MIDAS DISPLAYS

AURUM SERIES

Gold standard versatile displays: UK designed and engineered

Contents

Introduction

Gold standard versatile displays: UK designed and engineered

The **Aurum Series** is the next-generation family of TFT displays from Midas Displays, designed and developed by our UK-based engineering team. Created with upgradability and versatility at its core, the series combines **adjustable high brightness displays, a unified flex design**, and support for **RGB, LVDS, and HDMI interfaces**. An intelligent, embedded option based on the **Bridgetek BT817Q** advanced video engine IC is also available, making product development as seamless as possible.

Competitively priced and future proofed, the Aurum Series gives you all the flexibility and performance you need, backed by trusted UK-based design and support.

Initially available in **4.3", 5.0", 7.0" and 10.1",** each module offers:

- **Standard connection designs** for each interface supporting interchangeability
- **High-bright displays** for outstanding visibility in demanding environments
- **UK-based engineering design and support** for easy project integration
- **Optional USB or I²C switchable PCAP touch** for convenient user selection
- **Optional mounting lugs** for stable assembly

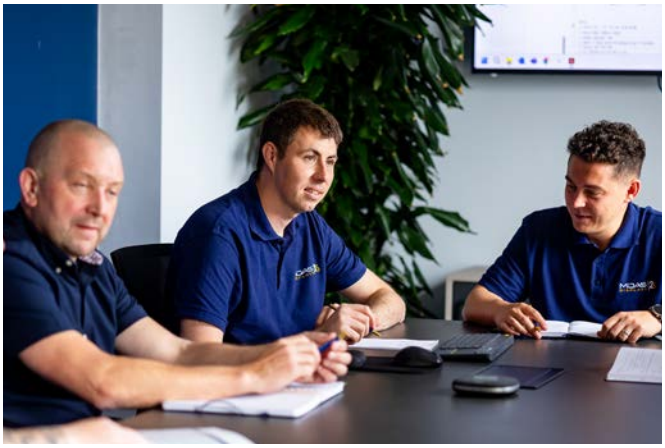
Concept and Development

Whether you're starting a new design or upgrading an existing product, the Aurum Series gives you the **flexibility, performance, and peace of mind** for your project needs, all backed by **trusted UK engineering.**

Concept

The **Aurum Series** was born from a clear customer need: versatile, high-performance displays that simplify integration and evolve with future demands. Working closely with OEMs across industries, we identified key pain points: complicated display interfacing, inconsistent brightness performance, and lack of design flexibility. Our UK-based engineering team responded with a concept that puts **versatility, upgradability, and reliability** at the centre.

This led to the creation of the **Midas Versatile TFT (MVT)** platform, designed to set a new **gold standard** for embedded display technology.

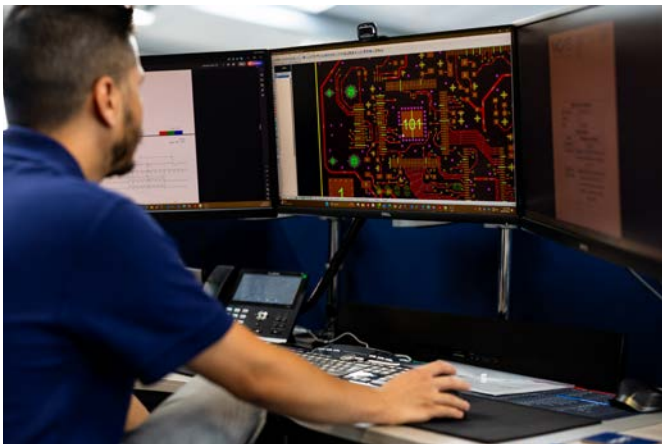


Development

Development of the Aurum Series focused on unifying hardware and design to streamline integration across a wide range of applications. Our engineering team in the UK designed each module with:

- **High-bright TFT panels** for readability in any environment
- **Common flex design** to simplify mechanical integration
- **Interface support for RGB, LVDS, and HDMI**, plus an embedded BT817Q video engine option
- **Switchable USB/I²C PCAP touch** for ultimate control flexibility

The series was engineered to support standard connection designs, making it easier to switch between display sizes or interfaces without redesigning the entire system.

