



Communications Test Design, Inc.

iMarc[®] 9126

Quick Reference

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Phone: North America 1-888-444-9556

International: +1-615-884-7455

Email: NCservice@ctdi.com

To place an order, please contact CTDI sales:

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Email: productsales@ctdi.com

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Phone: North America 1-888-444-9556

International: +1-615-884-7455

Email: NCservice@ctdi.com

Communications Test Design, Inc.
1353 Enterprise Drive
West Chester, PA 19380
USA

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Product Documentation

The complete product documentation is available at www.ctdi.com/ProductsPortfolio/tabid/2475/Default.aspx.

Select the following documents:

- Installation Instructions, document 9126-A2-GN11
- User's Guide, document 9128-A2-GB20

Getting started

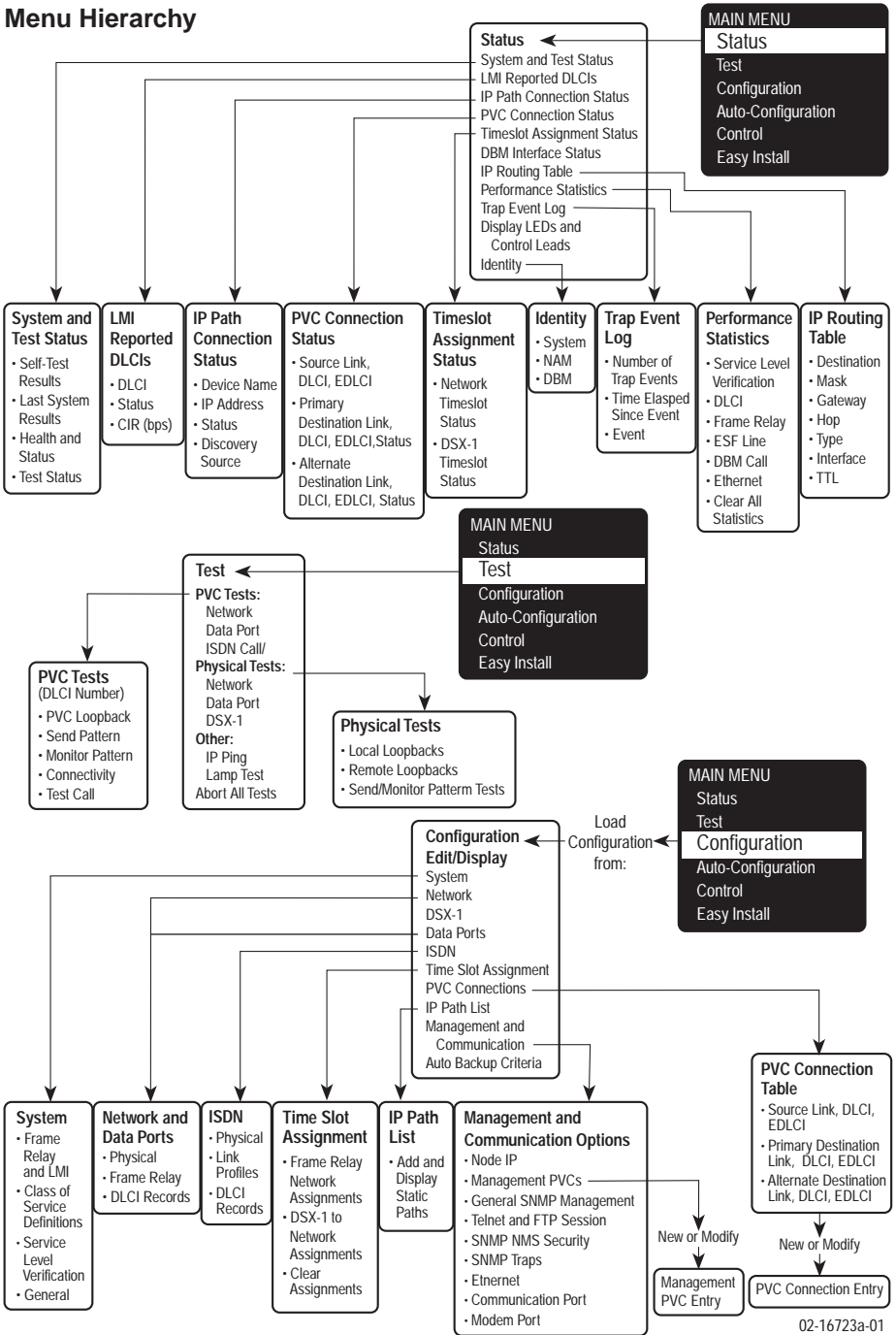
Refer to the iMarc 9126 Installation Instructions to install and set up, the iMarc 9126.

