



Telecommunications Group

**Ethernet Router
SNMP Manual**
Section 364-180-S02
Second Printing, December 2006

1 General

This document lists the objects supported by the Charles Industries, Ltd. 3641-80 and 3648-80 Ethernet Routers. The only difference between the 3641-80 and 3648-80 is that the 3648-80 has an Ethernet switch to eliminate the need for an external switch. Therefore the routers will be referred to as 'the router'. These MIBs are provided on the CD shipped with the units or can be located on the Internet.

If the router is not responding to router queries, set the SNMP community access to 'v1'.

The MIBs supported by this router are included on the CD shipped with the unit. A text version of the RFCs associated with the MIBs are also included for reference and linked on the documentation table-of-contents.

2 Using CLI

The router sets SNMP host mask to 255.255.255.255

When setting up the SNMP community using the CLI management port the steps are;

- make sure the community does not already exist using
- create community using
- create host using
- link host to router community using
- then save the community information using
- wait for prompt

The following is an example script. In this example the community name is 'private' with a host name of 'host15', which has a host IP of '192.168.0.15':

```
snmp delete community private
snmp add community private v1
snmp add host host15 192.168.0.15 v1 private
snmp add community private v1 hostname host15 rw
snmp community save
```

To verify information use CLI command;
snmp show community

NOTE: Some of the lines of information are longer than 80 characters and this display wraps after 80 columns .

Other commands can be found in the Command Line Interface manual (LT364-180-C01).

3 MIB Supported Objects

3.1 System group (RFC1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	sysDescr		Y	R/O	DisplayString (SIZE (0..255))

	sysObjectID		Y	R/O	OBJECT IDENTIFIER
	sysUpTime		Y	R/O	TimeTicks
	sysContact		Y	R/W	DisplayString (SIZE (0..255))
	sysName		Y	R/W	DisplayString (SIZE (0..255))
	sysLocation		Y	R/W	DisplayString (SIZE (0..255))
	sysServices		Y	R/O	INTEGER (0..127) Including OSI 2,3,4,7. Value=78

3.2 Interfaces group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	interfaces				
	ifNumber		Y	R/O	
	IfTable	ifIndex			
	IfEntry				
	IfIndex		Y ?	R/O	
	IfDescr		Y ?	R/O	
	IfType		Y ?	R/O	
	IfMtu		Y ?	R/O	
	IfSpeed		Y ?	R/O	
	ifPhysAddress		Y ?	R/O	
	ifAdminStatus		Y ?	R/W	up(1) down(2) testing(3) Only can set to (1) and (2).
	ifOperStatus		Y ?	R/O	
	ifLastChange		Y ?	R/O	
	ifInOctets		Y ?	R/O	
	ifInUcastPkts		Y ?	R/O	
	ifInNUcastPkts		Y ?	R/O	
	ifInDiscards		Y ?	R/O	
	ifInErrors		Y ?	R/O	
	ifInUnknownProtos		Y ?	R/O	
	ifOutOctets		Y ?	R/O	
	ifOutUcastPkts		Y ?	R/O	
	ifOutNUcastPkts		Y ?	R/O	
	ifOutDiscards		Y ?	R/O	
	ifOutErrors		Y ?	R/O	
	ifOutQLen		Y ?	R/O	
	ifSpecific		Y ?	R/O	

3.3 At group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	atTable				

	atEntry	AtIfIndex, atPhysAddress			
	atIfIndex		Only support read	R/W	INTEGER
	atPhysAddress		Only support read	R/W	PhysAddress
	atNetAddress		Only support read	R/W	NetworkAddress