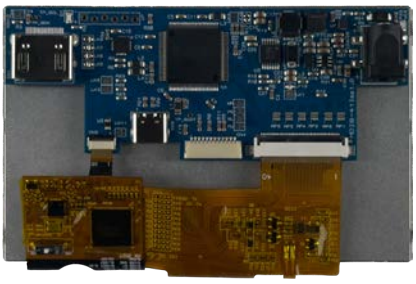


Testing

All Aurum displays undergo rigorous in-house testing to meet our gold standard of reliability and performance. Each module is tested to ensure long-term performance in industrial and commercial environments.

In addition, our UK-based team provides hands-on engineering support, making real-world testing and customer integration fast and frustration-free.

4.3”



4.3" back of HDMI

4.3" back of Embedded

Our 4.3" range includes RGB, HDMI, and Embedded interface options. Each option has a resolution of 800 x 480, IPS technology with all-round viewing angles, and brightness of 1000 cd/m² to 1250cd/m² depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-41 interface board. The Embedded option uses our MDIB-43 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 4.3" displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

RGB Display Features			
Size	4.30"	**Display Interface**	RGB
Resolution	800 x 480	**Contrast Ratio**	800
Module Dimensions	104.45mm x 65.50mm	**Active Area**	95.04mm x 53.86mm
Display Depth	2.75mm	**Display IC**	HX8264D + HX8664B
Brightness (Non Touch)	1250cd/m²	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-30°C to +85°C	**Optional**	Mounting Lugs

HDMI Option Features			
Module Depth	17.55mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-41
Operating Temperature	-20°C to +70°C	**Connector Type**	HDMI Type A

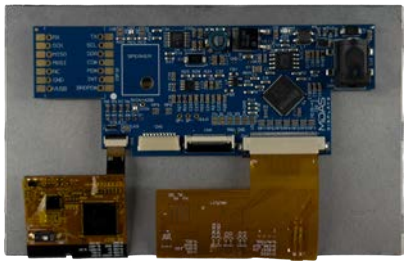
Embedded Option Features			
Module Depth	17.55mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-43
Operating Temperature	-30°C to +85°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I²C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.25mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m²	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

5.0”

5.0" back of HDMI



5.0" back of Embedded

Our 5.0" range includes RGB, HDMI, and Embedded interface options. Each option has a resolution of 800 x 480, IPS technology with all-round viewing angles, and brightness of 1000 cd/m² to 1250cd/m² depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-41 interface board. The Embedded option uses our MDIB-43 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 5.0” displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

RGB Display Features			
Size	5.00"	**Display Interface**	RGB
Resolution	800 x 480	**Contrast Ratio**	1000
Module Dimensions	120.70mm x 75.80mm	**Active Area**	108.00mm x 64.80mm
Display Depth	2.80mm	**Display IC**	ST7262
Brightness (Non Touch)	1250cd/m²	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-30°C to +85°C	**Optional**	Mounting Lugs

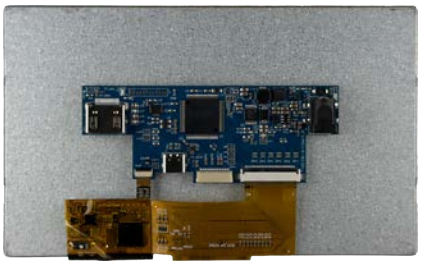
HDMI Option Features			
Module Depth	17.60mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-41
Operating Temperature	-20°C to +70°C	**Connector Type**	HDMI Type A

Embedded Option Features			
Module Depth	17.60mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-43
Operating Temperature	-30°C to +85°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

