

# TESSERA R<sup>2</sup>



*the revolutionary new receiver card  
for Tessler LED Processing*

## MORE POWER

R<sup>2</sup> is the most powerful Tessler receiver card ever. Supporting a 256K pixel capacity, R<sup>2</sup> is perfect for all types of LED panel, even very high resolutions.

All of Tessler's industry-leading feature set is built-in, including fully flexible mapping and rotation of panels, system-wide genlock and superior greyscale performance.

## SMALLER FORM FACTOR

Measuring just 68x32mm, the compact R<sup>2</sup> module form factor will fit into even the smallest panel enclosures. All that is required to mount R<sup>2</sup> is an inexpensive and widely-available SO-DIMM socket.

R<sup>2</sup> is designed to be integrated directly onto an LED panel's existing circuit boards for the smallest and lowest cost solution. Alternatively, a range of carrier boards are available to adapt R<sup>2</sup> to match other common form factors for compatibility with existing designs.

## OUTSTANDING VALUE

R<sup>2</sup> has been engineered for value and designed to remove unnecessary duplication of connectors and circuitry in an LED panel's design, giving a cost-effective overall solution.

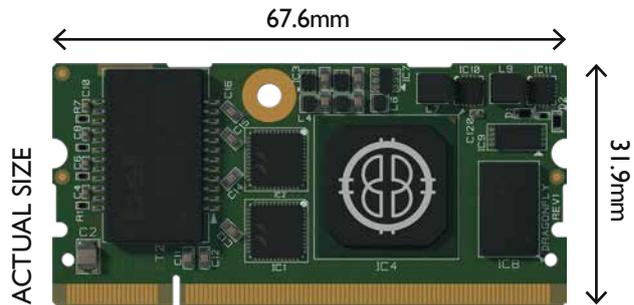
This combination of performance, features, size and cost makes R<sup>2</sup> great value for high quality LED video panel control.

SMALL  
IN  
SIZE

# BIG ON FEATURES

*R<sup>2</sup> takes a new module-based approach to LED panel receiver card design.*

*Using cutting-edge technology, R<sup>2</sup> is the perfect combination of capacity, size and features.*



## NEXT GENERATION LVDS TECHNOLOGY

R<sup>2</sup> supports two output signalling modes - traditional LVCMOS and the new LVDS mode.

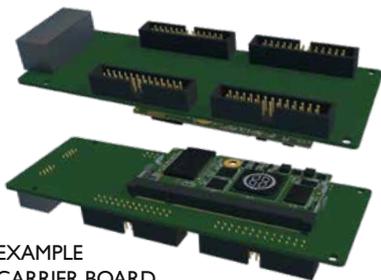
LVDS signalling uses high speed serialised data streams to drive large numbers of pixels over relatively few wires. Higher refresh rates can also be achieved with lower RF emissions, even over long internal cables.

LVCMOS signals are compatible with 5V TTL for legacy applications.

## COMPREHENSIVE MANUFACTURER SUPPORT

Panel manufacturers are supported every step of the way to get the most out of R<sup>2</sup>, from an extensive data sheet to a variety of reference designs.

Carrier boards are also available to adapt R<sup>2</sup> to other common receiver card form factors for compatibility with existing LED panel designs.



EXAMPLE CARRIER BOARD

## SUPERIOR GREYSCALE PERFORMANCE

Tessera processing consistently wins shoot-outs based on the strength of its visual greyscale performance, especially when the LED panels are run at low brightness as is typical in many studio applications.

## FULL GENLOCK AND SYNCHRONISATION

R<sup>2</sup> locks its LED refresh to the processor's video or genlock source making your LED panels look great on camera.

Multiple Tessera systems can also be locked together and completely synchronised, eliminating any worries about tearing when used side-by-side.

## SOPHISTICATED PER-LED COLOUR CALIBRATION

Per-LED colour calibration makes sure your panels look their best every time. R<sup>2</sup> supports reading calibration data from the LED modules so modules can be swapped without having to recalibrate.

Advanced Calibration Tuning options let video engineers make on-site tweaks, for example applying edge-correction to compensate for mechanical seams between panels.

## SPECIFICATIONS

- Capacity - 262,144 RGB pixels
- 2 x Gigabit Ethernet data connections
- All major driver ICs supported
- Up to 144 output data channels
- 16 bit-per-channel processing
- Support for sensors (e.g. temperature)
- Support for user interfaces (e.g. status LEDs, push buttons)
- DDR2 SO-DIMM form factor
- LVCMOS and LVDS output modes

## CONTROLLED BY WORLD-CLASS PROCESSORS

R<sup>2</sup> works with all Tessera products, including our flagship M2 Processor.

Tessera Processors are packed with features such as intuitive control software, built-in scaling, flexible mapping, extensive colour controls and live control over DMX.

