

Sharp Develops a LCD Controller Based on Mobile Display Digital Interface Technology for 3G CDMA Devices

September 1 2004

[Sharp Corporation](#) announced today the development of a [LCD](#) controller using the high-speed serial interface MDDI, the LCD LR38869 for [CDMA2000®](#) and WCDMA (UMTS) 3G cellular phones. Sample shipment will begin in late September 2004. With integrated [MDDI](#) technology, the number of signals across the device's hinge is significantly reduced, and the development of sophisticated designs, such as a rotation type display, is promoted.

The integration of MDDI allows reduced power consumption, enabling the adoption of advanced features, such as high definition (QVGA) LCDs and high pixel cameras (1M-3M pixel) for wireless devices. Furthermore, global adoption of multimedia functions, such as video streaming, is increasing and technology that can transmit mass data with high speed and low power consumption is required for further advancement.

MDDI, developed by QUALCOMM, is integrated into select QUALCOMM's Mobile Station Modem™ (MSM™) baseband chipsets for CDMA2000 and WCDMA (UMTS), starting with the MSM6150™ and MSM6550™ chipsets for CDMA2000 and the MSM6275™ and MSM6280™ chipsets for WCDMA (UMTS). The LR38869 LCD controller supports the MDDI standard, and ensures high speed and mass data transfer between the LCD panel and the MSM chipset. Moreover, the number of signals of a hinge part is exceedingly reduced from

conventional 21 to four. Advanced handset models, including rotation-type displays, which have excellent functionality and design, can also be developed. Furthermore, MDDI provides reduced power consumption and decreased EMI noise (unnecessary radiation) by differential serial-data transmission of low amplitude.

This device supports the MDDI (Mobile Display Digital Interface) standard developed by QUALCOMM and can inter-communicate with QUALCOMM's chipset solutions, including the MSM6150, the MSM6550, the MSM6275 and the MSM6280 chipsets. In addition, finishing the verification on the MSM6550 surfboard and development of a driver software, it contributes to shortening of a handset manufacturer's design period, and reduction of a development resource. Moreover, it is possible to control two screens; QVGA size main display and sub display to maximum QVGA size by this device.

The graphic processing function in which camera image data / LCD data conversion, expansion/rotation, etc. were carried in the conventional LCD controller for cellular phones is built in, and the load of Baseband IC is mitigated. This realizes smooth display and low power consumption.

The original press release can be found [here](#).

Citation: Sharp Develops a LCD Controller Based on Mobile Display Digital Interface Technology for 3G CDMA Devices (2004, September 1) retrieved 27 April 2024 from <https://phys.org/news/2004-09-sharp-lcd-based-mobile-digital.html>

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