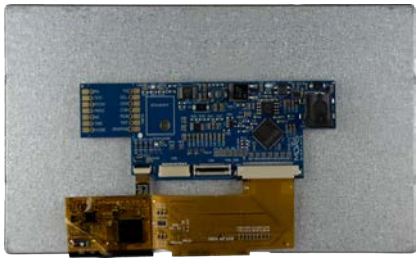
Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I²C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.25mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m²	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

7.0"



7.0" back of HDMI



7.0" back of Embedded

Our 7.0" standard resolution range includes RGB, HDMI, and Embedded interface options. Each option has a resolution of 800 x 480, IPS technology with all-round viewing angles, and brightness of 1000 cd/m^2 to 1200cd/m^2 depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-41 interface board. The Embedded option uses our MDIB-43 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 7.0" displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

RGB Display Features			
Size	7.00"	**Display Interface**	RGB
Resolution	800 x 480	**Contrast Ratio**	1000
Module Dimensions	164.90mm x 100.00mm	**Active Area**	153.84mm x 85.63mm
Display Depth	3.50mm	**Display IC**	ST7277
Brightness (Non Touch)	1200cd/m^2	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-20°C to +70°C	**Optional**	Mounting Lugs

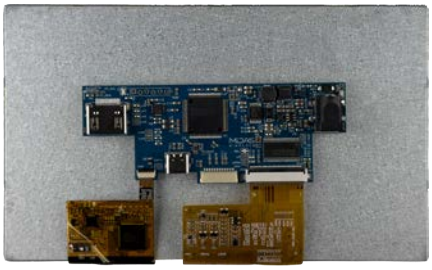
HDMI Option Features			
Module Depth	18.30mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-41
Operating Temperature	-20°C to +70°C	**Connector Type**	HDMI Type A

Embedded Option Features			
Module Depth	18.30mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-43
Operating Temperature	-20°C to +70°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

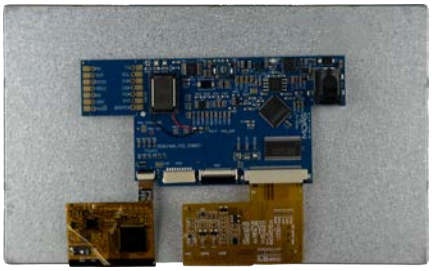
Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I^2C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.25mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m^2	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

7.0" High Resolution



7.0" high-resolution back of HDMI



7.0" high-resolution back of Embedded

Our 7.0" high-resolution range includes LVDS, HDMI, and Embedded interface options. Each option has a resolution of 1024 x 600, IPS all-round viewing angles, and brightness of 1000 cd/m² to 1200cd/m² depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-40 interface board. The Embedded option uses our MDIB-42 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 7.0" displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

LVDS Display Features			
Size	7.00"	**Display Interface**	LVDS
Resolution	1024 x 600	**Contrast Ratio**	800
Module Dimensions	164.90mm x 100.00mm	**Active Area**	154.21mm x 85.92mm
Display Depth	3.50mm	**Display IC**	EK73215 + EK79001H
Brightness (Non Touch)	1200cd/m²	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-20°C to +70°C	**Optional**	Mounting Lugs

HDMI Option Features			
Module Depth	18.30mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-40
Operating Temperature	-10°C to +70°C	**Connector Type**	HDMI Type A

Embedded Option Features			
Module Depth	18.30mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-42
Operating Temperature	-10°C to +70°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I²C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.25mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m²	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

10.1”

10.1” back of HDMI

10.1” back of Embedded

Our 10.1” standard resolution range includes LVDS, HDMI, and Embedded interface options. Each option has a resolution of 1024 x 600, IPS technology with all-round viewing angles, and brightness of 1000 cd/m² to 1200cd/m² depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-40 interface board. The Embedded option uses our MDIB-42 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 10.1” displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

