

## TEKTRONIX

# 80C08C

The Tektronix 80C08C is a high-sensitivity, multi-mode optical sampling module designed for 10 Gb/s telecom and datacom testing, compatible with DSA8300, DSA8200, and CSA8000 series digital serial analyzers.

## SPECIFICATIONS

### General

|            |                                                                                    |
|------------|------------------------------------------------------------------------------------|
| Interfaces | Optical input (accepts slide-on adapters), SMA outputs (on clock recovery options) |
| Display    | None (uses host mainframe display)                                                 |

### Physical

|                       |                                        |
|-----------------------|----------------------------------------|
| Power Supply          | Powered directly by the host mainframe |
| Operating Temperature | 10 °C to 40 °C °C                      |
| Dimensions (W×H×D)    | 79 mm × 25 mm × 135 mm mm              |
| Weight                | 0.6 kg                                 |

### Optical Performance

|                                             |                                                                                                                               |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Wavelength Range                            | 780 nm to 1650 nm                                                                                                             |
| Unfiltered Optical Bandwidth                | 12.5 GHz                                                                                                                      |
| Fiber Input Core Diameter                   | 62.5 μm (compatible with multi-mode and single-mode fiber)                                                                    |
| RMS Noise (Typical, 12.5 GHz Bandwidth)     | 1.5 μW                                                                                                                        |
| RMS Noise (Typical, with 9.953 Gb/s Filter) | 1.0 μW                                                                                                                        |
| Transition Time                             | 35 ps (typical, 10% to 90%, unfiltered)                                                                                       |
| Maximum Average Input Power                 | 1.0 mW                                                                                                                        |
| Optical Return Loss (Single-mode)           | >30 dB (typical)                                                                                                              |
| Optical Return Loss (Multi-mode)            | >14 dB (typical)                                                                                                              |
| Supported Reference Receiver Filters        | 9.953 Gb/s, 10.3125 Gb/s, 10.51875 Gb/s, 10.664 Gb/s, 10.709 Gb/s, 11.095 Gb/s (filter availability depends on configuration) |

### System & Chassis Architecture

|                              |                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------|
| Clock Recovery Options       | Optional integrated clock recovery (Opt. CR1, CR2, or CR4 depending on configuration) |
| Form Factor                  | Small plug-in module                                                                  |
| Slot Width                   | 1 slot                                                                                |
| Host Mainframe Compatibility | DSA8300, DSA8200, CSA8000, TDS8000 series                                             |

## Connectivity

|                                 |                                                           |
|---------------------------------|-----------------------------------------------------------|
| Optical Connector Type          | FC/PC (standard, interchangeable with other UOI adapters) |
| Clock Recovery Output Connector | SMA female (option-dependent)                             |

## Performance

|                                                   |             |
|---------------------------------------------------|-------------|
| Maximum RMS Noise (12.5 GHz Bandwidth)            | 2.2 $\mu$ W |
| Maximum RMS Noise (with 9.953 Gb/s Filter)        | 1.6 $\mu$ W |
| RMS Noise (Typical, with 10.3125 Gb/s Filter)     | 1.0 $\mu$ W |
| Maximum RMS Noise (with 10.3125 Gb/s Filter)      | 1.6 $\mu$ W |
| RMS Noise (Typical, with 10.66/10.71 Gb/s Filter) | 1.1 $\mu$ W |
| Maximum RMS Noise (with 10.66/10.71 Gb/s Filter)  | 1.7 $\mu$ W |
| RMS Noise (Typical, with 11.1 Gb/s Filter)        | 1.1 $\mu$ W |
| Maximum RMS Noise (with 11.1 Gb/s Filter)         | 1.8 $\mu$ W |

## Environmental

|                     |                                |
|---------------------|--------------------------------|
| Storage Temperature | -40 °C to +60 °C               |
| Operating Humidity  | 20% to 80% RH (non-condensing) |
| Storage Humidity    | 5% to 90% RH (non-condensing)  |
| Operating Altitude  | Up to 3,000 m (10,000 ft.)     |
| Storage Altitude    | Up to 12,190 m (40,000 ft.)    |

## Vertical System

|                             |                              |
|-----------------------------|------------------------------|
| Vertical Scale Factor Range | 10 $\mu$ W/div to 1.0 mW/div |
|-----------------------------|------------------------------|

## Integrated Average Power Meter

|                              |                   |
|------------------------------|-------------------|
| Power Meter Range            | -30 dBm to +4 dBm |
| Power Meter Wavelength Range | 780 nm to 1650 nm |

## Clock Recovery Options

|                               |                                                                                             |
|-------------------------------|---------------------------------------------------------------------------------------------|
| Opt. CR1 Clock Recovery Rate  | 9.953 Gb/s                                                                                  |
| Opt. CR2 Clock Recovery Rates | 9.953 Gb/s, 10.31 Gb/s, 10.52 Gb/s, 10.66 Gb/s, 10.71 Gb/s, 11.1 Gb/s                       |
| Opt. CR4 Clock Recovery Rates | 9.953 Gb/s, 10.31 Gb/s, 10.52 Gb/s, 10.66 Gb/s, 10.71 Gb/s, 11.1 Gb/s, 11.3 Gb/s, 12.5 Gb/s |

## TECHNOLOGY

Optical Sampling

## APPLICATIONS

10 Gb/s Telecom and Datacom Testing