3.4 IP group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	ipForwardings		Y	R/O	
	ipDefaultTTL		Y	R/O	
	ipInReceives		Y	R/O	
	ipInHdrErrors		Y	R/O	
	ipInAddrErrors		Y	R/O	
	ipForwDatagrams		Y	R/O	
	ipInUnknownProtos		Y	R/O	
	ipInDiscards		Y	R/O	
	ipInDelivers		Y	R/O	
	ipOutRequests		Y	R/O	
	ipOutDiscards		Y	R/O	
	ipOutNoRoutes		Y	R/O	
	ipReasmTimeout		Y	R/O	
	ipReasmReqds		Y	R/O	
	ipReasmOKs		Y	R/O	
	ipReasmFails		Y	R/O	
	ipFragOKs		Y	R/O	
	ipFragFails		Y	R/O	
	ipFragCreates		Y	R/O	
	ipAddrTable	ipAdEntAddr	??		
	ipAddrEntry				
	ipAdEntAddr			R/O	
	ipAdEntIfIndex			R/O	
	ipAdEntNetMask			R/O	
	ipAdEntBcastAddr			R/O	
	ipAdEntReasmMaxSize			R/O	
	ipRouteTable	ipRouteDest	??		
	ipRouteEntry				
	ipRouteDest			R/W	
	ipRouteIfIndex			R/W	
	ipRouteMetric1			R/W	
	ipRouteMetric2			R/W	
	ipRouteMetric3			R/W	
	ipRouteMetric4			R/W	
	ipRouteNextHop			R/W	
	ipRouteType			R/W	
	ipRouteProto			R/O	
	ipRouteAge			R/W	
	ipRouteMask			R/W	
	ipRouteMetric5			R/W	
	ipRouteInfo			R/O	

	ipNetToMediaTable	IpNetToMediaIfl Index, ipNetToMedia NetAddress	??		
	ipNetToMediaEntry				
	ipNetToMediaIflIndex		Y	R/O	
	ipNetToMediaPhysAddress		Y	R/O	
	ipNetToMediaNetAddress		Y	R/O	
	ipNetToMediaType		Y	R/O	
	ipRoutingDiscards		Y	R/O	

3.5 ICMP group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	icmpInMsgs		Y	R/O	
	icmpInErrors		Y	R/O	
	icmpInDestUnreachs		Y	R/O	
	icmpInTimeExcds		Y	R/O	
	icmpInParmProbs		Y	R/O	
	icmpInSrcQuenchs		Y	R/O	
	icmpInRedirects		Y	R/O	
	icmpInEchos		Y	R/O	
	icmpInEchoReps		Y	R/O	
	icmpInTimestamps		Y	R/O	
	icmpInTimestampReps		Y	R/O	
	icmpInAddrMasks		Y	R/O	
	icmpInAddrMaskReps		Y	R/O	
	icmpOutMsgs		Y	R/O	
	icmpOutErrors		Y	R/O	
	icmpOutDestUnreachs		Y	R/O	
	icmpOutTimeExcds		Y	R/O	
	icmpOutParmProbs		Y	R/O	
	icmpOutSrcQuenchs		Y	R/O	
	icmpOutRedirects		Y	R/O	
	icmpOutEchos		Y	R/O	
	icmpOutEchoReps		Y	R/O	
	icmpOutTimestamps		Y	R/O	
	icmpOutTimestampReps		Y	R/O	
	icmpOutAddrMasks		Y	R/O	
	icmpOutAddrMaskReps		Y	R/O	

3.6 TCP Group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
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	tcpRtoAlgorithm		Y	R/O	other(1),-- none of the following constant(2), -- a constant rto rsre(3),-- MIL-STD-1778, Appendix B vanj(4)-- Van Jacobson's algorithm [5]
	tcpRtoMin		Y	R/O	
	tcpRtoMax		Y	R/O	
	tcpMaxConn		Y	R/O	
	tcpActiveOpens		Y	R/O	
	tcpPassiveOpens		Y	R/O	
	tcpAttemptFails		Y	R/O	
	tcpEstabResets		Y	R/O	
	tcpInSegs		Y	R/O	
	tcpOutSegs		Y	R/O	
	tcpRetransSegs		Y	R/O	
	tcpConnTable	TcpConnLocalAddresses, tcpConnLocalPort, TcpConnRemAddresses, tcpConnRemPort			
	tcpConnEntry				
	tcpConnState		N	R/O	
	tcpConnLocalPort		N	R/O	
	tcpConnRemAddress		N	R/O	
	tcpConnRemPort		N	R/O	
	tcpInErrs		Y	R/O	
	tcpOutRsts		Y	R/O	

