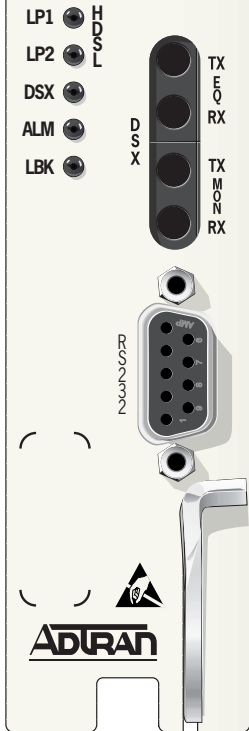


220 ICOT

CLEI: VACJGOC_ _

TA1000 ICOT
1179510L2



LED INDICATORS

- | | | |
|----------------|------------|---|
| DSX | ● Green | DSX-1 signal is present and synchronized |
| | * Blinking | Bipolar violation (BPV), frame bit error (SF mode), or CRC error detected at DSX-1 signal |
| | ○ Off | DSX-1 signal is absent or is of a form that does not match the provisioning of the HDSL circuit |
| LBK | ● Green | Local loopback is active |
| | * Blinking | Loopback arming sequence detected. ICOT is ready for loopback but is not in loopback |
| | ○ Off | ICOT is not in loopback or armed state |
| LP1/LP2 | ● Green | Good signal quality on Loop1/Loop2 (>2 dB margin above 10 ⁻⁷ BER) |
| | ● Yellow | Marginal signal quality on Loop1/Loop2 (≤ 2 dB margin above 10 ⁻⁷ BER) |
| | ● Red | Poor signal quality on Loop1/Loop2 (0 dB margin) |
| | * Blinking | Error detected on either end of Loop1/Loop2 |
| | ○ Off | No synchronization of ICOT and RT on Loop1/Loop2 |
| ALM | ● Yellow | Remote alarm condition detected |
| | ● Red | Alarm condition detected either locally (ICOT) or locally and remotely |
| | ○ Off | No alarm condition detected |

TOTAL ACCESS 1000 SYSTEM

The 220 ICOT is a high performance line interface unit used to deploy HDSL using 4-wire metallic facilities. The ICOT terminates a DSX-1 network-side interface from the COT or switch and converts the DSX-1 signal to 4-wire HDSL and adds span powering. The HDSL signal is delivered over two twisted copper pairs to the Total Access 1000 RT system where the HDSL signal is converted into 24 POTS services.

The ADTRAN 220 ICOT must be deployed in conjunction with ADTRAN Total Access 1000 Remote System. The Total Access 1000 RT system is comprised of an outside plant (OSP) housing, HDSL Line Interface Unit (HLIU), Power Supply Unit/Ring Generator (PSU/RG), Bank Controller Unit (BCU), and POTS or ISDN access modules. Refer to the Total Access 1000 RT Installation and Maintenance Practice, P/N 61179001L1-5, for more information regarding these units.

COMPLIANCE

This product is intended for use in Restricted Access Areas Only and is to be installed in a Type "B" or "E" enclosure. Also, ensure chassis ground is properly connected. The following is a list of UL 60950 Configuration Codes

Code	Input	Output
Power Code (PC)	F	C
Telecommunication Code (TC)	-	X
Installation Code (IC)	A	-

BANTAM JACKS

EQ

Provides an intrusive test access point to the data stream.

- TX-Accesses the data stream being transmitted to the Customer (HDSL Loops)
- RX-Accesses the data stream being received from the Customer (HDSL Loops)

MON

Provides a nonintrusive tap to monitor characteristics of the DSX signal

- TX - Monitors signal being transmitted to the Customer (HDSL Loops)
- RX - Monitors signal being received from the Customer (HDSL Loops)

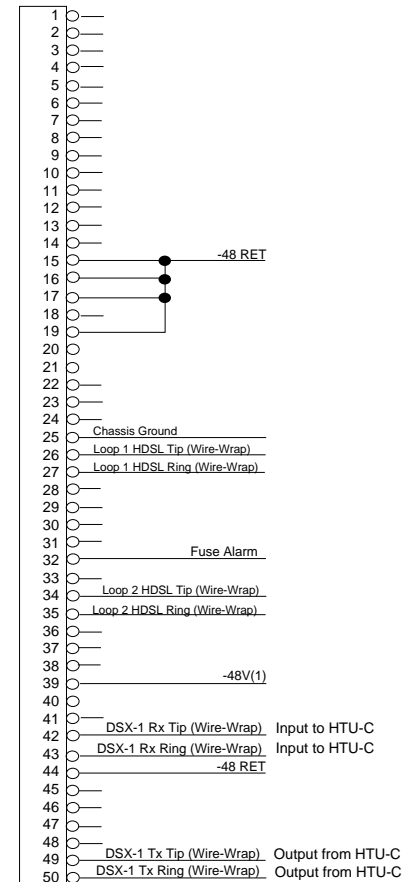
PROVISIONING

The ICOT has no external provisioning switches.

