Analog Headend

Continuum® Headend System
Model 9811 and 9814 Controllers
Model 9801 and 9802 Rear Interface Modules

Introduction

The Continuum® Headend System product family provides users with a vertically-oriented, compact, full featured ensemble of headend functions. The Model 9811 and 9814 Controllers manage all activities between application modules in addition to supporting external monitoring and control.

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Description

All Continuum configurations require one controller and its corresponding rear interface module per chassis. The Model 9811 and 9814 Controller Modules support all chassis level functions required by any combination of application modules. A controller and its Model 9801 or 9802 Rear Interface Module (RIM) provide access to vital system connections such as AC or DC power input, all back-up connections, Transmission Network Control System (TNCS) connections, and alarm interfacing. The controller also directs setup and control of all application modules.

Model 9811/9814 Controller Modules are required to take advantage of the additional features and capabilities of the Continuum Series 9825 Modulators. The Model 9811/9814 controllers are fully compatible with all versions of Continuum Application Modules and can be used in place of Model 9810/9813 Controller Modules if required.

Note: Existing Model 9810/9813 Controller Modules need not be upgraded to Model 9811/9814 Controllers unless Continuum Series 9825 Modulator Modules are present in that respective chassis. However, Model 9810/9813 Controllers can be upgraded to Model 9811/9814 Controller compatibility if necessary. Contact Scientific-Atlanta factory service for details.

Features

Controller:

- Model 9811 Controller supports AC and DC powering
- Model 9814 Controller supports dual DC (-48 V DC) powering
- Expanded memory for new Model 9825M and 9825S Modulators
- Supports all Continuum Headend System application modules
- Microprocessor control and configuration
- Front panel remote terminal access (RS-232)
- 57.15 mm x 25.40 mm (2.25 in. x 1 in.) LCD display for all configuration and control functions
- Supports application module automatic back-up
- Plug & Play capability
- Universal AC powering with DC back-up input or dual DC powering
- Power factor corrected AC power supply
- Mechanically improved connector system

Rear Interface Module

- Interface for universal AC powering with DC back-up input or dual DC powering
- Back-up bus access supports external back-up control and large back-up groups (more than eight application modules) with TNCS
- Provides SMC access to all application modules in the chassis (RS-485 and TTL)

Model 9811 / 9814 Controllers & Model 9801 / 9802 RIMs

Technical Details

Automatic Back-up
The controller initiates and maintains command over back-up signal routing in the event of an application module malfunction. Continuous communication between the controller module and its application modules maintains up-to-the-second system status. Extensive internal diagnostics within application modules, in coordination with controller communication, speeds signal re-routing to a designated back-up module.

Dual Powering Options
Available powering options include AC powering with DC back-up (Model 9811), and DC powering with DC back-up (Model 9814). For international applications, AC powering is universal (90 V AC to 264 V AC, 47 Hz to 63 Hz). DC input range is -42 V DC to -60 V DC SELV. Both controllers support full chassis powering of any mix of application modules.

Alarm Outputs
"Dry" contact closures are provided on the rear interface module for alarm connection. Users can select either Normally Open (NO) or Normally Closed (NC) contact types for alarm outputs.

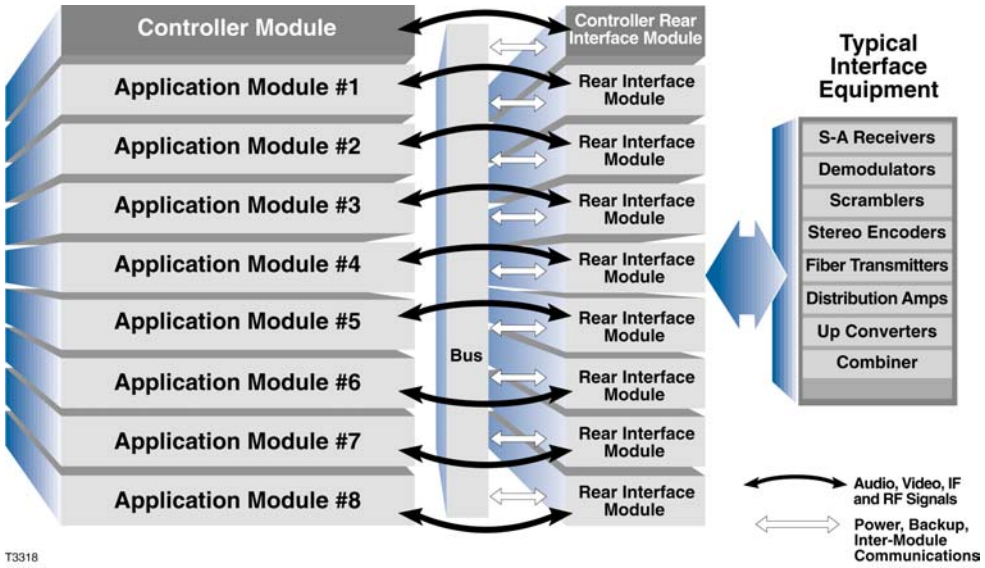
SMC (Status Monitoring and Control)
The SMC bus allows complete remote control operation of all application module functions and chassis level functions managed by the controller module. Interface is via two RJ-14 style jacks on the controller that are designed for loop-through cabling. This feature allows daisy-chaining of multiple SMC equipped units.

