



### **Product Highlights**

- State-of-the-art accuracy and touch response
- Standard-setting ESD and EMI protection
- Firmware download capability provides flexibility
- Wide operating temperature
- High touch coordinate resolution of 16k x 16k\*
- USB, HID, RS232-compliant interfaces
  - \* The maximum number of addressable coordinates generated by the controller

#### A World-Class Electronics Solution

The MicroTouch EX II Series Controllers bring flexibility and feature-rich functionality to capacitive touch screen applications. This high performance electronics platform is based on the innovative MicroTouch EX II ASIC, designed to provide high resolution, on-chip RAM, and a wide operating temperature range. With expanded regulatory approvals, improved power modes, and enhanced ESD and EMI protection, this controller series is a robust solution for popular touch applications.

#### **Advanced Firmware Download Capability**

Culminating decades of touch technology experience, the EX II Series electronics enables advanced firmware download capabilities, optimized for MicroTouch™ ClearTek™ II and legacy ClearTek™ touch screens. Standard factory-loaded firmware can be easily updated or replaced at some future date with downloadable, newer firmware revisions to match updated software application functionality. This field upgrade capability can mean minimal downtime for software upgrades.



## EX II Series Capacitive Touch System Electronics

	USB EX II 7700UC	USB EX II 7700HC	Serial EX II 7700SC
Part Numbers	EXII-7760UC	EXII-7730HC	EXII-7720SC
Communications Protocol	USB Rev 1.1	HID (Mouse)	Serial RS-232
Optional Components	7312256 96" (2.4 m) Cable, Pearl 7315050 23" (0.58m) Cable, Pearl	7312256 96" (2.4 m) Cable, Pearl 7315050 23" (0.58m) Cable, Pearl	7310101 96" (2.4 m) Cable, Pearl 7310107 26" (0.7 m) Cable, Pearl
Dimensions	1.30" x 2.55" x 0.45"	1.30" x 2.55" x 0.45"	1.30" x 2.55" x 0.45"
Zimonolono	33.0 x 65.0 x 11.4 mm	33.0 x 65.0 x 11.4 mm	33.0 x 65.0 x 11.4 mm
Power Connection	USB bus	USB bus	5V through 2-pin connector on board
Touch Screen Connection	5-pin locking AMP	5-pin locking AMP	5-pin locking AMP
Mean Time Between Failure (MTBF)	> 700,000 hours	> 700,000 hours	> 700,000 hours
Electrostatic Discharge (ESD)	± 8KV Contact, ± 27KV Air	$\pm$ 8KV Contact, $\pm$ 27KV Air	$\pm$ 8KV Contact, $\pm$ 27KV Air
Relative Humidity	0 to 95% non-condensing at +36°C	0 to 95% non-condensing at +36°C	0 to 95% non-condensing at +36°C
Storage Temperature	-50° to +85° C	-50° to +85° C	-50° to +85° C
Operating Temperature	-40° to +70° C	-40° to +70° C	-40° to +70° C
Power Requirements (Typical)	$5$ Vdc $\pm$ 5% 75 mA	$5$ Vdc $\pm$ 5% 75 mA	5-12Vdc ± 5% 85 mA
Regulatory	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548, RoHS	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548, RoHS	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548, RoHS
Driver Support	MT 7 (Win Vista, 2000, XP, XPe, WEPOS, CE.net 4.0/5.0, Linux) TouchWare (Win 95, 98, NT)	MSFT HID (Mouse) Optional: MT 7 (Win Vista, 2000, XP, XPe, WEPOS,CE.net 4.0/5.0)	MT 7 (Win Vista, 2000, XP, XPe, WEPOS, CE.net 4.0/5.0, Linux) TouchWare (Win 95, 98, NT)
Warranty	5 Years	5 Years	5 Years



# EX II Series Capacitive Touch System Electronics

	TouchPen System	EX II ASIC Chipset
Part Numbers	EXII-3710SP	EXII-ASIC-C
Communications Protocol	Serial RS-232	Serial RS-232 / USB Rev 1.1
Optional Components	69-901 TouchPen Kit (includes stylus, stylus cable, RS232 cable) 69-502 (stylus) 7311240 (stylus cable) 7311273 (RS232 cable)	N/A
Dimensions	4.80" X 1.35" x .32" 121.9 x 34.3 x 8.2 mm	N/A
Power Connection	12V through RS232 cable	Based on design
Touch Screen Connection	6-pin Molex	5-pin locking AMP
Mean Time Between Failure (MTBF)	> 600,000 hours	> 700,000 hours
Electrostatic Discharge (ESD)	± 8KV Contact, ± 27KV Air	Based on design
Relative Humidity	0 to 95% non-condensing at +36°C	0 to 95% non-condensing at +36°C
Storage Temperature	-50° to +85° C	-50° to +85° C
Operating Temperature	-40° to +70° C	-40° to +70° C
Power Requirements (Typical)	12Vdc ± 5% 100 mA	Based on design
Regulatory	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548, RoHS	UL/cUL, FCC-B, CE, VCCI, AS/NZS 3548, RoHS
Driver Support	MT 7 (Win Vista, 2000, XP, XPe, WEPOS, CE.net 4.0/5.0, Linux) TouchWare (Win 95, 98, NT)	MT 7 (Win Vista,2000, XP, XPe, WEPOS, CE.net 4.0/5.0, Linux) TouchWare (Win 95, 98, NT)
Warranty	5 Years	1 Year



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For more information on 3M touch products, call toll-free 1-888-659-1080 RoHS Directive compliant: In accordance with European Directive 2002/95/EC, "RoHS Directive compliant" means that the product or part does not contain any of the following substances in excess of the following maximum concentration values in any homogeneous material, unless the substance is in an application that is exempt under RoHS: (a) 0.1% (by weight) for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers; or (b) 0.01% (by weight) for cadmium. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M. (9/06)

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