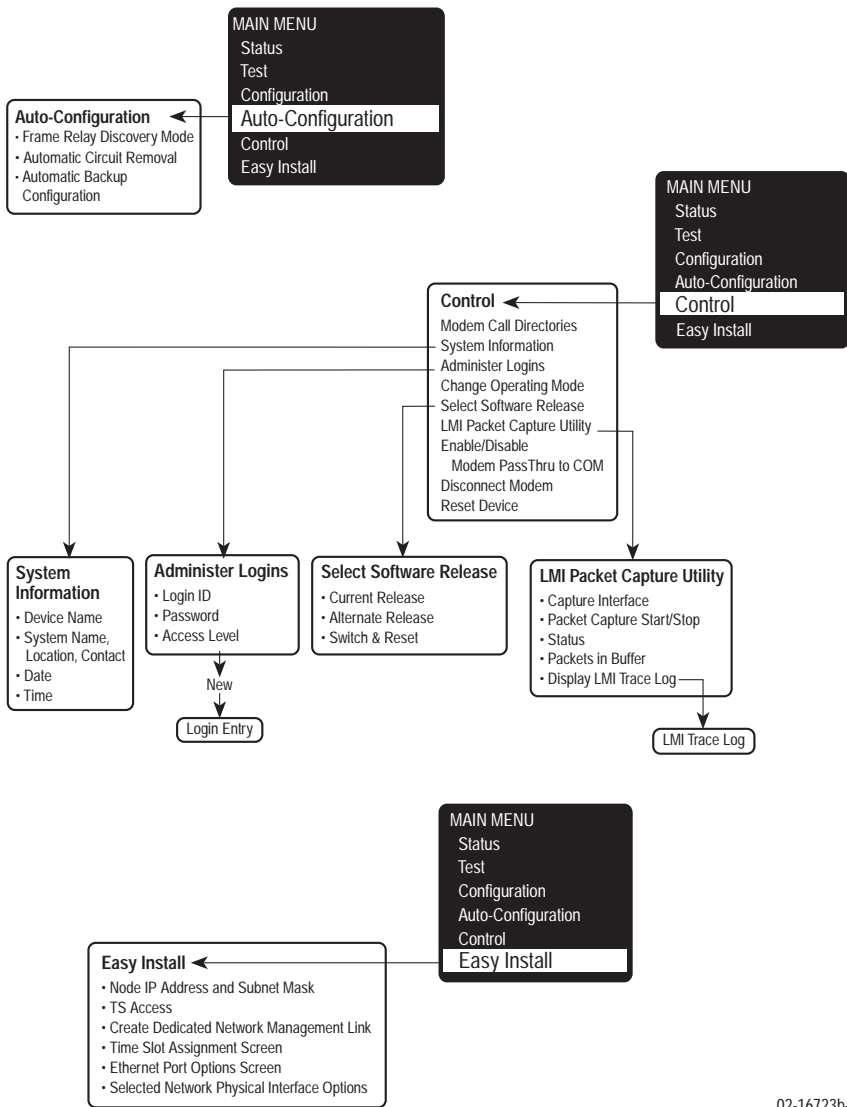
Refer to the User's Guide to get information about the unit

Menu Hierarchy

The Menu Hierarchy shows a pictorial view of the organization of the iMarc unit's screens, which can help you navigate the menus and access information.

Menu Hierarchy





Configuration Option Summaries

This section summarizes the configuration options accessed when you select Configuration from the Main Menu.

- System
- Physical (Network and Data Port)
- DSX-1
- Time Slot Assignment
 - Frame Relay Network Assignments
 - DSX-1 to Network Assignments
- Frame Relay (Network and Data Port)
- DLCI Records (Network and Data Port)
- PVC Connections
- IP Path List
- Management and Communication
- Auto Backup Criteria

System

Select System Options to configure options applicable to the entire system.