LVDS Display Features			
Size	10.10"	**Display Interface**	LVDS
Resolution	1024 x 600	**Contrast Ratio**	800
Module Dimensions	235.00mm x 143.00mm	**Active Area**	222.72mm x 125.28mm
Display Depth	5.05mm	**Display IC**	EK73215BCGA + EK79001HL
Brightness (Non Touch)	1200cd/m²	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-20°C to +70°C	**Optional**	Mounting Lugs

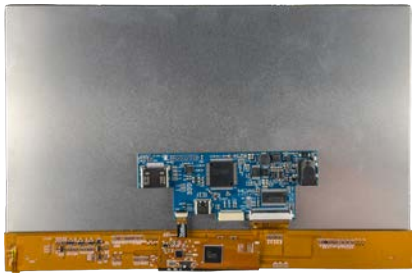
HDMI Option Features			
Module Depth	19.85mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-40
Operating Temperature	-10°C to +70°C	**Connector Type**	HDMI Type A

Embedded Option Features			
Module Depth	19.85mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-42
Operating Temperature	-10°C to +70°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

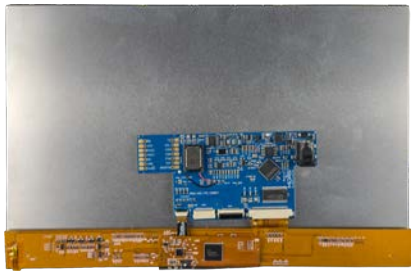
Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I²C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.40mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m²	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

10.1" High Resolution



10.1" high-resolution back of HDMI



10.1" high-resolution back of Embedded

Our 10.1" high-resolution range includes LVDS, HDMI, and Embedded interface options. Each option has a resolution of 1280 x 800, IPS technology with all-round viewing angles, and brightness of 1000 cd/m² to 1200cd/m² depending on touch type. The HDMI option is designed for a simplified set up and uses our MDIB-40 interface board. The Embedded option uses our MDIB-42 board and is based on the Bridgetek BT817Q advanced video engine IC to provide enhanced graphics via a simple SPI interface.

All 10.1" displays have optional extras, including but not limited to: mounting lugs, capacitive multi-touch, and resistive touch.*

LVDS Display Features			
Size	10.10"	**Display Interface**	LVDS
Resolution	1280 x 800	**Contrast Ratio**	900
Module Dimensions	229.70mm x 149.15mm	**Active Area**	216.96mm x 135.60mm
Display Depth	5.00mm	**Display IC**	EK79202B
Brightness (Non Touch)	1200cd/m²	**Pinout**	40-way
Viewing Angle	All (IPS)	**Pitch**	0.50mm
Operating Temperature	-20°C to +70°C	**Optional**	Mounting Lugs

HDMI Option Features			
Module Depth	19.80mm	**Interface**	HDMI
Module Voltage	5v-12v	**Board Included**	MDIB-40
Operating Temperature	-10°C to +70°C	**Connector Type**	HDMI Type A

Embedded Option Features			
Module Depth	19.80mm	**Interface**	Embedded (SPI/QSPI)
Module Voltage	5v-12v	**Board Included**	MDIB-42
Operating Temperature	-10°C to +70°C	**Connector Type**	Seeed XIAO module or 10-way, 1.00mm pitch

Optional Capacitive Multi-Touch Features			
Touch Interface	USB or I²C	**Touch Driver IC**	FT5726-003 + CH571
Additional Depth	2.30mm	**Touch FPC**	10-way, 0.50mm pitch
Adjusted Brightness	1000cd/m²	**Touch Connection HDMI Option**	USB-C or 12-way, 1.00mm pitch

*Resistive touch options available upon request

RGB Display Compatible Boards

MDIB-41

Our MDIB-41 board converts the HDMI input signal to an RGB output signal for the display, supporting resolutions up to 1280x800. The board has a 5-12V input range and can support the full 1250cd/m^2 brightness of our Aurum display range, whilst allowing for adjustable brightness with internal or external Pulse-width Modulation (PWM).
It can support 16 different Extended Display Identification Data (EDIDs), as well as I^{2}C or USB Human Interface Device (HID) touch functionality. This board is fully compatible with all Midas Aurum displays with RGB interface and has been designed in the UK by the Midas engineering team.

