

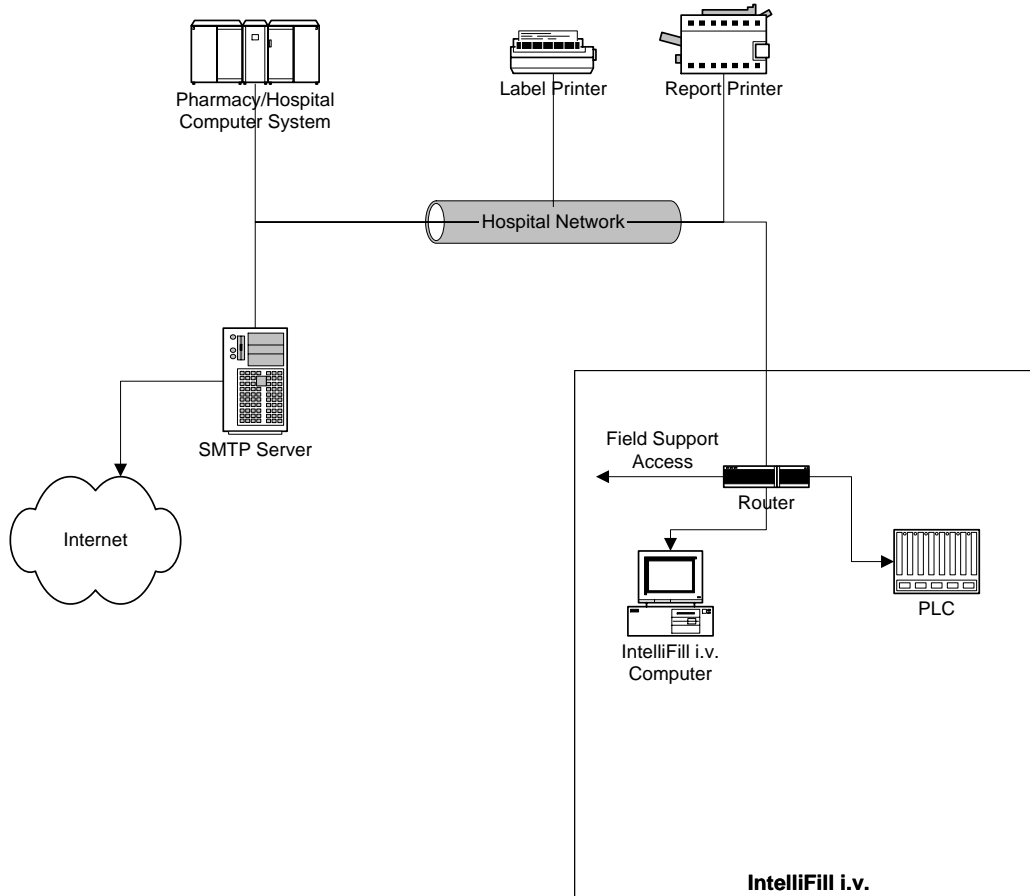


IntelliFill® i.v. Connectivity and Communications



INTRODUCTION

IntelliFill i.v. is designed to connect to a health-system network but not participate in the network's domain as a workstation. Although the system contains a desktop PC, its purpose is to operate as a device console and intelligent controller for the device. It is not intended as a general-purpose workstation. IntelliFill i.v. connects to the health-system network to permit the system to leverage existing IT infrastructure for printing and communications.



INTELLIFILL i.v. NETWORK ACCESS

IntelliFill i.v. requires a single network connection to access the following services:

- **Report printing** – the device console instantiates a page printer (usually a workgroup laser printer) to print device reports. In most cases, this printer is an IP printer that is treated as a local port using its IP address.
- **Label printing** – the device console instantiates a label printer (usually the IV room label printer) to print “pass-through” labels for any doses it receives that it cannot make. In most cases, this printer is an IP printer that is treated as a local port using its IP address.
- **Outbound-only (SMTP) email** – the device uses SMTP email messages for notification and reporting. To do this, IntelliFill i.v. needs to be configured with the hostname or IP address of the hospital's SMTP server. IntelliFill i.v. does not receive inbound email.

