

Dialog – First SmartXtend passive matrix OLED (PMOLED) driver IC (DA8620)

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The highly-integrated innovative power management, audio and short-range wireless technology specialist, Dialog Semiconductor, has announced that the company's first SmartXtend passive matrix OLED (PMOLED) driver IC, the DA8620, is being used by Lenovo in its recently launched colour feature phone, the S800.

The S800 is the first commercial mobile phone to offer a transparent colour display utilising Dialog's SmartXtend driver technology. SmartXtend allows the main display of mobile devices – particularly those offering QVGA resolution – to utilise PMOLED, rather than LCD or active matrix OLED (AMOLED) displays.

PMOLEDs provide superior advantages in terms of picture and colour quality, viewing angle and video performance over LCD displays used today. PMOLED displays are also offered with a transmittance effect greater than 50 percent, thus ideal for see-through or transparent displays applications.

"I am delighted to announce Lenovo as the first commercial adopter of our SmartXtend OLED driver IC. Lenovo has a well founded reputation for implementing cutting edge technologies, and I have no doubt the S800 handset will exceed consumer expectations while providing a new user experience with its transparency effect," said Dr Jalal Bagherli, CEO at Dialog Semiconductor.

"Together with our module partners we have perfected this technology over recent years to now offer portable device manufacturers a display technology that provides superior performance and enables unique features, such as transparency and flexibility. The Lenovo S800 early adopter design win will stimulate the PMOLED mobile market and represents our next milestone on route to mass production."

SmartXtend enables PMOLED panels to be used as the high-resolution main display in mobile phones, mp3 players and other portable devices. SmartXtend is a set of driving techniques for PMOLED that currently supports resolutions up to QVGA. It includes a unique multi-line addressing scheme, pre-charge schemes and accurate dynamic current matching to reduce peak current and the average power consumption of the display. This also extends the lifetime of the OLED display.

The DA8620 is available now and is shipped in bare die form with gold bumps suitable for mounting as chip-on-flex or chip-on-glass, says the company.