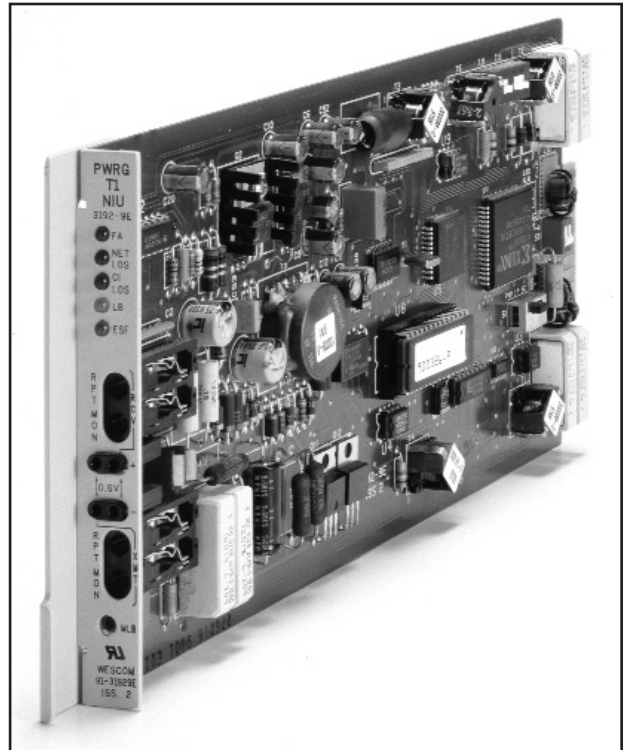


STS 3192-9E Powering T1 Network Interface Unit (NIU)

T1 Span Termination Equipment for the Point of Demarcation

Charles Industries' Span Termination System 3192-9E Powering NIU combines the functions of a Powering T1 Office Repeater plus a T1 Network Interface Unit in a single, high-density plug-in module. It is ideally suited for use in provisioning T1 High Capacity Digital Service (HCDS) from lightwave-fed building Remote Terminals located at customer premise locations. The 3192-9E, used as adjunct equipment to the Lightwave Multiplexer, provides transmission loopback for maintenance activities. In addition, the unit can be optioned to provide 60mA constant current power source towards the network interface, which can be used to power the customer's Channel Service Unit (CSU). This service arrangement is typical in MPOP (Minimum Point of Presence) applications.



Features

Maintenance Loopback

The 3192-9E provides a signal path Loopback feature, which can be used to differentiate circuit problems on either side of the network interface. The unit will automatically respond to Loopback control codes in either SF or ESF protocols. SF control codes are received as 5 or 6 bit inband repeating patterns, while ESF codes are via 16 bit messages in the ESF framing data link. When the 3192-9E is in the maintenance loopback state, it will send an AIS (all ones) signal toward the Customer Interface.

System Power

The 3192-9E generates all necessary voltages for its operation from a -48V (nominal) battery input source. The unit contains an internal high efficiency DC-DC converter to minimize input current, consequently maximizing battery reserve time in the remote terminal assembly.

Equalizer/Repeater Functions

The unit is intended to be co-located with the lightwave transport equipment and serves to extend the normal DSX range of that equipment. It provides a fixed DSX pre-equalizer for 0 to 110 ft. of cable. In the transmit direction, the unit provides variable pads for level coordination toward the CPE. The 3192-9E can accommodate up to 21dB of cable loss between itself and the customer's CSU.

Three Powering Options

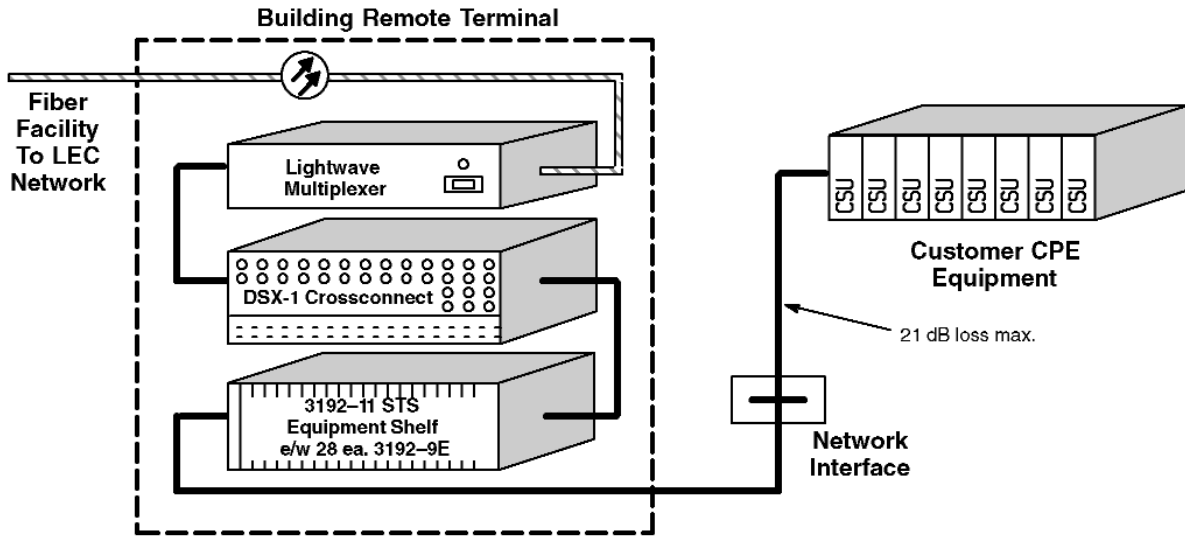
The 3192-9E provides three switch-selectable CI (customer interface) side power modes: line powering, sealing current, and looped simplex.

Telcordia Compliance

Charles' STS 3192-9E Powering T1 NIU conforms to Telcordia TR-TSY-000312.

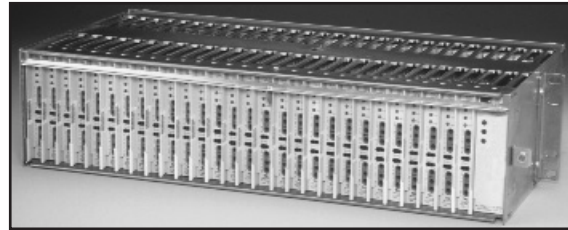


NIU Typical Configuration



NIU Mounting Shelves

3192-9E modules are conveniently housed in Charles Industries' 3192 Shelves. 4 shelf modules are available for both 19" and 23" rack enclosures (require 3 rack spaces [5.25"] per shelf):



<u>Model</u>	<u>Description</u>	<u>Module Slots</u>
3192-11	23" rack, connectorized backplane	28 + Alarm Card slot
3192-WR	23" rack, wire wrap backplane	28 + Alarm Card slot
319-02	19" rack, connectorized backplane	22 + Alarm Card slot
319-04	19" rack, wire wrap	22 + Alarm Card slot
319-3H	19" rack, 1RU, wire wrap	3 slots
2819-01	Wallmount shelf	5 slots (1 slot optional for alarm card)
2819-02	Wallmount shelf	6 slots

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