- Frame Relay and LMI
- Class of Service Definitions
- Service Level Verification
- General

Frame Relay and LMI

Select Frame Relay and LMI to configure the general frame relay options for the system.

Frame Relay and LMI	
Configuration Option	Settings Default in [Bold]
LMI Behavior	[Independent] , Port-1_Follows_Net1-FR1, Net1-FR1_Follows_Port-1, Port-1_Codependent_with_Net1-FR1
LMI Error Event (N2)	1, 2, [3] , 4, 5, 6, 7, 8, 9, 10
LMI Clearing Event (N3)	[1] , 2, 3, 4, 5, 6, 7, 8, 9, 10
LMI Status Enquiry (N1)	1, 2, 3, 4, 5, [6] , . . . 255
LMI Heartbeat (T1)	5, [10] , 15, 20, 25, 30
LMI Inbound Heartbeat (T2)	5, 10, [15] , 20, 25, 30
LMI N4 Measurement Period (T3)	5, 10, 15, [20] , 25, 30

Class of Service Definitions

Select Class of Service Definitions to configure class of service and code point definitions.

Class of Service Definitions	
Configuration Option	Settings Default in [Bold]
Class of Svc Name	<i>ASCII text</i> (8 characters)
Measure Latency & Availability	N, Y
Code Points Assigned	N, Y
Code Point Definitions	
Code Pnt	000000–111111
ID	1–7
Name	<i>ASCII text</i> (8 characters)

Service Level Verification

Select Service Level Verification to configure the SLV options for the system.

Service Level Verification	
Configuration Option	Settings Default in [Bold]
SLV Sample Interval (secs)	10–3600 [60]
SLV Synchronization Role	[Tributary] , Controller, None
SLV Type	Standard, COS 1–COS 7
SLV Delivery Ratio	Enable, [Disable]
DLCI Down on SLV Timeout	Enable, [Disable]
SLV Timeout Error Event Threshold	1, 2, [3] , . . . 20
SLV Timeout Clearing Event Threshold	[1] , 2, 3, . . . 20
SLV Round Trip Latency Error Threshold	50– [10000]
SLV Latency Clearing Event Threshold	1, [2] , 3, . . . 20
SLV Packet Size (bytes)	[64] –2048

General

Select General to configure a timeout period and duration for user-initiated loopbacks and pattern tests, a primary and secondary clock source for the system, and a system alarm relay.

General	
Configuration Option	Settings Default in [Bold]
Test Timeout	[Enable] , Disable
Test Duration (min)	1–120 [10]
Primary Clock Source	[Net1] , DSX, Internal, DBM
Secondary Clock Source	Net1, DSX, [Internal] , DBM

Physical

Select Physical to configure the physical characteristics of each interface:

- Network
- Data Ports

Network

Select Network, then Physical to configure physical characteristics for the T1 network interface.

Network	
Configuration Option	Settings Default in [Bold]
Line Framing Format	D4, [ESF]
Line Coding Format	AMI, [B8ZS]
Line Build Out (LBO)	[0.0] , -7.5, -15, -22.5
Bit Stuffing	[62411] , Disable
Transmit Timing	[System] , Interface
Network Initiated LLB	[Enable] , Disable
Network Initiated PLB	[Enable] , Disable
Network Initiated DCLB	Disable, [V.54_&_ANSI]
ANSI Performance Report Messages	Enable, [Disable]
Excessive Error Rate Threshold	[10E-4] , 10E-5, 10E-6, 10E-7, 10E-8, 10E-9
Circuit Identifier	<i>Text Field</i> , [Clear]

Data Ports

Select Data Ports, then Physical to configure physical characteristics for the port connected to the DTE.

Data Ports	
Configuration Option	Settings <small>Default in [Bold]</small>
Invert Transmit Clock	[Auto] , Enable, Disable
Transmit Clock Source	[Internal] , External
Monitor DTR	[Enable] , Disable
Monitor RTS (Control)	[Enable] , Disable
Port (DTE) Initiated Loopback	[Disable] , Local, Both

DSX-1

Select DSX-1 to configure the DSX-1 interface.

DSX-1	
Configuration Option	Settings Default in [Bold]
Interface Status	Enable, [Disable]
Line Framing Format	D4, [ESF]
Line Coding Format	AMI, [B8ZS]
Line Equalization	[0–133] , 133–266, 266–399, 399–533, 533–655
Send all Ones on DSX-1 Failure	[Enable] , Disable

Time Slot Assignment

Select Time Slot Assignment to make cross-connection assignments.