All provisioning is achieved via the menu system defined on the back side of this document. To access the menu system, connect a terminal emulator via the RS-232 (DB-9) connector on the faceplate of the ICOT. The terminal must be VT100 or compatible and set for 9600 bps, 8 data bits, no parity, 1 stop bit. The ICOT Main Menu will appear as listed below:

1. Bank Controller
2. Line Interface Unit
3. Provisioning
4. Access Modules
5. System Alarm
6. Contact Information
7. Set Circuit ID/Date/Time
8. Flash Upgrade ICOT

CARD EDGE PIN ASSIGNMENTS



LOOPBACK CODES

Arm/ 11000 (also known as a 2-in-5 pattern)

The HLIU will loop up toward the network. No AIS or errors will be sent as a result of this loopback. The ICOT and HRE will arm. When sent from the customer, this code will arm all units.

Arm/ FF48 (1111 1111 0100 1000)

ESF facility datalink; ESF only; when sent from the network, all units will be armed and an HLIU network loopback will be activated. This code has no functionality when sent from the customer.

Disarm/ 11100 (also known as a 3-in-5 pattern)

All units are removed from the armed state. If any of the units are in loopback when the 11100 pattern is received, they will loop down.

Disarm/ FF24 (1111 1111 0010 0100)

ESF facility datalink; disarms and/or loop down all units.

ICOT Network Loop Up / D3D3 (1101 0011 1101 0011)

If the units have been armed and no units are in loopback, the ICOT will loop up toward the network, 2 seconds of AIS (all 1s) will be sent, 5 seconds of data will pass, and then 231 bit errors will be injected into the DSX-1 signal. As long as the pattern continues to be sent, 231 errors will be injected every 20 seconds. When the pattern is removed, the unit will remain in loopback. If the pattern is reinstated, the injection of 231 bit errors will resume at 20-second intervals.

HRE Network Loop Up / C741 (1100 0111 0100 0001)

If an HRE is present, the units have been armed, the HRE will loop up toward the network, 2 seconds of AIS (all 1s) will be sent, 5 seconds of data will pass, and then 10 bit errors will be injected into the DSX-1 signal. As long as the pattern continues to be sent, 10 errors will be injected every 20 seconds. When the pattern is removed, the unit will remain in loopback. If the pattern is reinstated, the injection of 10 bit errors will resume at 20-second intervals.

HLIU Loop Up / C742 (1100 0111 0100 0010)

ESF facility Datalink; ESF only; when set from the network, an HLIU network loopback is activated and a 20-bit error confirmation is sent. When set from the customer, an HLIU customer loopback is activated with a 20-bit error confirmation.

Loop Down / 9393 (1001 0011 1001 0011)

All units currently in loopback will loop down, but remain in the armed state.

Query Loopback / D5D5 (1101 0101 1101 0101)

If the units are armed and the ICOT, HRE, or HLIU are in network loopback, errors are injected into the DSX-1 signal upon detection of the query loopback pattern. As long as the pattern continues to be sent, errors are injected again every 20 seconds. The number of errors injected each time depends on which unit is in loopback. 231 errors are injected if the ICOT is in network loopback, 20 at a time if the HLIU is in network loopback, 10 at a time if the HRE is in network loopback.

Query Loop Parameters / DBDB (1101 1011 1101 1011)

If the units are armed, errors are injected into the DSX-1 signal upon detection of the query loop parameters pattern. As long as a pattern continues to be sent, errors are injected again every 20 seconds. The number of errors injected each time depends on the current status of signal quality and pulse attenuation parameters on each loop. 111 errors are injected if all HDSL receiver points (ICOT

LP1/LP2, HRE#1 NET LP1/LP2, HRE #1 CST LP1/LP2, and HLIU or Total Access 1000 RT LP1/LP2) indicate pulse attenuation is 30 dB or lower and signal quality (margin) is 6 dB or higher. 11 errors at a time are injected if any of the 8 receiver points indicate pulse attenuation is greater than 30 dB and/or signal quality (margin) is less than 6 dB.

Loopback Time Out Override / D5D6 (1101 0101 1101 0110)

If the units are armed and this pattern is sent, the loopback time out will be disabled. The time out option will be updated on the PROVISIONING menu of the HTU (viewable through the RS-232 port) to NONE. As long as the units remain armed, the time out will remain disabled. When the units are disarmed, the loopback time out will return to the value it had before the D5D6 code was sent.

Span Power Disable / 6767 (0110 0111 0110 0111)

If the units are armed and this pattern is sent, the ICOT will deactivate its span power supply, turning off the HLIU and HRE (if present). As long as the pattern continues to be sent, the span power supply will remain disabled. When the pattern is no longer being sent, the ICOT will reactivate its span power supply, turning the remote unit(s) on. All units will retrain and return to the disarmed and unlooped state.

WARRANTY

Warranty for Carrier Networks products manufactured by ADTRAN and supplied under Buyer's order for use in the U.S. is ten (10) years. For a complete faxback copy of ADTRAN's *U.S. and Canada Carrier Networks Equipment Warranty*: (877) 457-5007, Document # 414.

ICOT MENU TREE

