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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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# EX II Series



## Capacitive Touch System Electronics

### 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
<b>Part Numbers</b>	EXII-7760UC	EXII-7730HC	EXII-7720SC
<b>Communications Protocol</b>	USB Rev 1.1	HID (Mouse)	Serial RS-232
<b>Optional Components</b>	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
<b>Dimensions</b>	1.30" x 2.55" x 0.45" 33.0 x 65.0 x 11.4 mm	1.30" x 2.55" x 0.45" 33.0 x 65.0 x 11.4 mm	1.30" x 2.55" x 0.45" 33.0 x 65.0 x 11.4 mm
<b>Power Connection</b>	USB bus	USB bus	5V through 2-pin connector on board
<b>Touch Screen Connection</b>	5-pin locking AMP	5-pin locking AMP	5-pin locking AMP
<b>Mean Time Between Failure (MTBF)</b>	> 700,000 hours	> 700,000 hours	> 700,000 hours
<b>Electrostatic Discharge (ESD)</b>	± 8KV Contact, ± 27KV Air	± 8KV Contact, ± 27KV Air	± 8KV Contact, ± 27KV Air
<b>Relative Humidity</b>	0 to 95% non-condensing at +36°C	0 to 95% non-condensing at +36°C	0 to 95% non-condensing at +36°C
<b>Storage Temperature</b>	-50° to +85° C	-50° to +85° C	-50° to +85° C
<b>Operating Temperature</b>	-40° to +70° C	-40° to +70° C	-40° to +70° C
<b>Power Requirements (Typical)</b>	5Vdc ± 5% 75 mA	5Vdc ± 5% 75 mA	5-12Vdc ± 5% 85 mA
<b>Regulatory</b>	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
<b>Driver Support</b>	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)
<b>Warranty</b>	5 Years	5 Years	5 Years

# EX II Series Capacitive Touch System Electronics

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

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**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)

**NOTICE:** Given the variety of factors that can affect the use and performance of a 3M Touch Systems Product (the "Product"), including that solid state equipment has operation characteristics different from electro mechanical equipment, some of which factors are uniquely within User's knowledge and control, it is essential that User evaluate the 3M Touch Systems Product and software to determine whether it is suitable for User's particular purpose and suitable for User's method of application. 3M Touch Systems' statements, engineering/technical information, and recommendations are provided for User's convenience, but their accuracy or completeness is not warranted. 3M Touch Systems products and software are not specifically designed for use in medical devices as defined by United States federal law. 3M Touch Systems products and software should not be used in such applications without 3M Touch Systems' express written consent. User should contact its sales representative if User's opportunity involves a medical device application.

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