3.7 UDP Group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	udpInDatagrams		Y	R/O	
	udpNoPorts		Y	R/O	
	udpInErrors		Y	R/O	
	udpOutDatagrams		Y	R/O	
	udpTable	UdpLocalAddress, udpLocalPort		R/O	
	udpEntry			R/O	
	udpLocalAddress		Y	R/O	
	udpLocalPort		Y	R/O	

3.8 EtherLike-MIB (RFC 2358)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	dot3StatsTable	dot3StatsIndex			
	dot3StatsEntry				
	dot3StatsIndex		Y	R/O	
	dot3StatsAlignmentErrors		Y	R/O	
	dot3StatsSingleCollisionFrames			R/O	

	dot3StatsMultipleCollisionFrames		Y	R/O	
	dot3StatsSQETestErrors		Y	R/O	
	dot3StatsDeferredTransmissions		Y	R/O	
	dot3StatsLateCollisions		Y	R/O	
	dot3StatsExcessiveCollisions		Y	R/O	
	dot3StatsInternalMacTransmitErrors		Y	R/O	
	dot3StatsCarrierSenseErrors		Y	R/O	
	dot3StatsFrameTooLongs		Y	R/O	
	dot3StatsInternalMacReceiveErrors		Y	R/O	
	dot3StatsEtherChipSet		Y	R/O	

3.9 Bridge MIB -- dot1dBase Group (RFC 1493)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	dot1dBase				
	dot1dBaseBridgeAddress		Y	R/O	
	dot1dBaseNumPorts		Y	R/O	
	dot1dBaseType		Y	R/O	
	dot1dBasePortTable	dot1dBasePort	??		
	dot1dBasePortEntry				
	dot1dBasePort			R/O	
	dot1dBasePortIfIndex			R/O	
	dot1dBasePortCircuit			R/O	
	dot1dBasePortDelayExceededDiscards			R/O	
	dot1dBasePortMtuExceededDiscards			R/O	

3.10 Bridge MIB -- dot1dStp Group (RFC 1493)

No.	3.10.1.1.1.1 Object Name	Table Index	Support (Y/N)	Access	Constrains
	dot1dStp		??		
	dot1dStpProtocolSpecification			R/O	
	dot1dStpPriority			R/W	
	dot1dStpTimeSinceTopologyChange			R/O	
	dot1dStpTopChanges			R/O	
	dot1dStpDesignatedRoot			R/O	
	dot1dStpRootCost			R/O	
	dot1dStpRootPort			R/O	
	dot1dStpMaxAge			R/O	
	dot1dStpHelloTime			R/O	
	dot1dStpHoldTime			R/O	
	dot1dStpForwardDelay			R/O	
	dot1dStpBridgeMaxAge			R/W	
	dot1dStpBridgeHelloTime			R/W	
	dot1dStpBridgeForwardDelay			R/W	
	dot1dStpPortTable	dot1dStpPort			
	dot1dStpPortEntry				
	dot1dStpPort			R/O	
	dot1dStpPortPriority			R/W	
	dot1dStpPortState			R/O	
	dot1dStpPortEnable			R/W	
	dot1dStpPortPathCost			R/W	
	dot1dStpPortDesignatedRoot			R/O	
	dot1dStpPortDesignatedCost			R/O	
	dot1dStpPortDesignatedBridge			R/O	
	dot1dStpPortDesignatedPort			R/O	
	dot1dStpPortForwardTransitions			R/O	

