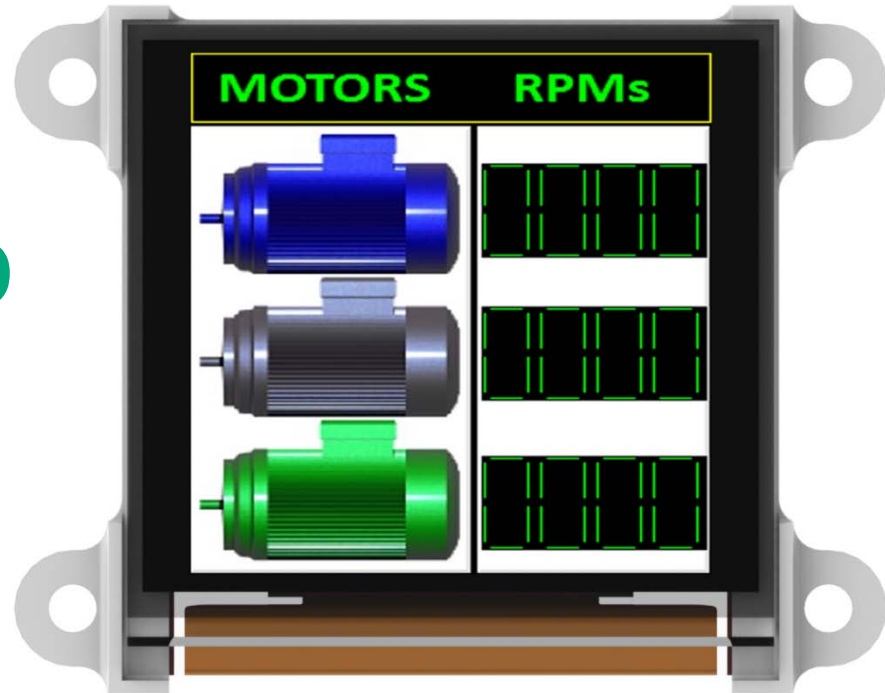# 1.5" microOLED

Intelligent GOLDELOX Display Module

µOLED-128-G2

4D SYSTEMS

TURNING TECHNOLOGY INTO ART

MESSAGE FROM THE CEO

To our valued customers,

Thank you for your interest in 4D Systems and the products we have to offer.

We are constantly looking for ways to improve our customer experience and it is hoped that a Product Brief such as this, can instil confidence in choosing 4D Systems as your supplier of superior embedded electronic products.

We invite you to showcase our latest release and thank you again for your continued support.

Atilla Aknar
Founder & CEO

Table of Contents

1. Overview of the µOLED-128-G2

The **µOLED-128-G2** is an Intelligent Display Module that serves as the perfect embedded display solution for any product design that requires the brilliance of colour, animation or images all on a 1.5'' OLED display.

Embedded at the heart of the design is the **GOLDELOX** Graphics Processor, which is driven by a highly optimised virtual core engine; EVE (Extensible Virtual Engine).

