

40 GHz and 50 GHz High-Speed Channel Modeling Platforms

The CMP-28 and CMP-32 Channel Modeling Platforms from Wild River Technology LLC represent powerful tools for development of high-speed 40 GHz and 50 GHz systems. The primary target application for the CMP-28 and CMP-32 is 3D-EM solver analysis versus time and frequency domain measurement methodology. Each is comprised of 27 structures based on a consistent development of primitive structures useful for performing a host of calibrations such as de-embedding, SOLR, WinCalXE™, VNA gating, time transform analysis, and LRM.

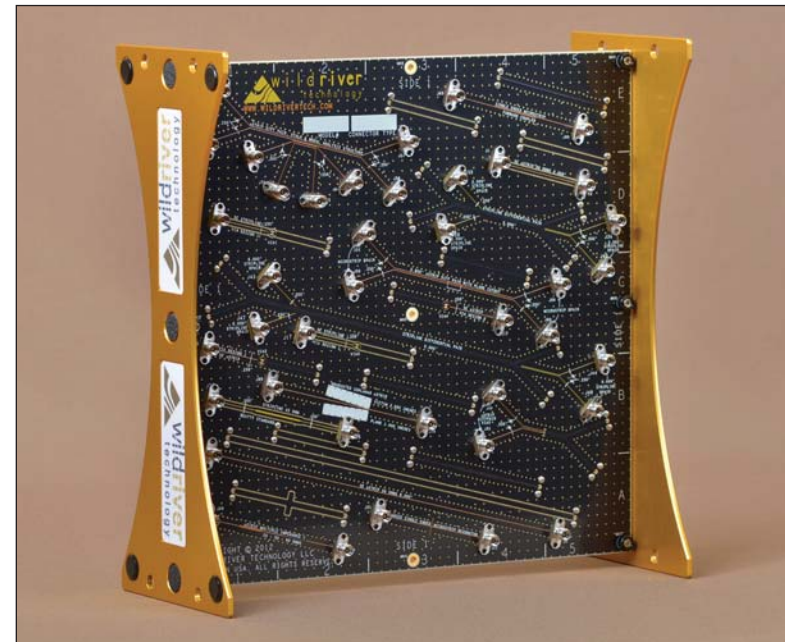
These platforms are an ideal complement to the Anritsu VectorStar™ family of Vector Network Analyzers. Measurements performed on the platform structures can be input into 3D-EM simulations for comparison with simulations based on the supplied structure design information. This enables designers to validate measurement-simulation correspondence and hence have more confidence in first-turn design success.

Features

- > **3D-EM benchmark structures**
 - Material Extraction Method and Supporting Structures
 - Resonators
 - Stepped-impedance Structures for VNA time transform analysis and TDR
- > **TDNA-VNA analysis structure**
 - TDR resolvers for ultra fast TDR (10 psec and 28 psec rise times)
- > **Allegro layout available for easy 3D-EM import**
- > **Family of via fields**
 - Capacitive, Inductive, Tuned

Applications

- > **3D-EM and measurement assistance for the SI practitioner**
 - Connector Launches
 - Vias
 - Multimode Analysis
 - Meshing Analysis Structure
 - Advanced Material Extraction and Loss Modeling
- > **10-32 Gbps SERDES and jitter analysis**
- > **VNA metrology to 50 GHz, 10 psec resolution**



The CMP-28/32 package includes the assembled and tested platform, a ruggedized carrying case and custom CMP patent pending stands with hardware and tools for assembly.



