

# IPLU firmware upgrade

INSTALLATION INSTRUCTIONS



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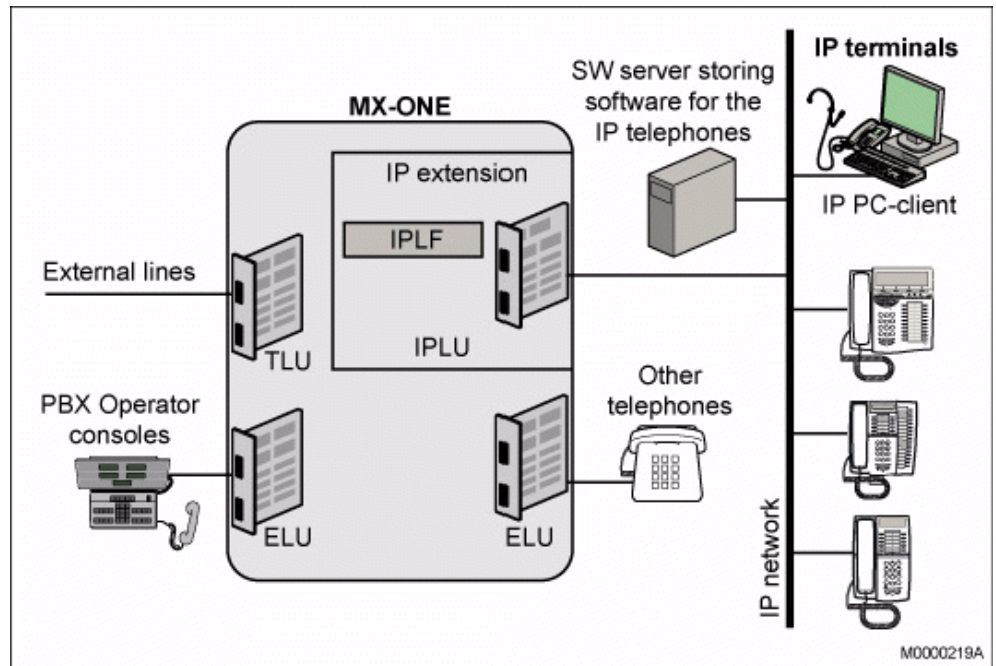
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# 1 GENERAL

## 1.1 SCOPE

The extension and trunk line unit IPLU is a board for Voice over IP (VoIP). The board handles the real-time media streams.

The IPLU firmware, IPLF, is stored in Flash memory and it can be upgraded from a Software (SW) server with the HyperText Transfer Protocol (HTTP) over the IP network



**Figure 1: IPLU Connects IP Phones to the System**

## 2

## AIDS

### 2.1

### TOOLS

A PC connected to the local network with access to the SW server

Proper administrator authority

Ethernet cable TSR 901 0484/L, where L is the cable length in mm

The software server can be any third party server. The following HTTP servers have been tested and represent the preferred selection:

- Microsoft® Windows® 2003 Internet Information Server 6.0
- Apache 1.3 and 2.0 on Microsoft® Windows® or on Redhat® Linux

## 3 PREPARATIONS

### 3.1 DATA

The following data must be known to complete this instruction:

- The location of the software. It can be located on a server on the Local Area Network (LAN) or at a remote server. For a remote server the IP address or the Domain Name System (DNS) name of the SW server must be known.
- The IPLU board position in the LIM

## 4

## DELIVERY METHOD

The IPLU board is pre-configured and preprogrammed from factory. There is a boot-loader program and a default FPGA configuration. All application programs are stored on the CF-card, which can be upgraded with new software while the board remains in the system.

The IPLF program can be fetched to the board from a server on the LAN or from a remote update server. The software is located in revision directories in the IPLU directory below the SW server root directory.

The FPGA program, which is a part of the IPLF, will be updated by the bootloader if the loaded, on-board program revision differs from the one read from the CF-card at boot time.

