Software Requirement Specification (SRS)

# Multi-Functional Tool Application

## 1. Introduction

The Multi-Functional Tool Application is a Python-based GUI designed to streamline and simplify Network Packet Capture, Memory leak checks, 08 Diagnostic Code Values and Debug log collection. This tool aims to save time and effort by reducing the complexity of manual command execution on Linux systems.

## 2. Overall Description

This application provides a user-friendly interface for performing essential diagnostic and testing operations on MFPs. It significantly enhances productivity by cutting testing time by approximately 80% and improving diagnostic quality.

## 3. Specific Requirements

The tool must be compatible with both desktop and laptop environments. It should provide functionalities for network packet capture, memory leak checks, debug log collection, diagnostic code details, and protocol configuration. The protocol value setting feature is currently pending implementation.

## 4. System Features

### 4.1 Network Packet Capture

Allows users to start and stop packet capture effortlessly. Generates a .pcap file that is automatically copied to the MFP's Shared Folder and opens the folder for easy access.

### 4.2 Memory Leak Check

Provides a protocol-specific Memory Leak Comparison Table to quickly determine if a memory leak has occurred.

### 4.3 Debug Log Collection

A straightforward Run button initiates script execution, collects logs, and copies them to the MFP’s Shared Folder. The folder is opened for easy access. Note: If the folder is empty the first time, try performing the debug logs operation again.

### 4.4 Diagnostic Code Details

Users can easily select ECC, Network Protocols, High Security Mode, and commonly used diagnostic codes to view relevant job-specific details.

### 4.5 08 Diagnostic Code Value Access

Provides an intuitive interface for users to easily set and get 08 Diagnostic code values. This feature streamlines diagnostic operations by allowing direct access to these values, enhancing troubleshooting efficiency and reducing manual effort and time.

### 4.6 Protocol Configuration

Offers a Protocol Selection Window where users can get or set protocol values directly. Note: Set protocol values operation still needs to be implemented.

## 5. Installation and Usage

To install and use the Multi-Functional Tool Application, copy the appropriate zip file from the tec-share location to any preferred location on your Remote Desktop, laptop, or test PC. Extract the contents and launch the application by double-clicking on MultiFunctionalToolApplication.

Location of Application Tool:

• Desktop Compatibility: \\tec-share\eBX\eBX\_NW\WorkArea\05.\_Tools\MultiFunctionalTool\_For\_Desktop.zip

• Laptop Compatibility: \\tec-share\eBX\eBX\_NW\WorkArea\05.\_Tools\MultiFunctionalTool\_For\_Laptop.zip