Structure Information

Single-ended Structures	Useful For
MICROSTRIP 50 OHMS 2.000 INCHES STRIPLINE 50 OHMS 2.000 INCHES	<ul style="list-style-type: none"> • SOLR Calibration THRU • T-matrix de-embedding • Material extraction
MICROSTRIP 50 OHMS 8.000 INCHES STRIPLINE 50 OHMS 8.000 INCHES	<ul style="list-style-type: none"> • Increase signal loss • Material extraction • Loss validation
STRIPLINE 50 OHMS 2.000 INCHES, CAPACITIVE LAUNCH STRIPLINE 50 OHMS 2.000 INCHES, INDUCTIVE LAUNCH	<ul style="list-style-type: none"> • Assists with Launch design • 3D-EM correspondence • TDR-VNA correspondence
STRIPLINE, VIA DESIGN 1 MICROSTRIP VIA DESIGN 1 STRIPLINE, VIA DESIGN 2 MICROSTRIP VIA DESIGN 2	<ul style="list-style-type: none"> • Via design tool • 3D-EM to measurement correspondence • SERDES testing
MICROSTRIP RESONATOR STRIPLINE RESONATOR	<ul style="list-style-type: none"> • VNA measurement verification • 3D-EM correspondence • TDR-VNA correspondence
MICROSTRIP 25 OHM BEATTY STANDARD STRIPLINE 25 OHM BEATTY STANDARD	<ul style="list-style-type: none"> • VNA and TDR measurement verification • TDR – VNA Correspondence • Measurement validation
MULTIPLE IMOEDANCE μ STRIP STRUCTURE 1 MULTIPLE IMOEDANCE μ STRIP STRUCTURE 2	<ul style="list-style-type: none"> • VNA and TDR measurement verification • TDR – VNA Correspondence • Measurement validation
MICROSTRIP FORWARD COUPLER	<ul style="list-style-type: none"> • 3D-EM to measurement correspondence • VNA measurement 3D-EM correspondence
MICROSTRIP, THRU WITH WHISKERS	<ul style="list-style-type: none"> • VNA S-parameter to TDR derived S-parameter correspondence, • 3D-EM correspondence to either time or frequency domain
GRADUATED COPLANER MICROSTRIP	<ul style="list-style-type: none"> • Interesting TDR structure • S-parameter to TDR analysis • Challenges 3D-EM meshing methodology
2.000" MICROSTRIP WITH GND PLANE VOIDS	<ul style="list-style-type: none"> • S-parameter to TDR analysis

Structure Information (Continued)

Differential Structures	Useful For
2.000" MICROSTRIP 2.000" STRIPLINE 6.000" MICROSTRIP 6.000" STRIPLINE	<ul style="list-style-type: none"> • Validates loss models • Material extraction • SOLR differential THRU • SERDES tolerance testing
MICROSTRIP WITH COUPLED VIA SET	<ul style="list-style-type: none"> • 3D-EM correspondence to measurement • Via design assistance • SERDES tolerance testing
COUPLED MICROSTRIP , XTALK & MODAL ANALYSIS STRUCTURE	<ul style="list-style-type: none"> • Crosstalk Analysis • Mode Conversion Validates loss models • Jitter Algorithm validation • SERDES tolerance testing
MICROSTRIP DIFFERENTIAL PAIR WITH PLANE CUTOUT	<ul style="list-style-type: none"> • PDN analysis • 3D-EM correspondence to measurement • Validates solver analysis • Creates modality • Unbalanced differential • SERDES tolerance testing

Ordering Information**CMP-28 – 40 GHz Test Platform**

Item #	Description
SM6689	CMP-28 Platform includes complete and fully tested assembly (each 2.92mm connector launch is TDR tested for consistency), and CMP-28/32 Users Guide, which includes structure dimension and dielectric information (see note 1). Complementary web-delivered training available after product shipment.

CMP-32 – 50 GHz Test Platform

SM6690	CMP-32 Platform includes complete and fully tested assembly (each 2.4mm connector launch is TDR tested for consistency) and CMP-28/32 Users Guide, which includes structure dimension and dielectric information (see note 1). Complementary web-delivered training available after product shipment.
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Optional Services

CMP-xx-EXT	Material Extraction Training (D_k , D_f , W-element, RLCG) (see note 2)
CMP-TRN-xx	Other training (see note 2)

Notes: 1. Allegro design files also available after shipment of product upon registration at WRT website.

2. Optional training supplied by Wild River technology LLC. Contact WRT sales for more information and for ordering at sales@wildrivertech.com

Pricing | Ordering | Training | Support

www.anritsu.com or 1-800-267-4878