Local Control Port
The controller provides front panel access for local control of all functions. The local control port is equivalent to, but electrically isolated from, the SMC interface. SMC activity has priority and is not affected by use of the local control port.

Back-up Bus Access
This feature allows an external module outside the Continuum Headend System chassis to back-up a faulty application module inside the chassis. This feature is useful when back-up groups larger than eight application modules are desired. Back-up busses are available for audio (L, R, SAP, subcarrier) and baseband video.

Model 9825M and 9825S Modulators Memory Expansion
The new Continuum Modulators (Models 9825M and 9825S) contain added feature sets that require additional memory in the controller module for proper operation. The Model 9811 and 9814 Controller Modules contain this necessary memory expansion. Models 9810 and 9813 Controller Modules may be upgraded to Model 9811/9814 Controller capability.

Signal Flow Diagram



Model 9811 / 9814 Controllers & Model 9801 / 9802 RIMs

Specifications

Description	Specification		
AC Input	Model 9811 (only) 90 V AC to 264 V AC, 50 Hz to 60 Hz, 375 W (max)		
Power factor correction	Model 9811 (only) ≥0.99 at 320 W load		
Powering Mode	**# of Application Modules**	**Max. Controller Power Dissipation**	**Max. App. Module Power Dissipation**
AC Input	8	60 W	320 W
DC Input	0-8	10 W	320 W* **Application module powered directly from external –48 V DC source*
DC Input	Model 9811 backup power (with Model 9801 RIM) Model 9814 primary power (with Model 9802 RIM) -42 V DC to -60 V DC SELV		
Controller Interface SMC Interface on rear interface module Local Control Port on Application Module	 RS-422 or TTL RS-485 compatible 9600 baud max RS-232, 9600 baud		
Alarms-Terminal Strip Connectors Normally Open Contact Normally Closed Contact Common Contact	 1A DC max, 60 V SELV open circuit max. for all contacts		
Ref Input Ref Output	6.000 MHz ±60 Hz @ 1 V p-p ±10 dB, 75Ω 6.000 MHz ±60 Hz @ 1 V p-p minimum, 75Ω		
Operating temperature	0°C to 50°C (32°F to 122°F)		
Shipping weight	Controller: 10 lbs (4.5 kg) RIM: 3 lbs (1.4 kg)		

Ordering Information

Description	Part Number
Model 9811 AC & DC Controller Module	741160
Model 9814 DC & DC Controller Module	748030
Model 9811/9814 Memory Upgrade service for Model 9810/9813 Controller (contact S-A factory service)	748606
Note: *A controller rear interface module must be present in the chassis for the controller module to be operational.*	

Model 9811 / 9814 Controllers & Model 9801 / 9802 RIMs

Specifications

Connector	Type
SMC Loop	Two RJ-14 telephone connectors (loop through)
Video Backup	BNC style connector 75Ω, 1 V p-p, DC - 8 MHz
Subcarrier Backup	BNC style connector; 4.5 MHz audio subcarrier 75Ω, 1 V p-p, 4 MHz - 8 MHz
IF Backup (future feature)	F style connector
Reference Input	F style connector
Reference Output	F style connector
R+, R-	Terminal block, 2 terminals 600Ω, 0 dBm, 20 Hz - 20 kHz
GND	Terminal block, 3 terminals
L/MONO +, L/MONO -	Terminal block, 2 terminals 600Ω, 0 dBm, 20 Hz - 20 kHz
SAP+, SAP-	Terminal block, 2 terminals 600Ω, 0 dBm, 20 Hz - 20 kHz
ALM (normally closed), ALM (normally open), COMMON	Terminal block, 3 terminals

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Ordering Information

Description	Part Number
Model 9801 AC & DC Controller Rear Interface Module	546020
Model 9802 DC & DC Controller Rear Interface Module	546280
Note: *A controller rear interface module must be present in the chassis for the controller module to be operational.*	

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