MDIB-43

Our MDIB-43 board converts an RGB display into an intelligent Embedded TFT, powered by the Bridgetek BT817Q Advanced Embedded Video Engine (EVE), enabling rich, low-latency UIs via a simple SPI interface. With a wide 5–12V input range, it delivers robust power flexibility for industrial and embedded applications, while supporting a broad range of resolutions from 1920x480 or 1280x800, down to 320x240. The board supports integrated touch, audio playback, and 128MB of onboard QSPI Flash for storing media assets such as images, videos, and audio. A dedicated 20-pin 0.5mm FFC connector facilitates reliable power delivery and communication via SPI/QSPI protocols. Additionally, the integrated slot accommodates a Seeed Studio XIAO ESP32-C3/RP2040 module or any pin-compatible alternative, streamlining both evaluation and development processes. Fully compatible with all Midas Aurum RGB displays designed in the UK by the Midas engineering team.

LVDS Display Compatible Boards

MDIB-40

Our MDIB-40 board converts the HDMI input signal to an LVDS output signal for the display, supporting resolutions up to 1280x800. The board has a 5-12V input range and can support the full 1200cd/m² brightness of our Aurum display range, whilst allowing for adjustable brightness with internal or external Pulse-width Modulation (PWM).
It can support 16 different Extended Display Identification Data (EDIDs), as well as I²C or USB Human Interface Device (HID) touch. This board is fully compatible with all Midas Aurum displays with LVDS interface and has been designed in the UK by the Midas engineering team.

MDIB-42

Our MDIB-42 board converts an LVDS display into an intelligent Embedded TFT, powered by the Bridgetek BT817Q Advanced Embedded Video Engine (EVE), enabling rich, low-latency UIs via a simple SPI interface. With a wide 5–12V input range, it delivers robust power flexibility for industrial and embedded applications, while supporting a broad range of resolutions from 1920x480 or 1280x800, down to 320x240. The board supports integrated touch, audio playback, and 128MB of onboard QSPI Flash for storing media assets images, videos, and audio. A dedicated 20-pin 0.5mm FFC connector facilitates reliable power delivery and communication via SPI/QSPI protocols. Additionally, the integrated slot accommodates a Seeed Studio XIAO ESP32-C3/RP2040 module or any pin-compatible alternative, streamlining both evaluation and development processes. Fully compatible with all Midas Aurum LVDS displays designed in the UK by the Midas engineering team.

Embedded Displays

What are our Embedded Aurum displays?

Powered by Bridgetek's next-generation **BT817Q** graphics controller, the Midas **Aurum Embedded Series** delivers powerful performance in a fully integrated smart display solution.

These displays are built for industrial, medical, and consumer settings, bringing together graphics, touch controls, and audio in a single, compact platform. This integration makes system design simpler and speeds up development.

BT817Q Graphics Controller

High-performance, feature-rich, and MCU-friendly

The **BT817Q** from the Bridgetek family is ideal for applications requiring rich, modern GUIs that run on small microcontrollers via **SPI/QSPI**.

- Designed for high-quality HMIs
- Runs sophisticated GUIs with simple software
- Ideal for compact embedded systems

