QUICK CARD

Serial Datacom Bit Error Rate Testing (BERT)
This quick card describes how to configure the T-BERD 5800 as Data Terminal Equipment (DTE) and run a Bit Error Rate Test on a Serial Datacom interface with typical configuration settings. Please refer to the T-BERD 5800 Testing Manual for an explanation of all settings.

- T-BERD/MTS 5800 with Transport software release V31.2.1 or greater
- Datacom Expansion Module (VIAVI Part# C5DEM)
- USB Type B to USB Type A cable
- One of the following Datacom cables to connect the Datacom Expansion Module to the line under test:
  - RS-232/V.24, EIA-530 Cable (VIAVI Part# CB-21148994-002)
  - RS-449/V.36 Cable (VIAVI Part# CB-21144332-002)
  - V.35 Cable (VIAVI Part# CB-21148995-002)

Figure 1: Equipment Requirements

CONNECT TO LINE UNDER TEST
- Connect the **USB Type B to USB Type A cable** to the Datacom Module and the USB port on the side of the T-BERD 5800.
- Connect the desired **Datacom cable** to the Datacom Expansion Module.
- Use the connector labeled “To DCE” to connect to the line under test.

LAUNCH TEST

1. Press the **Power button** to turn on the T-BERD.
2. Tap the **Datacom** icon at the top of the launch screen.

Figure 2: Launch Screen
QUICK CARD

T-BERD/MTS 5800 Portable Network Tester

CONFIGURE TEST

- The following Information is needed to configure the test:
  - Interface (RS-232/V.24, EIA-530, RS-449/V.36, or V.35)
  - Signal Mode (Balanced or Unbalanced)
  - Timing Mode (Synchronous or Asynchronous)
  - Rx Timing Source (Internal or Interface)
  - Tx Timing Source (Internal or Interface)
  - Out of Band Flow Control (On or Off)
  - Test Patterns(s)
  - BER Pass/Fail Threshold

1. Press the Setup soft key on the top right side of the screen.

2. Tap .

3. Press to continue.

4. Select the indicated folders and configure your test as follows. Leave all other values at default, unless specified in the work order.

<table>
<thead>
<tr>
<th>Folder</th>
<th>Option</th>
<th>Value(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>Interface</td>
<td>RS-232/V.24, EIA-530, RS-449/V.36, etc.</td>
</tr>
<tr>
<td>Timing</td>
<td>Timing Mode</td>
<td>Synchronous or Asynchronous</td>
</tr>
<tr>
<td></td>
<td>Rx Timing Source</td>
<td>Interface (RT)</td>
</tr>
<tr>
<td></td>
<td>Tx Timing Source</td>
<td>Select Interface (ST) for Synchronous timing, select Internal (Synth) for Asynchronous timing.</td>
</tr>
<tr>
<td></td>
<td>Synthesizer Frequency</td>
<td>Enter frequency in kHz; i.e., 9.6 kHz for 9600 bps.</td>
</tr>
<tr>
<td>Pattern</td>
<td>Pattern</td>
<td>Enter the 1st Pattern in your test plan (QRSS, 2^6-1, etc.) Note: 2^11-1 = 2047, 2^9-1 = 511, 2^6-1 = 63</td>
</tr>
</tbody>
</table>

5. Press the Results soft key to view the Test Results screen.
RUN TEST

1. Tap the **Signal Lead** tab at the bottom of the screen and tap the RTS and DTR buttons.
2. Press the **Restart** soft key.
3. Using the drop-down menus, select “**Summary/Status**” for the left results display and select “**HS Datacom/BERT**” for the right results display.
4. Allow the test to run for desired duration and verify the following:
   - **Pattern Sync** LED is green.
   - **Error Rate** result does not exceed your required Bit Error Rate (BER) threshold. (0.00E+00 if pass/fail threshold unknown)
5. In the T-BERD’s **Quick Config** menu, change “**Pattern**” to the next value in the test plan.
6. Press the **Restart** soft key to reset results.
7. Allow the test to run for desired duration and verify the following:
   - **Pattern Sync** LED is green.
   - **Error Rate** result does not exceed your required BER threshold. (0.00E+00 if pass/fail threshold unknown)
8. Repeat steps 5 through 7 for all Patterns in the test plan.