**SPHERE RS-232 MODULE/1**

**A close-up of a circuit board

Description automatically generated**

**Additional RS-232C Circuitry**

USER & TECHNICAL

A logo with a circle and a circle

Description automatically generatedDOCUMENTATION

# INTRODUCTION

WHAT IS INCLUDED

1. A kit of parts for you to assemble and connect to your SPHERE-1 CPU/2 board, including all components needed to be soldered to the RS-232C MODULE/1 board.
2. This Manual (including assembly instructions).
3. Example software to drive your new RS-232C MODULE/1 interface.

ASSEMBLY

GETTING STARTED

CONFIGURATION

THEORY OF OPERATION

WARRANTY

PARTS LIST (INCLUDED)

Quantity Type Description Location

1 PCB Printed Circuit Board -

1 CK-104 0.1 μF Electrolytic Capacitor C12

1 1.1 kΩ 1W Resistor R4

1 820 Ω 1W Resistor R5

1 2 kΩ ¼W Resistor R9

1 512 Ω ¼W Resistor R16

2 IN4001 Diode D10, D11

2 4N33N E30, E31

1 MC1488N E46

1 MC1489 E52

5 Vertical 1x2 Pin Headers PB0 x 2 ,

PB7 x 2,

PB0/PB7

2 Vertical 1x3 Pin Headers TX/RX/CON x 2

2 Vertical 1x4 Pin Headers E40 connection

Power/GND etc

4 Jumpers PB0, PB7 as required

PARTS LIST (NOT INCLUDED)

Quantity Description

3 Leads/cables to connect RS-232C Module/1 to CPU/2 board.

2 Leads/cables to connect RS-232C Module/1 to Serial Device