Frame Relay Network Assignments

Select Frame Relay Network Assignments to assign DS0s on the T1 network interface(s) for frame relay links.

Frame Relay-to-Network Interface Time Slot Assignment	
Network Channel	Settings Default in [Bold]
Time Slot Discovery	[Enable] , Disable
N01–N24	[Available] , Assigned, FrameRly1

DSX-1 to Network Assignments

Select DSX-1-to-Network Assignments to assign or unassign DSX-1 time slots to T1 network interface time slots.

DSX-1-to-Network Interface Time Slot Assignment	
Network Channel	Settings Default in [Bold]
N01–N24	[Available] , Assigned, DSX-1/yy
Signaling and Trunk Conditioning	None, [RBS] , E&M-idle, E&M-busy, FXSg-idle, FXSg-busy, , FXS1-idle, FXS1-busy, FXSD-idle, FXSD-busy, PLAR3idle, PLAR3busy, PLAR4idle, PLAR4busy, DPO-idle, DPO-busy, FXOg-idle, FXOg-busy, FXO1-idle, FXO1-busy, FXOD-idle, FXOD-busy, DPT-idle, DPT-busy, USER-0000, USER-0001, USER-0010, USER-0011, USER-0100, USER-0101, USER-0110, USER-0111, USER-1000, USER-1001, USER-1010, USER-1011, USER-1100, USER-1101, USER-1110, USER-1111

Frame Relay

Select Frame Relay to configure the Frame Relay characteristics of the following interfaces:

- Network
- Data Ports

Frame Relay	
Configuration Option	Settings Default in [Bold]
LMI Protocol	Initialize_From_Net1FR1, Initialize_From_Interface, Auto_On_LMI_Fail, Standard, Annex-A, Annex-D [Initialize_From_Interface] for a data port link. [Auto_On_LMI_Fail] for a network link.
Traffic Policing	Enable, [Disable]
LMI Parameters	[System] , Custom
When LMI Parameters is set to System:	
Frame Relay DS0s Base Rate	[Nx64] , Nx56

Frame Relay (continued)

When LMI Parameters is set to Custom:

Frame Relay DS0s Base Rate	[Nx64], Nx56
LMI Error Event (N2)	1, 2, [3], 4, 5, 6, 7, 8, 9, 10
LMI Clearing Event (N3)	[1], 2, 3, 4, 5, 6, 7, 8, 9, 10
LMI Status Enquiry (N1)	1, 2, 3, 4, 5, [6], . . . 255
LMI Heartbeat (T1)	5, [10], 15, 20, 25, 30
LMI Inbound Heartbeat (T2)	5, 10, [15], 20, 25, 30
LMI N4 Measurement Period (T3)	5, 10, 15, [20], 25, 30

DLCI Records

Select DLCI Records to configure the DLCI Records for the following interfaces:

- Network
- Data Port

The Auto-Configuration feature provides automatic DLCI record configuration.

DLCI Records for Each Interface

Configuration Option	Settings	Default in [Bold]
DLCI Number	16–1007	
DLCI Type	Standard, Multiplexed, IP Enabled [Standard] for DLCIs on user data ports. [Multiplexed] for network and ISDN interfaces.	
CIR (bps)	0–1536000 [64000]	
Tc	<i>This field displays the committed rate measurement interval to be used for the DLCI based upon the displayed option settings.</i>	
Committed Burst Size Bc (Bits)	[CIR], Other	
Bc	0–1536000 [64000]	
Excess Burst Size Be (Bits)		
Be	0–1536000 [1472000]	
DLCI Priority	Low, Medium, [High]	
Outbound Management Priority	Low, [Medium], High	
Backup Group	[None], A–Z	

PVC Connections

Select PVC Connections to manually configure the logical connections between the selected interface and the data ports. The Auto-Configuration feature provides automatic configuration of PVC connections.

PVC Connections	
Configuration Option	Settings Default in [Bold]
Source Link	Port-1, Net1-FR1
Source DLCI	16–1007
Source EDLCI	0–62
Primary Destination Link	Net1-FR1
Primary Destination DLCI	16–1007
Primary Destination EDLCI	0–62
Alternate Destination Link	Net1-FR1
Alternate Destination DLCI	16–1007
Alternate Destination EDLCI	0–62

IP Path List

Select IP Path List (Static) to configure the list of static path IP addresses.

