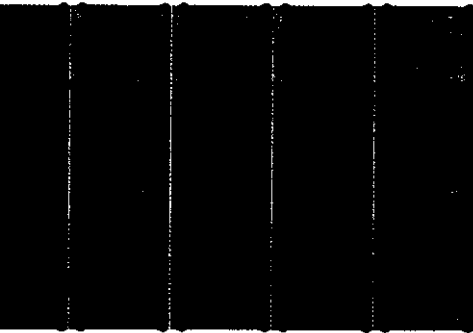


# CM 800 HP

## Channel Module Product Description

- The Channel Module is an RF channel selective repeater. It can be used in the On Channel Repeater (OCR) or Translator mode. As no baseband demodulation/remodulation process takes place within the Channel Module, signals are amplified with minimal distortion and propagation delays.
- Different filtering characteristics and bandwidths can be provided to ensure compatibility with most types of analog/digital signaling formats and channel spacing.
- When configured in the OCR mode, the input and output frequencies are the same and a gain of greater than 120 dB can be realized.

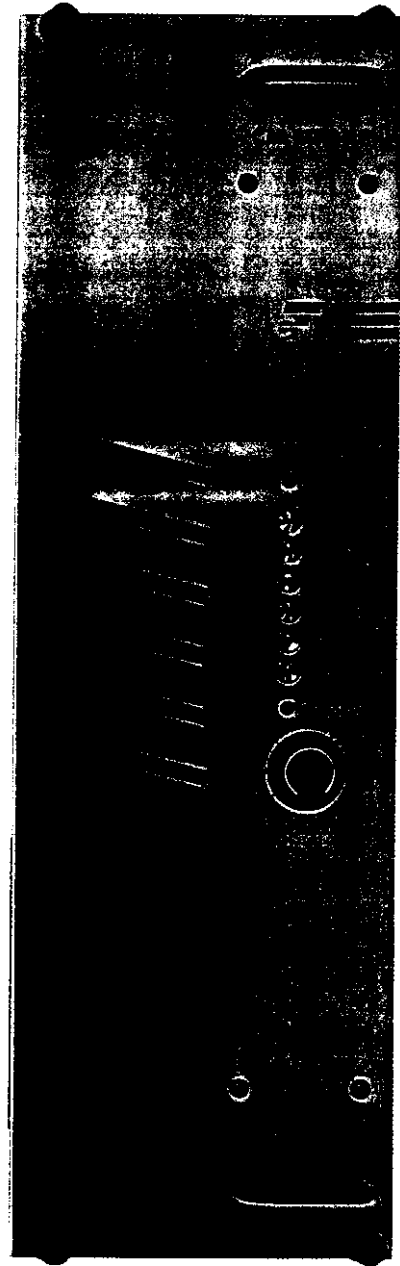


- When configured in the Translator mode, with different input and output frequencies, a gain of 160 dB is available.

- In either mode, the input threshold's gain and output power are programmable either locally from a RS-232 port on the front panel or remotely from a System Controller. No disassembly is

required to perform these adjustments. A simple set-up program allows programming information to be entered directly in dBm for input threshold/output power and in dB for gain. Together with the capability to monitor RSSI levels, these features minimize the need to use test equipment during system installation and set-up.

- Automatic maximum possible gain set up can be provided as an option.
- In conventional system applications, CTCSS/DCS decoding can be programmed to provide additional protection from interfering signals, ensuring only wanted signals are amplified.
- The chassis of the Channel Module is cast aluminum, designed to provide the high levels of internal shielding required for this application. A double Eurocard format allows five Channel Modules and one Controller Module to be plugged into a single 19" EIA rackmount card cage that is 10.5" (6 rack units) high.
- Additional per channel alarm and monitoring functions are available as detailed in the following table.



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# Technical Specifications CM 800 HP

Frequency of Operation	<b>806-960 MHz</b>
Sensitivity	<b>-117 dBm</b>
Input Carrier Detection Threshold	<b>-110 to -50 dBm</b>
Carrier Detection Threshold Adjustment Step	<b>2 dBm</b>
Carrier Detection Attack Time	<b>&lt;2 ms</b>
Gain Range (Adjustable)	<b>70 to 120 dB</b>
On-Channel Repeater (OCR) Translators	<b>70 to 160 dB</b>
AGC Range	<b>70 dB</b>
AGC Attack Time	<b>&lt;1 ms</b>
AGC Decay Time	<b>&lt;1 ms</b>
Output Power	<b>1 W to <del>20W</del> 7.0W</b>
Output Power Tolerance	<b>-0dB, +1dB</b>
Duty Cycle	<b>100%</b>
Frequency Stability	<b>Tracks Input Signal Frequency</b>
On-Channel Repeater (OCR)/Translators	<b>+/-1.5 ppm (+/-0.2 ppm optional)</b>
Passband Frequency Stability (Internal TCXO)	<b>Narrowband FM Voice and Data</b>
Modulation Types	<b>Application Specific</b>
Bandwidth	<b>Application Specific</b>
Selectivity	<b>&gt;70 dB</b>
Receiver Spurious Response Rejection	<b>&gt;70 dB</b>
Receiver Intermodulation	<b>&lt;-57 dBm</b>
Receiver Conducted Spurious Emissions	<b>&lt;-16 dBm and &lt;-40 dBc</b>
Transmitter Conducted Spurious Emissions	<b>&gt;43 dB</b>
Transmitter FM Hum and Noise	<b>50 Ohms</b>
Input Impedance	<b>50 Ohms</b>
Output Impedance	<b>&lt;1.5:1</b>
Input VSWR	<b>&lt;1.5:1</b>
Output VSWR	<b>22 to 28 VDC (13.8 VDC*)</b>
Power Supply Voltage	<b>&lt;0.7 A DC</b>
Supply Current Drain	<b>&lt;3.5 A (&lt;4.5 A*)</b>
Standby	
Transmit	

\* 5 W output power.

Mechanical		CM 800 HP
RF Connectors		<b>SMA Receptacles</b>
Environmental		<b>90% humidity @ 50°C (122°F)</b>
Operating Temperature Range		<b>-30 to +60°C (-22 to +140°F)</b>
Dimensions		<b>222 x 225 x 75 mm (8.74" x 8.86" x 2.95")</b>
Weight		<b>4.09 kg (9 lb)</b>

Programming CM 800 HP	
Frequency of Operation	✓
Output Power	✓
Carrier Detection Threshold	✓
Carrier Detection Timeout	✓
Gain	✓
DCS/CTCSS	✓

Alarms/Monitoring	
Power	✓
VSWR	✓
Temperature	✓
Synt. lock	✓