# Hunter Field Server Automation Written Specification

**Part 1 – General**

1.1 The irrigation controller shall be integrated into the industrial automation system, SCADA, and/or Smart City by means of a field server, or “gateway,” that serves as a translator from the network protocol to the irrigation controller’s command protocol.

The irrigation controller integration shall allow direct access to all commands and data in the controller. The integration shall not require the installation of third-party retail irrigation control software in the network.

The field server shall be installed within the same network and subnet as the irrigation controller. The irrigation controller shall be connected to the network with the OEM manufacturer’s LAN (Ethernet) communication option, unless otherwise requested by the end user.

**Part 2 – Parts and Material**

2.1 The field server shall be Hunter model FS-1000 or FS-3000.

2.2 Dimensions

1. The field server shall have a height of 2" (50 mm), a length of 5" (127 mm), and a width of 6" (152 mm).

2.3 Field server housing:

1. Standard DIN rail mount for mounting

2.4 The field server shall be equipped with:

 A. Two (2) RJ-45 Ethernet ports

1. Ethernet ports shall be 10/100BaseT, MDIX, or DHCP, and shall function at 9600, 19200, 38400, 57600, 76800, or 115000 baud.

 B. One (1) RS-485/RS-232 port

 C. One (1) RS-485 port

 D. SD card reader

 E. 9-12 VDC or 24 VAC power input terminals

2.5 Warranty

1. The field server shall be installed in accordance with the manufacturer’s published instructions. It shall carry a conditional 2-year exchange warranty. The product shall be the FS-1000 or FS-3000 Field Server, as manufactured for Hunter Industries Incorporated, San Marcos, California.

**Part 3 – Function and Operation**

3.1 The field server software shall be equipped with:

 A. On-board diagnostic functions for both serial and Ethernet devices

B. Web configuration page authentication (self-signed certificates) with user and password management features

C. All necessary compliance approvals, including:

 1. CE

 2. FCC Part 15 C

 3. BTL

 4. UKCA listings:

 a. UL 62368-1

 b. CAN/CSA C22.2

D. 1,000 data points or 3,000 data points

1. To be determined by Hunter Global Applications Engineering and the integrator, after detailed integration specifications have been created by the user

 E. Compatibility with the specified network protocol, including:

 1. BACnet

 2. Modbus

 3. DNP3

 4. RESTful API

 5. 120+ other known protocols

F. Complete documentation of all commands and data points in the irrigation controller to allow for easy and unlimited direct integration

3.2 The file shall be compatible with:

A. Hunter irrigation controllers:

1. ACC2 Controller with A2C-LAN (Ethernet Communication Module)

2. ICC2 Controller with LANKIT (Ethernet Communication Module)