

SDH/SONET Test Sets

CTS 710 • CTS 750



Features

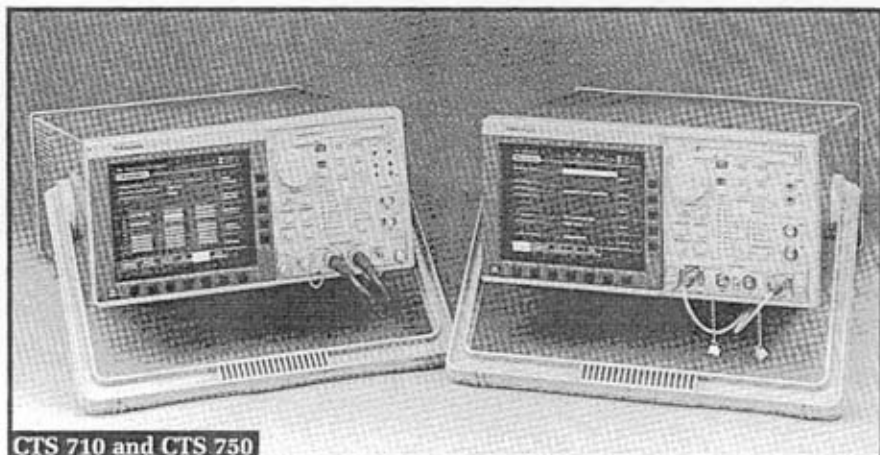
CTS 710/CTS 750

- 52 Mb/s, 155 Mb/s, and 622 Mb/s Transmit and Receive
- DS1 and DS3 Testing (Optional)
- 2 MB, 34 MB and 140 MB Testing (Optional)
- Bit Error Rate Testing Including BIP Error Monitoring and Analysis
- Payload Mapping and Demapping
- Tributary Add, Drop and Test
- Pointer Generation and Analysis
- Alarms Generation and Analysis
- DCC and User Channel Access
- APS Testing
- Simple User Interface
- Automatic Setup
- Pass/Fail Testing
- Rugged Modular Design, Customer Configurable
- Disk Drive
- IEEE 488.2 and RS-232C



Applications

- Network Integrity Testing
- In-service Performance Monitoring
- Overhead Testing
- Tributary Mapping and Demapping
- Tributary Testing
- Stimulus and Response Testing
- Stress Testing



CTS 710 and CTS 750

CTS 700 Series

The ITU-T and ANSI standards for SDH/SONET specify requirements for the network element (ADM, multiplexers, terminals, etc.) interfaces. Installation, commissioning, maintenance and repair of the SDH/SONET network involves the challenge of testing to ITU-T and ANSI standards. The CTS 700 Series is ready for the challenge to assist with these and other testing needs. In one configurable, expandable and upgradable instrument you will find everything required to do your testing.

CONFIGURABLE

The CTS 700 Series is a rugged portable test set designed not only for your current tasks; through its unique architecture, it will grow with you as SDH and SONET grows. When you require additional capabilities such as optical interfaces, jitter analysis, ATM testing, etc., you can add such functionality to your CTS 700. This upgradability is important due to evolving nature of the standards, test requirements and equipment capabilities.

The CTS 700 Series is part of a new generation of test sets combining various different functions in one instrument with the power to go beyond basic testing. The modular nature of the test set allows you to configure the instrument to your needs, without the cost of unwanted built-in capabilities. Starting with a low cost platform which addresses your basic SDH or SONET testing needs, you can expand its capabilities as desired with a growing number of options.

EASY TO USE

The CTS 700 Series incorporates a number of new productivity features:

- AutoScan – Graphically presents the incoming signal structure and allows easy instrument setup
- Pass/Fail Testing – Automates following a written test procedure
- TroubleScan – Highlights error, alarms, and defects
- Graphical Displays – For historical trend analysis
- Online Help – For quick assistance with operation
- Disk Drive – For easy storage of instrument setups, Pass/Fail Test and results

These instruments employ innovative hardware technology which reprograms itself, depending on the operational mode. Future demands regarding access and control of particular bytes are easily reprogrammed. Upgrades are distributed on disks.

Please refer to the data sheet for more technical specifications.

SDH/SONET Test Sets

CTS 710 • CTS 750

CTS 710 SONET/DS3/DS1 Test Set

TRANSMIT AND RECEIVE RATES

- STS-1, STS-3 (electrical)
- STS-3c and OC-3c
- OC-1, OC-3, OC-12 (optical)
- DS1, DS3 (Opt. 22)
- Compliance to ANSI T1-105

GENERATION AND ANALYSIS

- Testing of Bit Error Rates including B1, B2, B3, VT BIP, Line FEBE, Path FEBE and Payload
- Complete alarm monitoring and generation
- Measurements: 1 sec to 99 days
- Histograms: 72 hours with 1 minute resolution. 45 days with 15 minute resolution
- Measurements with ANSI T1M1.3 analysis

OVERHEAD MANAGEMENT

Transport Overhead, Path Overhead and VT Overhead

- Set and View Byte Value: All
- Set and View Byte Trace Message: J1
- Add/Drop: DCCs, F1, F2