IP Path List	
Configuration Option	Settings Default in [Bold]
IP Address	000.000.000.001–223.255.255.255
FWD	[No] , Yes

Management and Communication

Select Management and Communication to configure the iMarc unit so it can be managed by an NMS or Telnet terminal, and to select the appropriate protocols.

- Node IP
- Management PVCs
- General SNMP Management
- Telnet and FTP Sessions
- SNMP NMS Security
- SNMP Traps
- Ethernet Port, if applicable
- Communication Port
- Modem Port

Node IP

Select Node IP to configure support of the IP communication network.

Node IP	
Configuration Option	Settings Default in [Bold]
Node IP Address	000.000.000.001 – 223.255.255.255, [Clear]
Node Subnet Mask	[000.000.000.000] – 255.255.255.255, Clear
Default IP Destination	[None] , Modem, COM, Ethernet, <i>PVCname</i>
TS Access Management Link	[None] , <i>PVCname</i>
TS Management Link Access Level	[Level-1] , Level-2, Level-3
TS Management SNMP Validation	Enable, [Disable]

Management PVCs

Select Management PVCs to configure a Management PVC for in-band management. The Auto-Configuration feature provides automatic configuration of Management PVCs on the Network interface.

Management PVCs	
Configuration Option	Settings Default in [Bold]
Name	ASCII text entry (8 characters)
Payload Managed	Enable, [Disable]
Intf IP Address	[Node-IP-Address] , Special (<i>address entry: 000.000.000.001 – 223.255.255.255</i>)
Intf Subnet Mask	[Node-Subnet-Mask] , Calculate, Special (<i>address entry: 000.000.000.000 – 255.255.255.255</i>)
Set DE	Enable, [Disable]
Primary Link	Net1-FR1, Port-1, Clear
Primary DLCI	16–1007
Primary EDLCI	0–62
Primary Link RIP	None, Standard_out, Proprietary
Encapsulation	[Routed]
Alternate Link	Net1-FR1, Port-1, ISDN Link Name, Clear
Alternate DLCI	16–1007
Alternate EDLCI	0–62

General SNMP Management

Select General SNMP Management to configure the iMarc unit so it can be managed as an SNMP agent.

General SNMP Management	
Configuration Option	Settings Default in [Bold]
SNMP Management	[Enable] , Disable
Community Name 1	ASCII text entry, [Public] , Clear
Name 1 Access	Read, [Read/Write]
Community Name 2	ASCII text entry, [Clear]
Name 2 Access	[Read] , Read/Write

Telnet and FTP Sessions

Select Telnet and FTP Sessions to configure access to the iMarc unit through Telnet or FTP, and to determine whether security will be required.

Telnet and FTP Sessions	
Configuration Option	Settings Default in [Bold]
Telnet Session	[Enable] , Disable
Telnet Login Required	Enable, [Disable]
Session Access Level	[Level-1] , Level-2, Level-3
Inactivity Timeout	[Enable] , Disable
Disconnect Time (Minutes)	1–60 [10]
FTP Session	[Enable] , Disable
FTP Login Required	Enable, [Disable]
FTP Max Transfer Rate	1– [1536]

SNMP NMS Security

Select SNMP NMS Security to configure access to the unit.

SNMP NMS Security	
Configuration Option	Settings Default in [Bold]
NMS IP Validation	Enable, [Disable]
Number of Managers	[1] –10
NMS <i>n</i> IP Address	000.000.000.001–223.255.255.255, [Clear]
Access Type	[Read] , Read/Write

SNMP Traps

Select SNMP Traps to configure desired SNMP traps and dialing out when SNMP traps occur.