- **Inbound print stream** – IntelliFill i.v. receives label print streams as if it were the IV room label printer, parses those labels, prepares the doses it can from the doses defined in the label stream and passes the remaining doses to another label printer; all without changing the programming of the labels in the pharmacy information system (PIS). To ensure data integrity, all received streams must arrive on a designated port, and the software only accepts streams from designated hosts by name or IP address. Therefore, Baxa needs the hostname(s) and/or IP address(es) of the host(s) that may be sending authorized transmissions to the device.
- **Remote support** – Baxa Technical Support uses SecureLink™ (formerly Enexity) to provide remote support for its devices.

IntelliFill i.v. is an FDA Class II Exempt Medical Device (Pharmacy Compounding Device). As such, its software and hardware environments are subject to tight controls and not subject to change. The hospital may not place any software or data on the device PC, nor may it add, modify or remove hardware.

INTELLIFILL i.v. COMMUNICATIONS FACILITIES

IntelliFill i.v. supports communications over a single, Ethernet (RJ45) Cat 5 or higher network connection.

The IntelliFill i.v computer operates as part of a local area network (LAN) within the device that includes a programmable logic controller (PLC) for operation of device components and a field service access port.

All network access to and from the device is mediated by a firewall router (Netgear RP614) with two primary responsibilities:

- Eliminating unsolicited IP traffic that might interfere with communications between the computer and PLC.
- Protecting the computer from direct access across the network connection.

All unsolicited inbound IP traffic is trapped in the router. Only that traffic occurring on a small, controlled list of ports is forwarded to the device PC.

The router offers a public (WAN) and private (LAN) side. The WAN side is configured with a single, static IP address supplied by the hospital that is the device’s public IP address.

The LAN side supports the internal device network. Its addressing scheme defaults to:

| | |
|--------------------|-------------|
| Router | 192.168.0.1 |
| Console | 192.168.0.2 |
| PLC | no address |
| Field Service Port | 192.168.0.3 |

The router can be configured with the facility’s DNS server addresses if the health-system wants to have the device authenticate inbound transmissions by host name rather than IP address.

Although the router can be set up as a DHCP server for computers attached to its LAN side, this configuration is implemented only with the health system’s consent.

REQUIRED INFORMATION

Installation of an IntelliFill i.v. device requires that the hospital supply the following information:

- Static IP address for application to the WAN side of the router
- Default gateway
- Subnet mask
- SMTP server hostname or IP address
- IP address of report printer
- IP address of label printer
- Primary DNS server
- Secondary DNS server
- Pharmacy information system host name(s) or IP address(es)
- Port number over which labels will be sent

TELEPHONE SUPPORT

Baxa relies on telephone support to help IntelliFill i.v. operators remain productive. A telephone extension with a wireless connection, or a cord of sufficient length, should be available near the device to permit the user to interact with the device while they are on the phone.

REMOTE SUPPORT

Baxa Technical support uses SecureLink to provide remote support over a network connection. Because SecureLink uses an outbound call from the device to the SecureLink server, no inbound ports need to be opened for remote support. The device does require outbound web access over SSL for connection to the SecureLink server.

INTERFACE TECHNOLOGY

The Baxa interface strategy is described in TP058, Print Stream Interface Specifications. In brief, IntelliFill i.v. presents itself to the health-system PIS as an IV label printer. IntelliFill i.v. reads each label as it is presented, determines whether it can prepare the dose described by the label, queues a syringe that can be prepared and passes the labels for does it cannot prepare on to another printer.

IntelliFill i.v. can maintain multiple, simultaneous connections to a variety of systems and has successfully established communications with Cerner Classic, Cerner Millennium, IDX, Meditech, McKesson/HBOC Clinstar and Mediware WORx.

IntelliFill i.v. is manufactured for Baxa Corporation by FHT, Inc.