Enhanced User Interface Integration

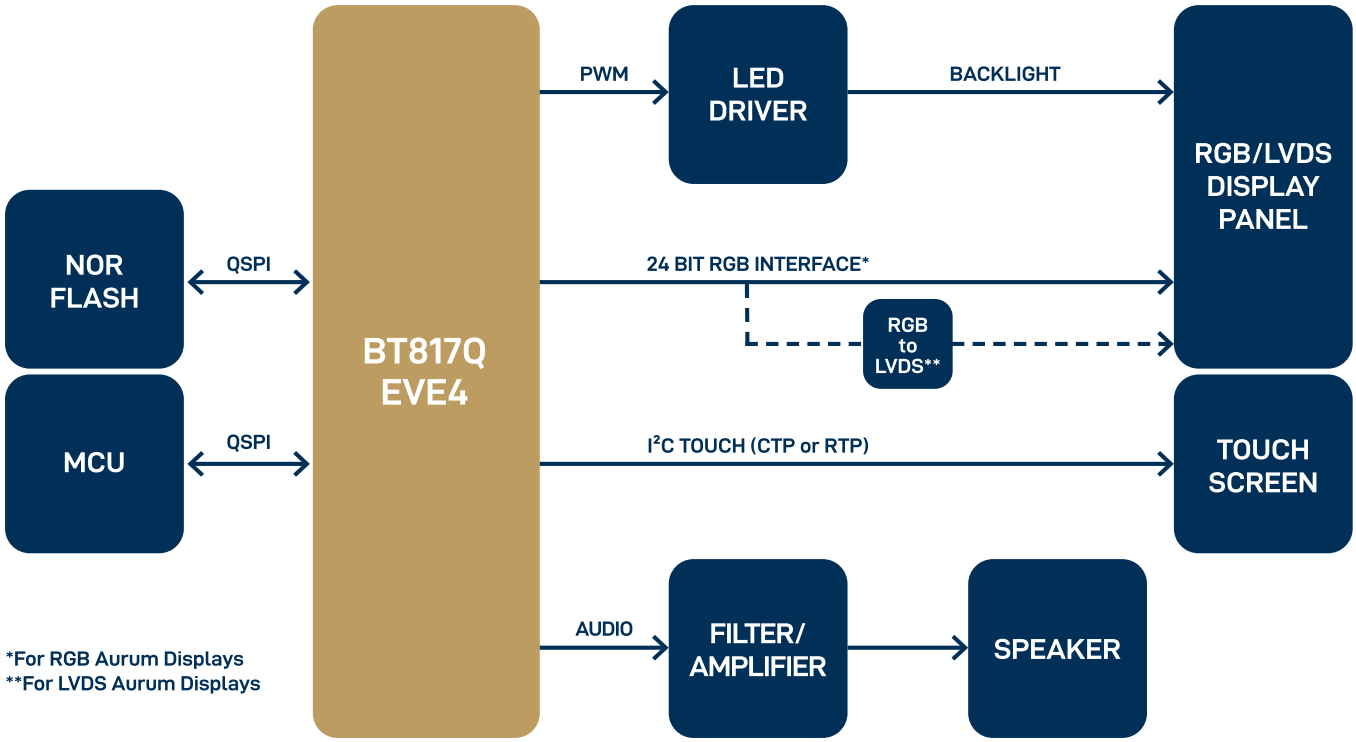
Midas Aurum Embedded Displays with the BT817Q controller offer a seamless interface combining:

- High-performance graphics rendering
- Responsive touch control
- Integrated audio playback

This cohesive platform enables faster prototyping and professional-grade user experiences.

Embedded Video Engine (EVE) Architecture

A streamlined, object-oriented approach that reduces design complexity and shortens development cycles.



Embedded Displays Continued

High-Resolution Display Support

The Embedded Aurum Series using the BT817Q introduces support for higher resolutions:

- **WSVGA (1024x600)**
- **WXGA (1280x800)**

Perfect for applications requiring crisp detail and vibrant visuals.

Integrated Audio System

Embedded Aurum boards include a built-in audio amplifier capable of mixing:

- The BT817Q's local audio output
- External host audio signals

A dedicated speaker connector provides effortless audio integration.