CTS 750 SDH/PDH Test Set

TRANSMIT AND RECEIVE RATES

- STM-0E, STM-1E (electrical)
- STM-0, STM-1, STM-4 (optical)
- 2 Mb/s, 34 Mb/s, 140 Mb/s (Opt. 36)
- Compliance to ITU-T G.707, G.708, G.709

GENERATION AND ANALYSIS

- Testing of Bit Error Rates including B1, B2, B3, TU BIP, MS FEBE, Path FEBE and Payload
- Complete alarm monitoring and generation
- Measurements: 1 sec to 99 days
- Histograms: 72 Hours with 1 minute resolution. 45 days with 15 minutes resolution.
- Measurements with ITU-T analysis according to G.826, G.821, M.2100

OVERHEAD MANAGEMENT

Section Overhead, Path Overhead and TU Overhead

- Set and View Byte Value: All
- Set and View Byte Trace Message : J1, J2
- Add/Drop: DCCs, F1, F2

CTS 710/CTS 750

OTHER

- APS Control
- Pointer movement control
- Complete Pointer Sequence selection in accordance with ITU-T G.783 and ANSI T1X1.6
- Timing offset up to ± 100 ppm
- DS1 and DS3 T-carrier testing (Opt. 22)
- 2 Mb/s, 34 Mb/s, 140 Mb/s (Opt. 36) PDH testing
- Disk storage: 200 instrument setups, or 400 hours of results including histories, or 200 Pass/Fail tests on each disk (DOS compatible)

PHYSICAL CHARACTERISTICS

| Dimensions | mm | in. |
|------------|------|-------|
| Height | 164 | 6.4 |
| Width | 491 | 14.25 |
| Depth | 1362 | 19.25 |
| Weight | kg | lb. |
| Net | 10 | 22.5 |

Please refer to the data sheet for more technical specifications.

ORDERING INFORMATION

For price information: Outside the U.S. contact your local Tektronix representative, inside the U.S. see the price list in the back of this catalog.

CTS 710

SONET DS3/DS1 Test Set.

Includes: User Manual, Reference Manual, Performance Verification, Front Cover, Accessory Pouch, 75 Ω Cable, Power Cord.

CTS 750

SDH/PDH Test Set.

Includes: User Manual, Reference Manual, Performance Verification, Front Cover, Accessory Pouch, 75 Ω Cable, Power Cord.

OPTIONS FOR CTS 710 AND CTS 750

Opt. 03 – Optical/Electrical Interface, 52 Mb/s, 155 Mb/s, 1310 nm.

Includes: Two Optical Connector Kits 020-1885-00 for FC-PC, ST, DIN, SC.

Opt. 04 – Optical/Electrical Interface, 52 Mb/s, 155 Mb/s, 622 Mb/s, 1310 nm.

Includes: Two Optical Connector Kits 020-1885-00 for FC-PC, ST, DIN, SC.

Opt. 05 – Optical/Electrical Interface, 52 Mb/s, 155 Mb/s, 622 Mb/s, 1550 nm, 0 dBm Power.

Includes: Two Optical Connector Kits 020-1885-00 for FC-PC, ST, DIN, SC.

Opt. 06 – Optical/Electrical Interface, 52 Mb/s, 155 Mb/s, 622 Mb/s, 1310/1550 nm.

Includes: Two Optical Connector Kits 020-1885-00 for FC-PC, ST, DIN, SC.

Opt. 11 – 1.6/5.6 Connector Adapter Kit for CTS 750.

OPTIONS FOR CTS 710 ONLY

Opt. 22 – DS1 and DS3 Testing.

Includes: Standalone, Map/Demap and Add/Drop.

OPTIONS FOR CTS 750 ONLY

Opt. 36 – 2 Mb/s, 34 Mb/s and 140 Mb/s Testing.

Includes: Standalone, Map/Demap and Add/Drop.

SERVICE ASSURANCE OPTIONS

3 Year Warranty Standard.

INTERNATIONAL POWER PLUG OPTIONS

Opt. A1 – Universal Euro 220 V, 50 Hz.

Opt. A2 – United Kingdom 240 V, 50 Hz.

Opt. A3 – Australian 240 V, 50 Hz.

Opt. A4 – North American 240 V, 60 Hz.

Opt. A5 – Switzerland 220 V, 50 Hz.

FIELD UPGRADE KITS

CTS7F01 – Electrical Interface

52 Mb/s, 155 Mb/s, 75 Ω BNC.

CTS7F03 – Optical/Electrical Interface,

52 Mb/s, 155 Mb/s, 1310 nm.

CTS7F04 – Optical/Electrical Interface,

52 Mb/s, 155 Mb/s, 622 Mb/s, 1310 nm.

CTS7F05 – Optical/Electrical Interface,

52 Mb/s, 155 Mb/s, 622 Mb/s, 1550 nm.

CTS7F22 – DS1 and DS3 Testing.

Includes: Standalone, Map/Demap and Add/Drop.

CTS7F36 – 2 Mb/s, 34 Mb/s and 140 Mb/s Testing.

Includes: Standalone, Map/Demap and Add/Drop.

ACCESSORIES

Rackmount – Order 016-0819-1x.

Optical Connector Kit –

Includes: FC-PC, ST, DIN, SC. Order 020-1885-00.

Battery Powered Printer – HC411 Opt. 04.

Hard Transit Case – Order 016-1157-00.

Soft Carrying Bag – Order 016-1158-00.

CART

Order K212.