3.11 Bridge MIB -- dot1dTp Group (RFC 1493)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	dot1dTp				
	dot1dTpLearnedEntryDiscards		Y	R/O	
	dot1dTpAgingTime		Y	R/O	
	dot1dTpFdbTable	dot1dTpFdbAddress	??		
	dot1dTpFdbEntry				
	dot1dTpFdbAddress			R/O	
	dot1dTpFdbPort			R/O	
	dot1dTpFdbStatus			R/O	other(1) invalid(2) learned(3) self(4) mgmt(5)
	dot1dTpPortTable	dot1dTpPort	??		
	dot1dTpPortEntry				
	dot1dTpPort			R/O	
	dot1dTpPortMaxInfo			R/O	
	dot1dTpPortInFrames			R/O	
	dot1dTpPortOutFrames			R/O	
	dot1dTpPortInDiscards			R/O	

3.12 Bridge MIB -- dot1dStatic Group (RFC 1493)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	dot1dStatic				
	dot1dStaticTable	dot1dStaticAddress , dot1dStaticReceivePort	??		
	dot1dStaticEntry				
	dot1dStaticAddress			R/W	
	dot1dStaticReceivePort			R/W	
	dot1dStaticAllowedToGoTo			R/W	
	dot1dStaticStatus			R/W	

3.13 PPP-IP-NCP-MIB (RFC 1473)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	ppplp				
	ppplpTable	ifIndex	??		
	ppplpEntry				
	ppplpOperStatus			R/O	1: opened(1) 2: not-opened(2) when PPP Routed mode: opened(1) PPP Bridge mode: not-opened(2)
	ppplpLocalToRemoteCompressionProtocol			R/O	
	ppplpRemoteToLocalCompressionProtocol			R/O	
	ppplpRemoteMaxSlotId			R/O	
	ppplpLocalMaxSlotId			R/O	
	ppplpConfigTable	ifIndex	??		
	ppplpConfigEntry				
	ppplpConfigAdminStatus			R/W	
	ppplpConfigCompression			R/W	

3.14 PPP_LCP_MIB (RFC 1471)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	pppLinkStatusTable	ifIndex	??		
	pppLinkStatusEntry				
	pppLinkStatusPhysicalIndex			R/O	
	pppLinkStatusBadAddresses			R/O	
	pppLinkStatusBadControls			R/O	
	pppLinkStatusPacketTooLongs			R/O	
	pppLinkStatusBadFCSs			R/O	
	pppLinkStatusLocalMRU			R/O	
	pppLinkStatusRemoteMRU			R/O	
	pppLinkStatusLocalToPeerACMap			R/O	
	pppLinkStatusLocalToRemoteProtocolCompression			R/O	
	pppLinkStatusRemoteToLocalProtocolCompression			R/O	
	pppLinkStatusLocalToRemoteACCompression			R/O	
	pppLinkStatusRemoteToLocalACCompression			R/O	
	pppLinkStatusTransmitFcsSize			R/O	
	pppLinkStatusReceiveFcsSize			R/O	
	pppLinkConfigTable	ifIndex	??		
	pppLinkConfigEntry				
	pppLinkConfigInitialMRU			R/W (Supported R/O)	

	pppLinkConfigReceiveACCCMap			R/W (Supported R/O)	
	pppLinkConfigTransmitACCCMap			R/W (Supported R/O)	
	pppLinkConfigMagicNumber			R/W (Supported R/O)	
	pppLinkConfigFcsSize			R/W (Supported R/O)	

3.15 PPP_SEC_MIB (RFC 1472)

No.	Object Name	Table Index	Support (Y/N)	Access	Constraints
	pppSecurity				
	pppSecurityConfigTable	pppSecurityConfigLink , pppSecurityConfigPreference	??		
	PppSecurityConfigEntry				
	pppSecurityConfigLink			R/O	0..2147483647
	pppSecurityConfigPreference			R/O	0..2147483647
	pppSecurityConfigProtocol			R/O	
	pppSecurityConfigStatus			R/O	1: invalid(1) 2: valid(2)
	pppSecuritySecretsTable	pppSecuritySecretsLink, pppSecuritySecretsIdIndex	??		
	pppSecuritySecretsEntry				
	pppSecuritySecretsLink			R/O	
	pppSecuritySecretsIdIndex			R/O	
	pppSecuritySecretsDirection			R/O	
	pppSecuritySecretsProtocol			R/O	
	pppSecuritySecretsIdentity			R/O	
	pppSecuritySecretsSecret			R/O	
	pppSecuritySecretsStatus			R/O	