An extensive range of hardware and software peripherals have been integrated into the design, to give the user freedom to adapt the module to suit almost any application, such as; a **1.5'' PMOLED** display, micro-SD card connector, GPIOs that can be used for Digital Input/Output, Analogue Input, One-Wire and Sound Generation.
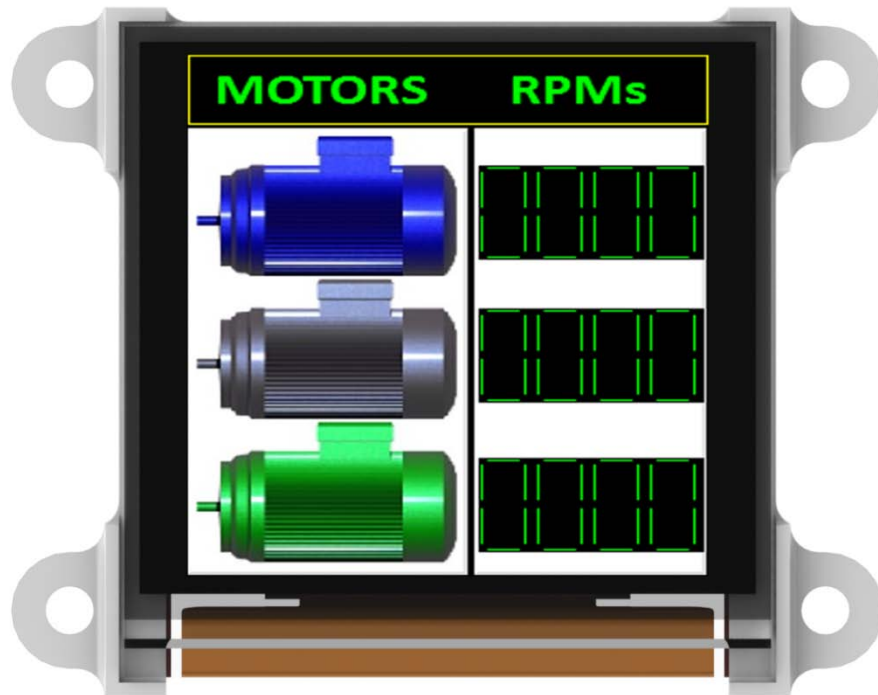
2. Module Features

01   1.5'' PMOLED Screen

02   128 x 128 Resolution with 65K True to Life Colours

03   GOLDELOX Graphics Processor

04   10KB FLASH Memory, 510Bytes RAM

**05**   1 x UART Serial port

06   2 x GPIOs

Function	IO1	IO2
Digital Input	Yes	Yes
Digital Output	Yes	Yes
A/D Conversion 8/10 bits	Yes	No
Dallas 1-Wire Support	Yes	Yes
Sound Generation, RTTL Tunes	Yes	Yes
Joystick – 5 Position Multiswitch	Yes	No

