



Oct 10th, 2006

Differences between the MC8775 (Parent) and MC8775V (Variant)

MC8775 and MiniCard 8775 are used inter-changeably to represent the same product.
 MC8775V and MiniCard 8775V are used inter-changeably to represent the same product.

Summary of Hardware Similarities and Differences

Differences

Items	MC8775	MC8775V
Host Interface	Conforms to PCI Express Mini-Card standard. Using USB interface.	4 of the MiniCard connector pins that are not used on the MC8775 are reassigned to carry the Tx and Rx audio and grounds.
Audio	No audio connector.	4 wire analogue audio is supported over the MiniCard connector (non-standard pin-out). Additionally: 4 wire (digital) PCM audio or 4 wire serial data (UART) supported over the standard MiniCard interface.
Physical Attributes & PCB Layout	MiniCard form factor layout.	The PCB is the same as MC8775, an extra chip is installed in the MC8775V to Drive/receive the 4 extra PINs. It is not installed in the MC8775

Similarities

Items	MC8775	MC8775V
Antenna	Coaxial cable connector on card for an externally mounted antenna.	Same as MC8775
Power supply circuitry	3.3V externally supplied supply (as per standard).	Same as MC8775
SIM	SIM connections via MiniCard connector. External SIM Holder	Same as MC8775
SIM operation	Supports 1.8V and 3V USIM operation	Same as MC8775
Device Drivers	Provide NDIS and multiple serial ports	Same as MC8775
Watcher & SDK/API	Common to all MC87xx products	Same as MC8775
Baseband processor	Qualcomm chipset & schematic	Same as MC8775
RF Design	Chipset & Schematic	
• 2G RF	GSM/GPRS/EDGE 850, 900, 1800. 1900 Band	Same as MC8775
• 3G RF	UMTS/HSDPA 850, 1900, 2100 Band	Same as MC8775
• Transmit and Receive path	The 2G RF path and the 3G RF path are independent and isolated from each other.	Same as MC8775

Summary of Firmware differences

Both MC8775 and MC8775V product uses the same host communications interfaces and device drivers. This also applies to higher-level communications layers. Therefore, the same Watcher runs on both.

The MC8775 and MC8775V use the same protocol stack software and the same firmware load. In order for the firmware to differentiate between the MC8775 and MC8775V, a jumper is used on a GPIO. This allows the firmware to determine if the voice functionality exists, and if so, to enable it. The protocol handling and performance of the two products are virtually identical.

Conclusion

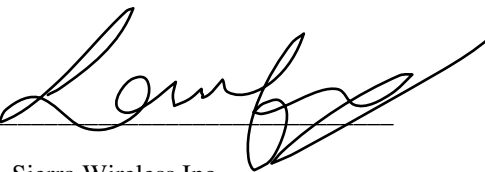
From the descriptions of the comparison between the parent model (MC8775) and the variant device (MC8775V), we recommend that the test results from the parent model (MC8775) are also applicable to the variant device (MC8775V) in the following general areas:

- GSM/EDGE/GPRS/UMTS/HSDPA Protocol conformance results
- 2G and 3G RF conducted and radiated conformance results
- SIM/USIM application and electrical results

Based on the very minimal differences we recommend that testing be done on:

- Spot checking speech-related testing (2G FR & EFR, 3G AMR)
 - The MC8775 parent will have full voice testing
- Spot-checking of the RF conducted where voice is involved
- General regression testing

Authorized by: _____



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