Adaptive Scalable Texture Compression (ASTC)

Superior image quality, reduced memory use

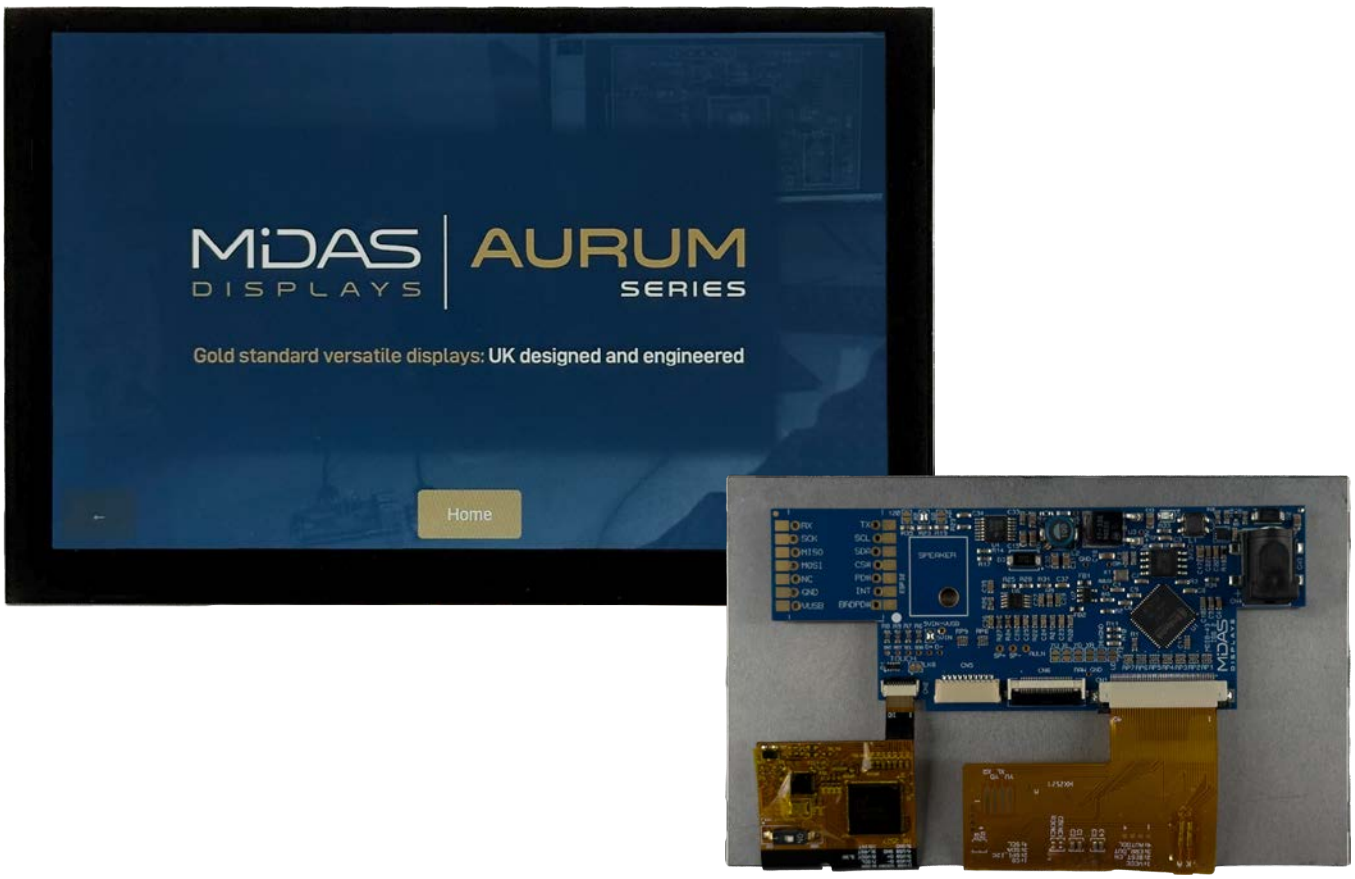
ASTC support allows:

- Enhanced image quality without extra bandwidth
- Smaller compressed graphics files with no significant visual loss
- Significant memory efficiency

A dedicated QSPI port enables external flash expansion for graphics storage.

On-Board Flash Memory

Included QSPI flash stores graphical assets directly on the module.



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