07   1 x 32 bit free running System timer with 1ms resolution

08   4 x 16 bit timers with 1ms resolution

09   2 x 5 Pin Interface

10   micro-SD Card Slot

11   4 x Mounting tabs with 3mm holes

12   Light weight at only ~11gm
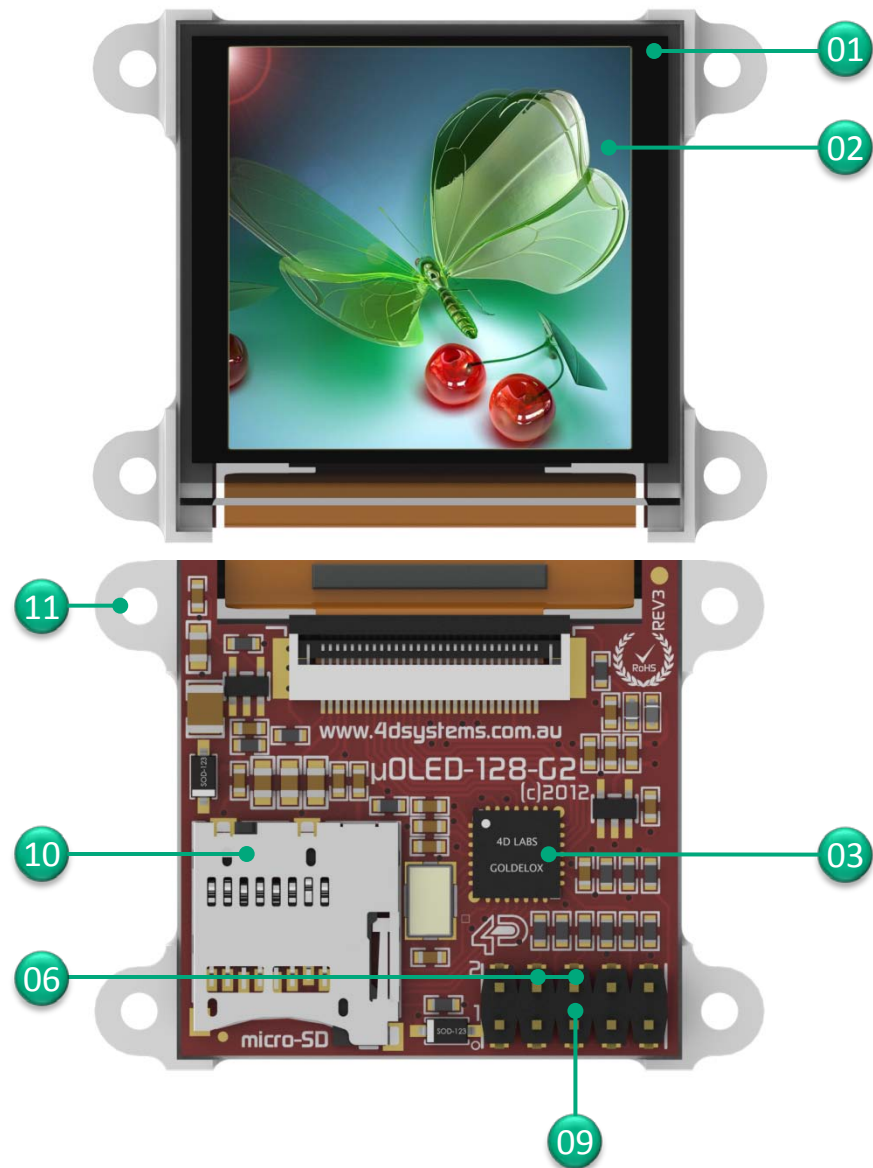
3. GOLDELOX Processor

At the core of the **µOLED-128-G2** design lies the **GOLDELOX** Graphics Processor. It has an array