3.16 PPP-BRIDGE-NCP-MIB (RFC 1474)

No	Object Name	Table Index	Support (Y/N)	Access	Constrains
	pppBridge				
	pppBridgeTable	IfIndex	??		
	pppBridgeEntry				
	pppBridgeOperStatus			R/O	
	pppBridgeLocalToRemoteTinygramCompression			R/O	
	pppBridgeRemoteToLocalTinygramCompression			R/O	
	pppBridgeLocalToRemoteLanId			R/O	
	pppBridgeRemoteToLocalLanId			R/O	
	pppBridgeConfigTable	IfIndex	??		
	pppBridgeConfigEntry				
	pppBridgeConfigAdminStatus			R/O	1: open(1) 2: close(2)
	pppBridgeConfigTinygram			R/O	1: false(1) 2: true(2)
	pppBridgeConfigRingId			R/O	1: false(1) 2: true(2)
	pppBridgeConfigLineId			R/O	1: false(1) 2: true(2)
	pppBridgeConfigLanId			R/O	1: false(1) 2: true(2)
	pppBridgeMediaTable	IfIndex, pppBridgeMediaMacType	??		
	pppBridgeMediaEntry				
	pppBridgeMediaMacType			R/O	
	pppBridgeMediaLocalStatus			R/O	
	pppBridgeMediaRemoteStatus			R/O	
	pppBridgeMediaConfigTable	IfIndex, pppBridgeMediaConfigMacType	??		
	pppBridgeMediaConfigEntry				
	pppBridgeMediaConfigMacType			R/W	
	pppBridgeMediaConfigLocalStatus			R/W	

3.17 FRAME-RELAY-DTE-MIB (RFC 2115)

No	Object Name	Table Index	Support (Y/N)	Access	Constrains
	FrameRelayDTE				
	frDlcmiTable	frDlcmiIndex	N		
	frDlcmiEntry				
	frDlcmiIndex			R/O	
	frDlcmiState			R/C	
	frDlcmiAddress			R/C	
	frDlcmiAddressLen			R/C	
	frDlcmiPollingInterval			R/C	
	frDlcmiFullEnquiryInterval			R/C	
	frDlcmiErrorThreshold			R/C	
	frDlcmiMonitoredEvents			R/C	
	frDlcmiMaxSupportedVCs			R/C	
	frDlcmiMulticast			R/C	
	frDlcmiStatus			R/C	
	frDlcmiRowStatus			R/C	
	frCircuitTable		N		
	frCircuitEntry				
	frCircuitIndex			R/O	
	frCircuitDlci			R/O	
	frCircuitState			R/C	
	frCircuitReceivedFECNs			R/O	
	frCircuitReceivedBECNs			R/O	
	frCircuitSentFrames			R/O	
	frCircuitSentOctets			R/O	
	frCircuitReceivedFrames			R/O	
	frCircuitReceivedOctets			R/O	
	frCircuitCreationTime			R/O	
	frCircuitLastTimeChange			R/O	
	frCircuitCommittedBurst			R/C	
	frCircuitExcessBurst			R/C	
	frCircuitThroughput			R/C	
	frCircuitMulticast			R/C	
	frCircuitType			R/O	
	frCircuitDiscards			R/O	
	frCircuitReceivedDEs			R/O	
	frCircuitSentDEs			R/O	
	frCircuitLogicalIndex			R/C	
	frCircuitRowStatus			R/C	

