SMARTNET

STATEMENT OF WORK FOR ANALYSIS OF HEAD PROTOCOL

2023-SOW-0001

Document revision history					
Rev	**Description**	**Date**	**Author**	**Checked**	**Approved**
01	First release	10/09/24	JT	CB	CB

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1 INTRODUCTION

This statement of work outlines the requirements for the analysis and documenting of the protocol used to provide communication between the Device Heads and Radio Boards. The detail included in this document is intended for quotation purposes only.

2 SYSTEM FUNCTIONALITY

Smartnet Devices may be fitted with a number of detector heads e.g. Smoke, Heat or Combi (heat and smoke), these heads connect to the device via a set of four pins. The heads fit to common radio module, this is illustrated below.

Figure 1 Combi, Smoke and Heat heads

Figure 2 Four Pin Interconnection Between Radio Modue and Head

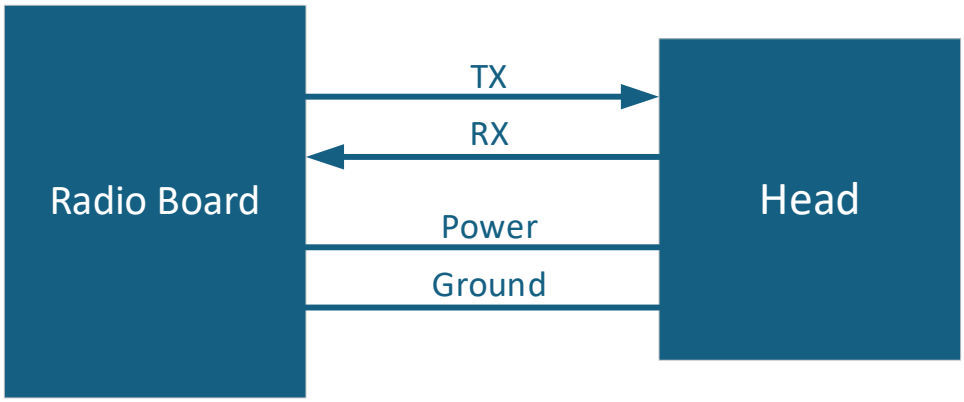

Figure 3 RBU and Head Interface

The Radio module communicates to the head via a serial interface the current understanding of the protocol used is documented in 1000-SPC-0002-03 BPL Fire Detector Specification.

3 SCOPE OF FIRMWARE SUPPORT

Cygnus Systems plan to undertake a redesign of the Detector Heads and as first step in this process is to ensure the communication protocol documentation is complete and correct.

3.1 Review of RBU and Head Firmware Communication Protocol.

Cygnus Systems require that the RBU and Head Firmware be analysed to reverse engineer the communication protocol, message types, and message detail between the RBU and Head. This information should be compared to the existing documentation for the protocol and where necessary the document should be updated and corrected

Receivables:

1. 1000-SPC-0002-03 BPL Fire Detector Specification
2. 2705-001_r03 - Detector head source code
3. 2001-SW-0001: Radio board source code
4. 2003-QUR-0004-01 Detector Protocol Test Report

Deliverables:

1. A Protocol Specification document defining the implemented protocol and full detail of each valid message, the parameters and packet structure.
2. An updated Test report indicating the operational status of each message within the protocol