of dedicated graphics controls, supported by an ample supply of integrated peripherals.
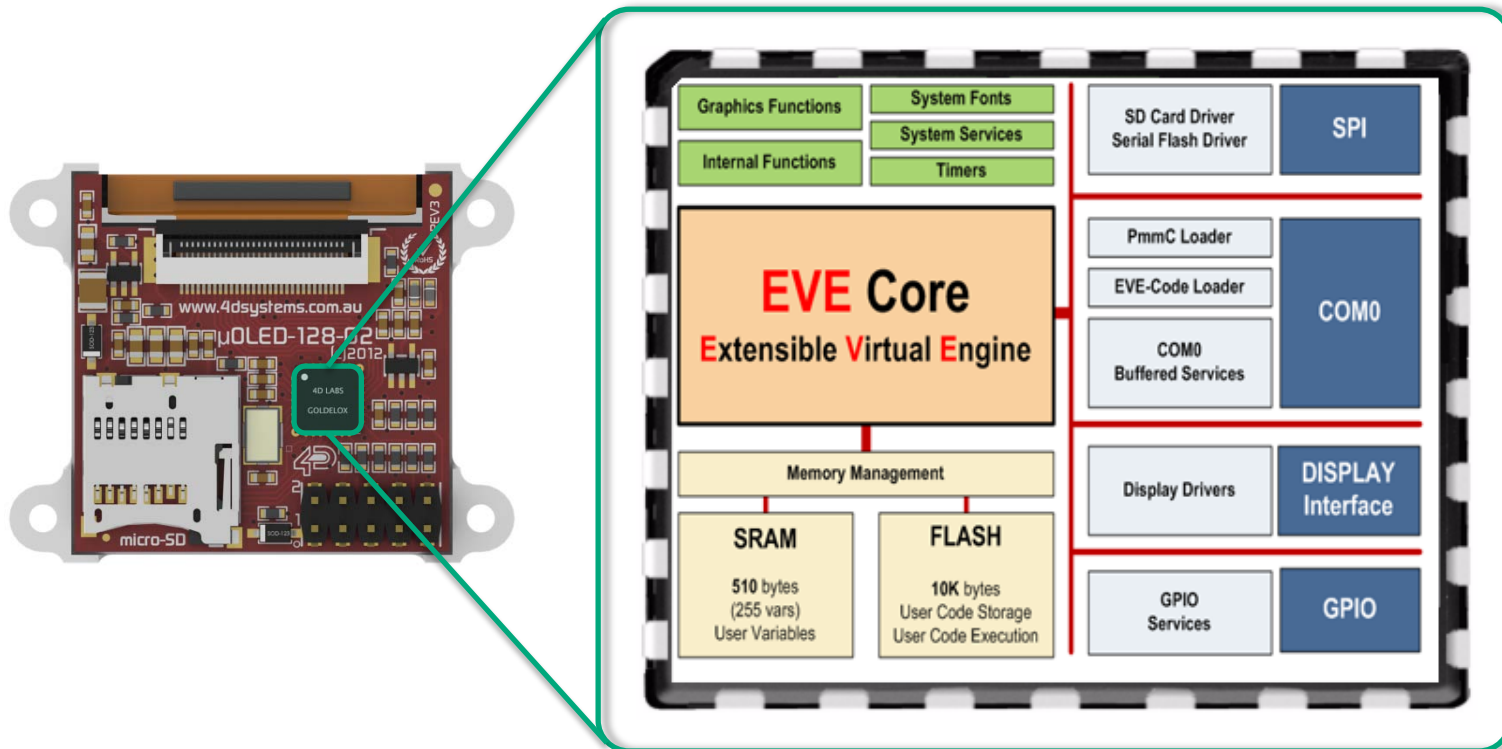
The GOLDELOX offers a complete suite of features, crafted to be at the forefront of any product requiring colour, animation, images and sound. The GOLDELOX is also powerful enough to control and communicate with peripheral devices over SPI, One Wire or Serial Port.