3.18 SNMP group (RFC 1213)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	snmpInPkts		Y	R/O	Counter
	snmpOutPkts		Y	R/O	Counter
	snmpInBadVersions		Y	R/O	Counter
	snmpInBadCommunityNames		Y	R/O	Counter
	snmpInBadCommunityUses		Y	R/O	Counter
	snmpInASNParseErrs		Y	R/O	Counter
	snmpInTooBigs		Y	R/O	Counter
	snmpInNoSuchNames		Y	R/O	Counter
	snmpInBadValues		Y	R/O	Counter
	snmpInReadOnlyS		Y	R/O	Counter
	snmpInGenErrs		Y	R/O	Counter
	snmpInTotalReqVars		Y	R/O	Counter
	snmpInTotalSetVars		Y	R/O	Counter
	snmpInGetRequests		Y	R/O	Counter
	snmpInGetNexts		Y	R/O	Counter
	snmpInSetRequests		Y	R/O	Counter
	snmpInGetResponses		Y	R/O	Counter
	snmpInTraps		Y	R/O	Counter
	snmpOutTooBigs		Y	R/O	Counter
	snmpOutNoSuchNames		Y	R/O	Counter
	snmpOutBadValues		Y	R/O	Counter
	snmpOutGenErrs		Y	R/O	Counter
	snmpOutGetRequests		Y	R/O	Counter
	snmpOutGetNexts		Y	R/O	Counter
	snmpOutSetRequests		Y	R/O	Counter
	snmpOutGetResponses		Y	R/O	Counter
	snmpOutTraps		Y	R/O	Counter
	snmpEnableAuthenTraps		Y	R/W	enabled(1), disabled(2)
	snmpSilentDrops		Y	R/O	Counter
	snmpProxyDrops		Y	R/O	Counter

3.19 snmpTargetAddrTable(2737)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	snmpTargetMIB				
	snmpTargetObjects				
	snmpTargetSpinLock		Y		
	snmpTargetAddrTable	snmpTargetAddrName			
	snmpTargetAddrEntry				
	snmpTargetAddrName		Y	N/A	
	snmpTargetAddrTDomain		Y	R/C	Not restriction.
	snmpTargetAddrTAddress		Y	R/C	1..255
	snmpTargetAddrTimeout		Y	R/C	0.. 2147483647
	snmpTargetAddrRetryCount		Y	R/C	0..255
	snmpTargetAddrTagList		Y	R/C	0..255
	snmpTargetAddrParams		Y	R/C	1..32
	snmpTargetAddrStorageType		Y	R/C	other(1) volatile(2) nonvolatile(3) permanent(4) readOnly(5)
	snmpTargetAddrRowStatus		Y	R/C	active(1) notInService(2) notReady(3) createAndGo(4) createAndWaite(5) destroy(6)
	snmpTargetParamsTable	snmpTargetParamsName			
	snmpTargetParamsEntry				
	snmpTargetParamsName		Y	N/A	
	snmpTargetParamsMPModel		Y	R/C	
	snmpTargetParamsSecurityModel		Y	R/C	
	snmpTargetParamsSecurityName		Y	R/C	
	snmpTargetParamsSecurityLevel		Y	R/C	
	snmpTargetParamsStorageType		Y	R/C	
	snmpTargetParamsRowStatus		Y	R/C	
	snmpUnavailableContexts		Y	R/O	
	snmpUnknownContexts		Y	R/O	

3.20 snmpNotifyTable(RFC 2573)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	snmpNotificationMIB				
	snmpNotifyTable	snmpTargetAddrName			
	snmpNotifyEntry				
	snmpNotifyName		Y	N/A	
	snmpNotifyTag		Y	R/C	
	snmpNotifyType		Y	R/C	
	snmpNotifyStorageType		Y	R/C	
	snmpNotifyRowStatus		Y	R/C	

3.21 snmpCommunityTable(RFC 2576)

No.	Object Name	Table Index	Support (Y/N)	Access	Constrains
	snmpCommunityMIBObjects				
	snmpCommunityTable	snmpCommunityIndex			
	SnmpCommunityEntry				
	snmpCommunityIndex		Y	N/A	
	snmpCommunityName		Y	R/C	
	snmpCommunitySecurityName		Y	R/C	
	snmpCommunityContextEngineID		Y	R/C	
	snmpCommunityContextName		Y	R/C	
	snmpCommunityTransportTag		Y	R/C	
	snmpCommunityStorageType		Y	R/C	
	snmpCommunityStatus		Y	R/C	