SNMP Traps	
Configuration Option	Settings Default in [Bold]
SNMP Traps	Enable, [Disable]
Number of Trap Managers	[1] –6
NMS <i>n</i> IP Address	000.000.000.001–223.255.255.255, [Clear]
Initial Route Destination	[AutoRoute] , COM, Modem, Ethernet, <i>PVCname</i>
General Traps	Disable, Warm, AuthFail, [Both]
Enterprise Specific Traps	[Enable] , Disable
Link Traps	Disable, Up, Down, [Both]
Link Traps Interfaces	Network, DSX-1, T1s, Ports, DBM, [All]
DLCI Traps on Interfaces	Network, Ports, DBM, [All] , None
DLCI Traps on Interfaces – Filter	[Normal] , Filter
RMON Traps	[Enable] , Disable
Trap Dial-Out	Enable, [Disable]
Trap Disconnect	[Enable] , Disable
Call Retry	Enable, [Disable]
Dial-Out Delay Time (Min)	1–10 [5]
Alternate Dial-Out Directory	[None] , 1–5
Latency Traps	[Enable] , Disable
IP SLV AvailabilityTraps	[Enable] , Disable

Ethernet Port

Select Ethernet Port to configure the iMarc unit's Ethernet port, if applicable.

Ethernet Port	
Configuration Option	Settings Default in [Bold]
Interface Status	Enable, [Disable]
IP Address	000.000.000.001–223.255.255.255, [Clear]
Subnet Mask	[000.000.000.000] – 255.255.255.255, Clear
Default Gateway Address	000.000.000.001–223.255.255.255, [Clear]
Proxy ARP	Enable, [Disable]

Communication Port

Select Communication Port to configure the iMarc unit's COM port.

Communication Port	
Configuration Option	Settings Default in [Bold]
Port Use	[Terminal] , Net Link, Modem PassThru
When Port Use is set to Terminal:	
Data Rate (Kbps)	9.6, 14.4, [19.2] , 28.8, 38.4, 57.6, 115.2
Character Length	7, [8]
Parity	[None] , Even, Odd
Stop Bits	[1] , 2
Ignore Control Leads	[Disable] , DTR
Login Required	Enable, [Disable]
Port Access Level	[Level-1] , Level-2, Level-3
Inactivity Timeout	[Enable] , Disable
Disconnect Time (Minutes)	1–60 [10]

Communication Port (continued)

When Port Use is set to Net Link:

Data Rate (Kbps)	9.6, 14.4, [19.2], 28.8, 38.4, 57.6, 115.2
Character Length	[8]
Parity	[None], Even, Odd
Stop Bits	[1], 2
Ignore Control Leads	[Disable], DTR
IP Address	000.000.000.001–223.255.255.255, [Clear]
Subnet Mask	[000.000.000.000]–255.255.255.255, Clear
Link Protocol	[PPP], SLIP
RIP	[None], Standard_out

When Port Use is set to Modem PassThru:

Data Rate (Kbps)	9.6, 14.4, [19.2], 28.8, 38.4, 57.6, 115.2
Character Length	7, [8]
Parity	[None], Even, Odd
Stop Bits	[1], 2
Ignore Control Leads	[Disable], DTR

Modem Port

Select Modem Port to configure the iMarc unit's Modem port.

Modem Port

Configuration Option	Settings	Default in [Bold]
Port Use	[Terminal], Net Link	
When Port Use is set to Terminal:		
Dial-In Access	[Enable], Disable	
Login Required	Enable, [Disable]	
Port Access Level	[Level-1], Level-2, Level-3	
Inactivity Timeout	[Enable], Disable	
Disconnect Time (Minutes)	1–60 [10]	

Modem Port (continued)

When Port Use is set to Net Link:

Dial-In Access	[Enable], Disable
IP Address	000.000.000.001–223.255.255.255, [Clear]
Subnet Mask	[000.000.000.000]–255.255.255.255, Clear
Link Protocol	[PPP], SLIP
Alternate IP Address	000.000.000.001–223.255.255.255, [Clear]
Alternate Subnet Mask	[000.000.000.000]–255.255.255.255, Clear

Auto Backup Criteria

Select Auto Backup Criteria to control automatic backup.

Auto Backup Criteria

Configuration Option	Settings	Default in [Bold]
Auto Backup	Enable, [Disable]	
DLCI Down Backup Activation Delay (sec)	[0]–3600	
DLCI Down Backup Activation Transmission Threshold	[1]–10	
Backup Restoration Delay (sec)	[0]–3600	
When Auto Backup Allowed	[Always], Restrict	
Backup Allowed From	Monday–Sunday, [00:00]–23:00, None	
Backup Allowed To	Monday–Sunday, 00:00–[24:00]	