4. 1.5'' PMOLED Display

The **μOLED-128-G2** has a **1.5''** PMOLED display at the forefront of the design that exhibits the power and capabilities of the GOLDELOX processor. Combining a resolution of **128x128** pixels with **65K** True to Life colours, the μOLED-128-G2 delivers an astounding plethora of colours perfect for animations, slideshows and other multimedia presentations.

5. micro-SD Card Slot

The **μOLED-128-G2** supports **micro-SD** memory cards via the on-board micro-SD connector. This provides the user with expandable memory space suitable for all multimedia file retrieval; such as images, animations and movie clips, as well as data logging applications.

Supports up to 2GB micro-SD as well as micro-SDHC memory cards starting from 4GB and above.
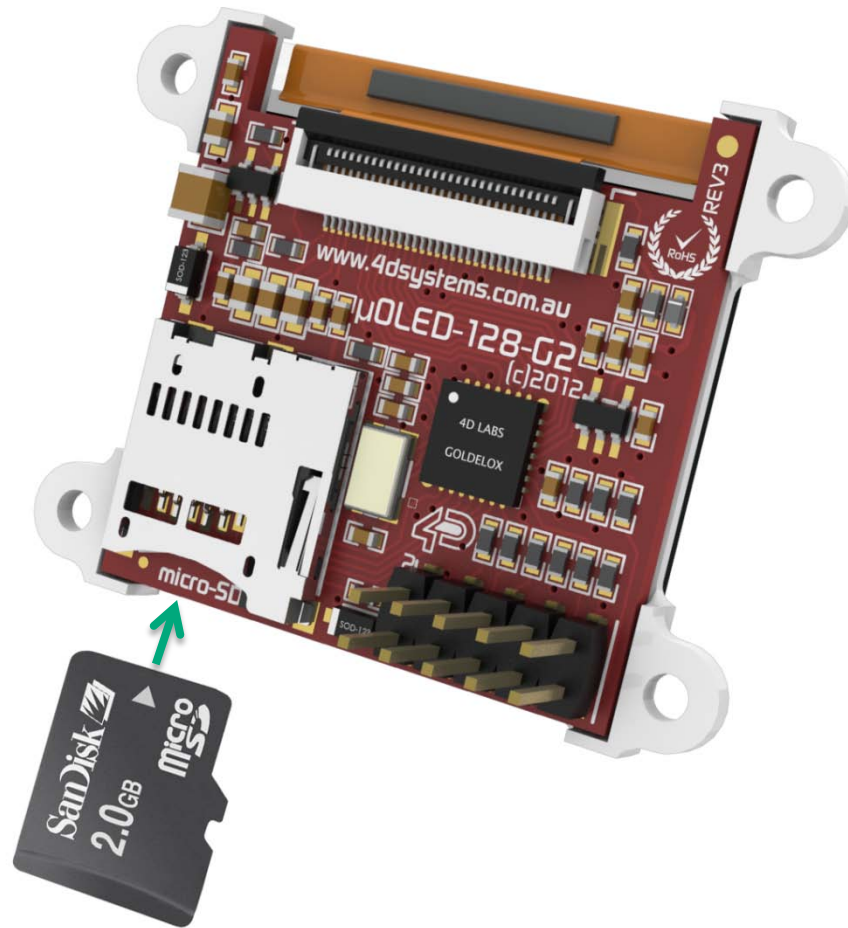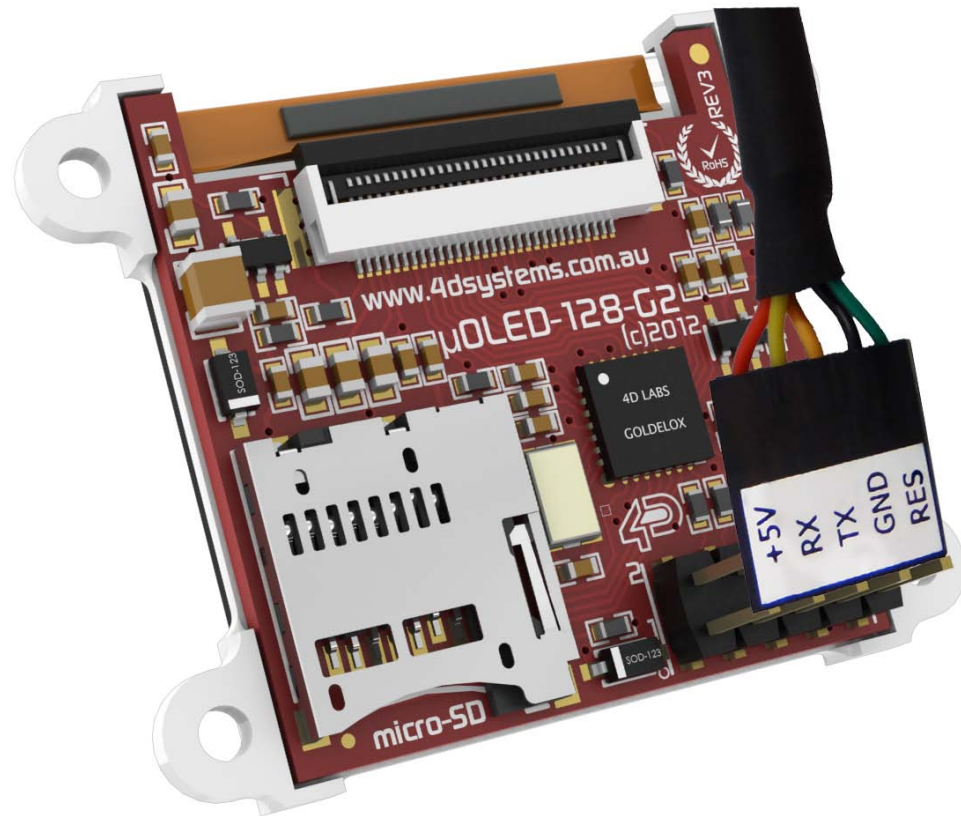
6. Powering Your Device

Powering the **µOLED-128-G2** is as simple as connecting to a PC via a 4D Programming Cable.

