



SUPPORTS CIRCUIT WIRELINE AND IP NETWORKS

MLC 8000 CONVENTIONAL ANALOG COMPARATOR

The MLC 8000 is a versatile product platform that allows gradual migration of analog conventional voting/simulcast systems from circuit connectivity to IP network connectivity (LAN or WAN networks). When designing a conventional system one MLC 8000 operates as a console Tone Remote Control (TRC) interface and audio voter and at least one MLC 8000 as a sub-site link converter to 4-wire analog base stations and receivers. It allows users to immediately realize the savings of IP connectivity by providing a flexible solution with a direct interface to the existing 4-wire equipment at the remote RF sites.

- Interface with existing analog TRC consoles
- Interface with existing analog 4-wire base stations and receivers
- Supports PL/DPL generation, pre-emphasis and companding for analog simulcast
- Supports analog simulcast over IP subsite links up to 64 subsites
- Supports analog conventional voting on ASTRO® 25 systems with IP subsite links
- Fully compatible with GTR 8000 stations, QUANTAR™ stations or ASTRO-TAC receivers

SUPERIOR AUDIO QUALITY

The MLC 8000 uses an advanced G.711 voice codec technology to provide transparent operation for several analog signaling standards including MDC 1200 and DTMF. The Motorola-designed audio sampling hardware and digital signal processing provide superior audio fidelity, minimizing the impact of packetization on the audio quality experienced by subscribers and console operator positions.

DATA SHEET

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SPECIFICATIONS

	MLC 8000	DC POWER ADAPTER
Dimensions (H x W x D)	1.7 in (4.2cm x 8.6 in (21.8cm) x 10.4 in (26.4cm)	1.24 in (3.2cm) x 1.79 in (4.5cm) x 4.35 in (11.1cm)
Weight	5.8 lbs (2.6kg)	
Temperature	-30 °C to 60 °C (-22 °F to 140 °F) operating -40 °C to 80 °C (-40 °F to 176 °F) non-operating	-30 °C to 60 °C (-22 °F to 140 °F) operating -40 °C to 80 °C (-40 °F to 185 °F) non-operating
Humidity	5 to 95% @+50 °C (122 °F) (Non-Condensing)	5 to 95% @+50 °C (122 °F) (Non-Condensing)
Heat Dissipation	40 BTU/Hour (Maximum)	
Input Voltage Range	10.8 to 14 VDC (12v Nominal) b	90-260VAC
Input Frequency		60Hz/50Hz
Output Voltage Range		11.4V to 12.6V (12v Nominal)
Current Draw	Less than 0.6A at 12VDC	
Power Consumption	9 Watts (Maximum)	Maximum Load 2.0A
Environmental Regulatory	EU WEEE Directive EN 50419 Compliant	EU WEEE Directive EN 50419 Compliant
Safety Certifications	United States: UL60950-1 (UL Listed), Europe: EN60950-1, Canada: CSA	

INTERFACE SPECIFICATIONS

4-wire Analog Audio (Non-simulcast subsite link converter configuration)	Four RJ45 Connectors RX/TX Line Impedance: 600 Ohm	Input Audio Level: -30 to +10dBm, adjustable Output Audio Level: -30 to +10dBm, adjustable
Analog Simulcast Base Radio Port (Simulcast subsite link converter configuration)	One RJ45 Connector RX/TX Line Impedance: 600 Ohm PTT External PTT (logic output)	Output Audio Level: -10dBm output, .1dB adjustable Output Audio Delay: 0 to 300ms, 1usec adjustable Input Audio Level: -30 to +10dBm, adjustable
4-wire Analog Console Port (Analog comparator configuration)	One RJ45 Connector RX/TX Line Impedance: 600 Ohm	Input Audio Level: -30 to +10dBm, adjustable Output Audio Level: -30 to +10dBm, adjustable
V.24 Digital Audio	Four RJ45 Connectors	Synchronous RS232, 9600 baud Motorola V.24 Protocol
Ethernet	RJ45 Connector	
Analog Simulcast External Reference Input +12 VDC Input	QMA Connector (QMA-to-BNC jack adapter included) High Impedance (6.8K Ohms)	Required for analog simulcast comparator and analog simulcast subsite link converter configurations. Requires 5MHZ/1PPS composite reference from TRAK 8835-2M or TRAK 9100

SYSTEMS SPECIFICATIONS

	ANALOG NON-SIMULCAST VOTING	ANALOG SIMULCAST	MIXED-MODE NON-SIMULCAST VOTING ¹	V.24 SUBSITE LINK CONVERTER ²
Comparator Voting Capacity	1-64 receivers	1-64 receivers	1-64 receivers	1-64 receivers
Subsite Link Converter Capacity	Up to 4 TRC stations or receivers	1 Simulcast TX/RX station ³ or 1 receiver	Up to 4 V.24/4-wire "hybrid link" stations or receivers	Up to 4 V.24 stations or receivers
Subsite Link Types	T1 channel bank, IP	IP	T1 channel bank, IP	T1 channel bank, IP
Analog IP Audio Companding	G.711 (64Kbps, PCM)	G.711 (64Kbps, PCM)	G.711 (64Kbps, PCM)	N/A
Console Interface	Tone Remote Control	Tone Remote Control	Motorola V.24	Motorola V.24
Station/Receiver Interface	Receiver: Status Tone Station: Tone Remote Control (TRC)	Receiver: Status Tone Station: External PTT and Status Tone	Motorola V.24	Motorola V.24
Voting Algorithm	Continuous Voting	Continuous Voting	Continuous Voting Vote and Hold (Analog)	Continuous Voting
Voting Control and Display	MLC 8000 configuration tool standard or MCN 8000 Server/Client (CTI Products, Inc.)	MLC 8000 configuration tool standard or MCN 8000 Server/Client (CTI Products, Inc.)	MLC 8000 configuration tool standard or MCN 8000 Server/Client (CTI Products, Inc.)	MLC 8000 configuration tool standard or MCN 8000 Server/Client (CTI Products, Inc.)

¹ Requires ASTRO 25 Core and GCM 8000 Comparator

² Requires GCM 8000 Comparator

³ Requires TRAK GPS-synchronized composite reference

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