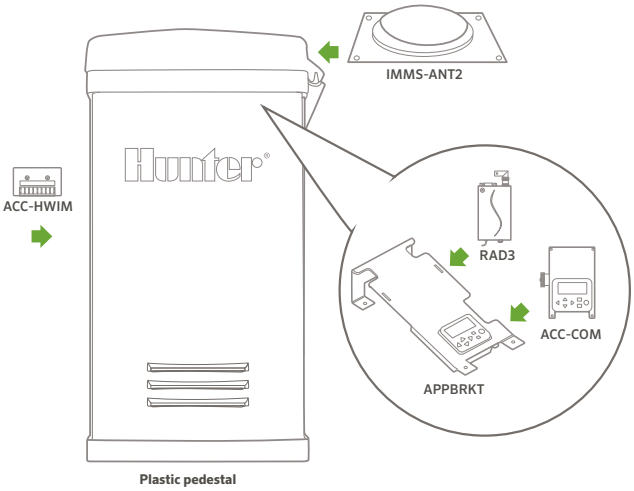
Note:
* Also supports radio and hardwire



Wall mount communications installation

RADIO ANTENNA OPTIONS (SPECIFY SEPARATELY)

Model	Description
IMMS-ANT2	Omni-directional antenna for plastic pedestal lid installation
IMMS-ANT3	Omni-directional antenna for wall or pole mount installation
IMMS-ANTYAGI3	High efficiency directional antenna for pole installation
RA5M	High gain omni-directional mast antenna for roof or pole installations



Plastic pedestal communications installation

USER-INSTALLED OPTIONS (SPECIFY SEPARATELY)

Model	Description	Purpose
ACC-HWIM	Hardwire interface module required for hardwire connections	Provides surge protected terminals for hardwired cable connections
RAD3	UHF radio module (North America), 450-470 MHz	UHF radio module for wireless connections (licence and antenna required and not included)
RAD460INT	UHF radio module (International), 440-480 MHz "Consult factory for other international frequency ranges"	UHF radio module for wireless connections, international only (licence and antenna required and not included)
APPBRKT	Communication bracket for plastic pedestals	Holds Com modules and accessories in plastic pedestal (not required in wall mounts)

Base	Description	Options	Purpose
IMMS-CCC	Hardwire Central Interface	None = 120 VAC (North America) E = 230 VAC (Europe/international power) A = 230 VAC (Australia)	Hardwired central interface for connection to site via direct wire (GCBL cable), supplied with USB cable for connection to central computer, and plug-in transformer
GCBL*	100 = 30 m 300 = 90 m 500 = 150 m		Cable for all IMMS hardwired communications

Note:
* GCBL available in 300 m increments (up to 1200 m)

SPECIFICATIONS

- ACC-COM-HWR, POTS, LAN, GPRS-E
- 8 cm x 11 cm x 4.5 cm
- Powered internally by controller
- Mounted internally to ACC controller
- RAD3, RAD460INT: 450-470 MHz, UHF Radios, Power Output: 1 Watt, Bandwidth: 12.5 kHz narrowband
- ACC-HWIM: Hardwire interface module for 4-20 mA loop communications, includes 8 colour-coded terminals for GCBL connection, installs inside ACC controller cabinets or pedestals
- ACC-COM-LAN requires fixed IP address from system administrators
- ACC-COM-GPRS-E requires a monthly service plan

HARDWIRE COMMUNICATIONS CABLE

- GCBL shielded, two twisted pair 1 mm^2 wire with ground wire, up to 3,000 m between each device

SYSTEM CONFIGURATIONS (ACC CONTROLLERS)

1. **Determine how you will reach the first controller on each site**
   - Dial-up landline: Add ACC-COM-POTS to controller
   - Hardwire cable: Add one IMMS-CCC at the computer, and ACC-COM-HWR plus one ACC-HWIM at the controller
   - Ethernet local area network: Add ACC-COM-LAN at the controller, and connect to the network (RJ-45 jack)
   - GPRS cell phone: Add ACC-COM-GPRS-E to controller (requires GPRS coverage and service contract)
2. **Determine how that first controller will reach the other controllers on the site**
   - If by radio, add one RAD3 (US) or RAD460INT (international) plus antenna to the controller
   - If by hardwire cable, add one ACC-HWIM (if it is not already present as in 1)
3. **Equip the other controllers. Add one ACC-COM-HWR to each controller, plus:**
   - One ACC-HWIM when hardwire connection will be necessary
   - One RAD3 plus antenna when radio connections are necessary

SAMPLE CONFIGURATIONS

- Many other configurations possible; consult Hunter Technical Support or System Design Guide for details.