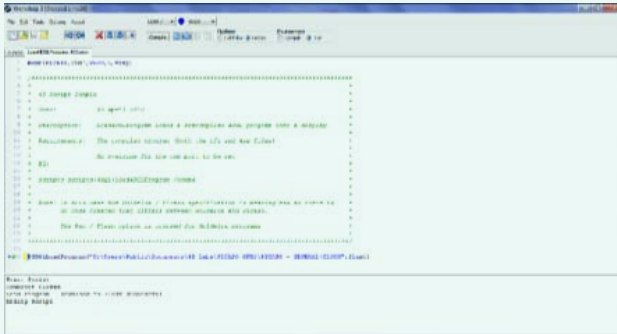Alternatively, power can be supplied by a regulated 5V DC source.

7. What you Need

Essential items

4D Programming Cable

Windows Based PC

4D Workshop4 IDE Software Tool

Optional Items

micro-SD Card & SD Adaptor

8. Development Environment

Workshop4 is a comprehensive software IDE tool suite that provides an integrated software development platform for all of the 4D family of processors and modules. The Workshop4 IDE supports three different **Development Environments** for the user, to cater for different requirements and skill level.

Designer: The Designer environment enables the user to write 4DGL code in its natural form to program the µOLED-128-G2.

ViSi: A visual programming experience, suitably called ViSi, enables drag-and-drop type placement of objects to assist with 4DGL code generation and allows the user to visualise how the display will look while being developed.

Serial: A Serial environment is also provided to transform the µOLED-128-G2 into a slave serial module, allowing the user to control the display from any host microcontroller or device with a serial port.
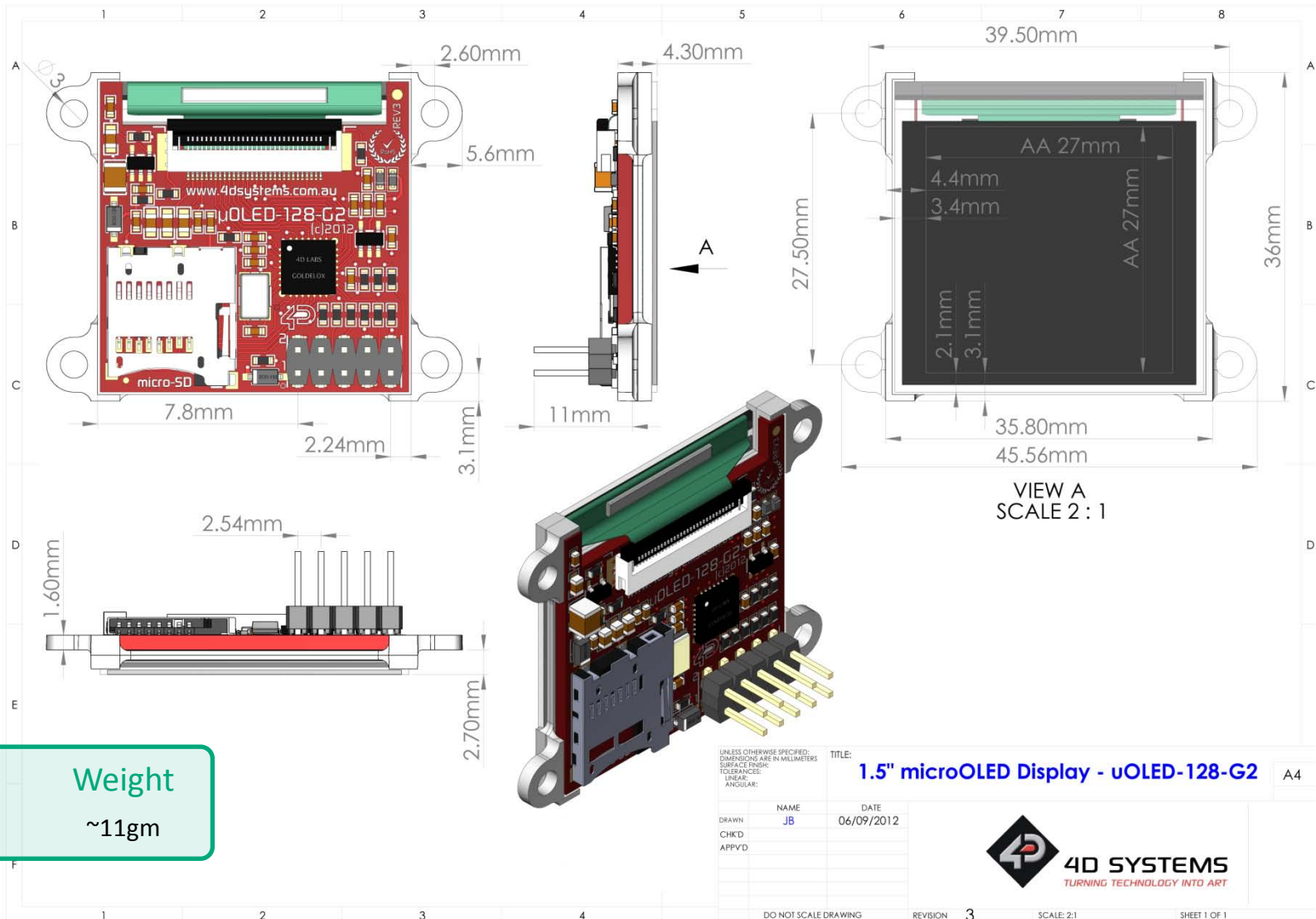
9. Getting Started