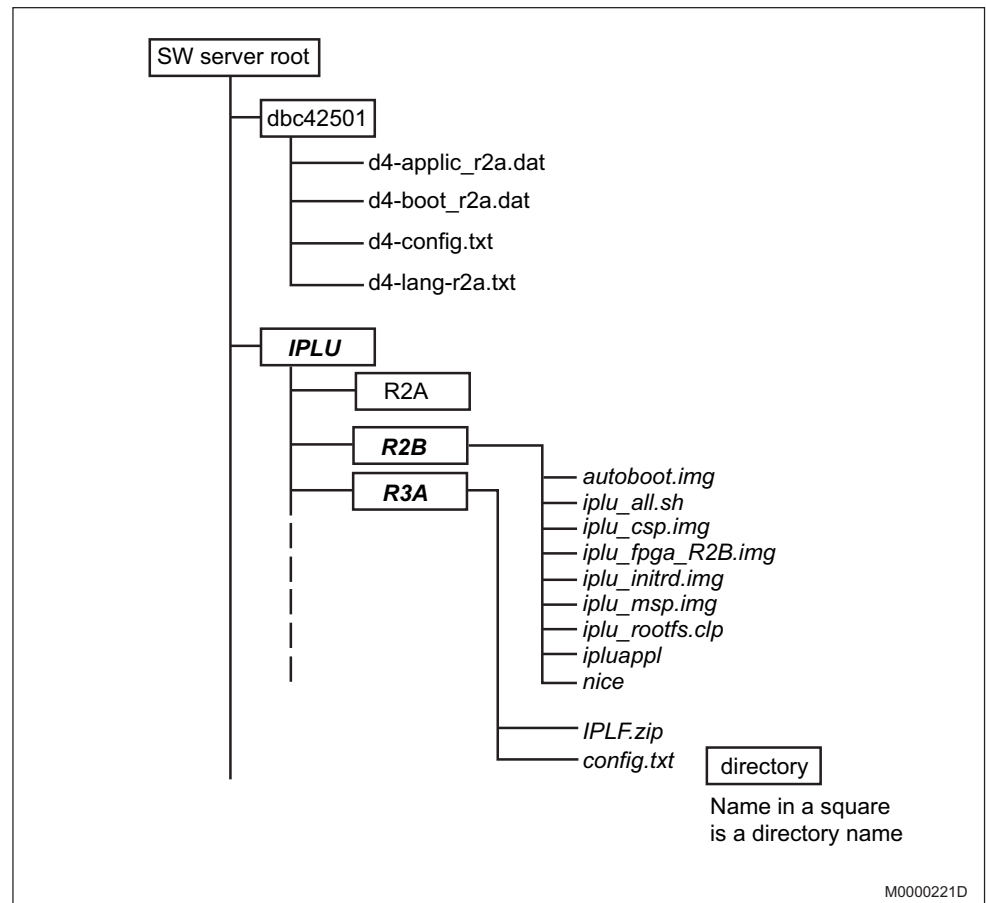
As the IPLU board, for factory testing purposes, has been assigned a static IP address, it has to be modified in the network configuration process to the appropriate IP address, which is valid for the site.

## 5 PROCEDURE

### 5.1 SOFTWARE SERVER

The different IPLF software revision directories are to be located in a directory straight under the HTTP server root directory. The name of this directory is to be IPLU.

**Note:** Do not try to modify any of the unpacked files or to compile your own set of files.



**Figure 2: Directory structure for IPLU upgrades**

A typical size of an IPLU application program is in the order of 30 MBytes. The typical download rate from a local software server to the CF-card is 300-500 Kbytes per second. The IPLF upgrade procedure should then take no longer than 2 - 5 minutes per IPLU board.

**Note:** From revision R3A the file structure has been changed.

## 6

## EXECUTION

### 6.1

### UPDATE THE IPLU SOFTWARE

To upgrade the IPLF the following actions should be performed:

1. Make sure that the new software is in place on the SW server.
2. Check that the network configuration is correct. The IPLU must be initialized in the system, connected to the IP network, and must have access to the SW server.
3. Download the IPLF firmware from the SW server to the IPLU board. Use a revision directory, on page 7 . Enter the command *board\_sw*. Use the option **-netload** with **-host** and **-path** and specify either **-bpos** , or **-boardid** and **-lim** .
4. For example, the command could look like: *board\_sw -netload -bpos 3-2-00 -host www.swserverxyz.se -path R3A*
5. to upgrade the IPLU board in LIM 3, magazine 2, and board position 00 from the SW server *www.swserverxyz.se*, where the software is located in the */IPLU/R3A/* directory.
6. Activate the new firmware: Enter the command *board\_sw*. Use the option **-activate** plus **-bpos** , or **-boardid** and **-lim** .
7. Confirm the new firmware to be the default choice. Enter the command *board\_sw* with option **-confirm** plus **-bpos** , or **-boardid** and **-lim** .
8. Verify that the firmware is correct. Enter the command *board\_sw* with option **-status** plus **-bpos** , or **-boardid** and **-lim** .



## **7 TERMINATION**

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