Getting started is as simple as connecting the 4D Programming Cable to the Display Module, and choosing your Product and Development Environment in the 4D Workshop4 IDE.

4D Workshop4 IDE guides you through the relevant Aid Tools with adequate explanation to get your Application up and running in no time.

4D Programming Cable

Weight

~11gm
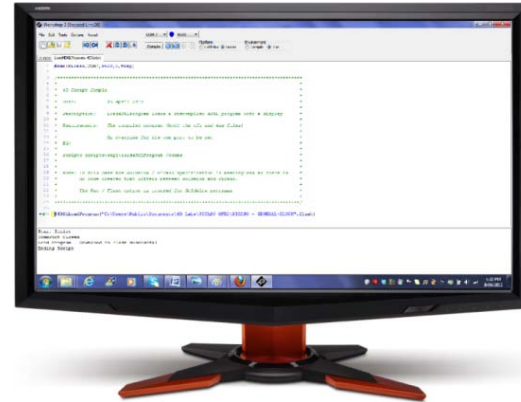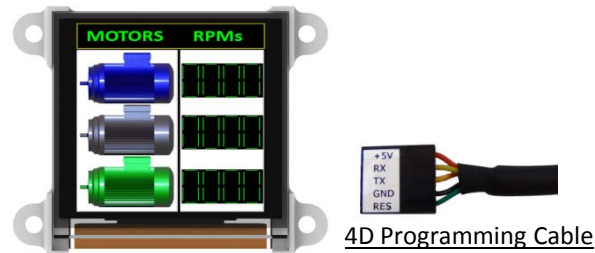
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For additional information on the μOLED-128-G2, please refer to the μOLED-128-G2 Datasheet or visit 4D Systems website at
www.4dsystems.com.au
If you require specific help with a 4D Systems product, information can be sourced from the FAQ and relevant forum threads
on the website, or by contacting a direct member of our Tech Support team at 4D Systems at support@4dsystems.com.au
For enquiries regarding sales, distributors, or business relations, please contact Sales at sales@4dsystems.com.au